RELEASE NOTES SERVICE PACK 1
UNILOGIC® V 1.41.321
UNISTREAM® OS 1.41.232

UniLogic® V 1.41.321 UNISTREAM® OS 1.41.232 February 2026

This Service Pack provides the new functions and bug fixes listed below.

New Functions

Redfish	**Redfish Update and Task Services Support:**
	
	UniStream PLCs now support the Redfish **UpdateService** and **TaskService**, enabling asynchronous firmware and UniLogic application updates via standard Redfish actions. Supports application, firmware, and combined updates, including staged updates. Firmware and software inventories are exposed through **Redfish URIs**, with runtime service control available via Ladder logic.
	Requires SD card, activated Redfish license, and FTP/SFTP-hosted update files.
	
	Redfish Object Project Configuration:
	
	• Redfish objects support per-object property selection using **Properties Configuration** templates.
	
	• Objects of the same type can expose different fields, and the generated JSON reflects the selected properties.
	
	• Supporting structs are generated with all defined properties, regardless of configuration selection.
	
	Redfish Events and Alerts Support:
	
	• UniLogic now provides comprehensive support for **Redfish Events**, enabling PLCs to generate, log, and deliver Redfish-compliant alerts.
	
	• **New Ladder Elements:**
	
	    a. **Redfish: Notify and Log Event** - Send a predefined notification and record the event in the system log. All parameters are configured within the action.
	
	    b. **Redfish: Notify and Log Event Indirect** - Send and log an event whose details are defined by tag values. This allows event contents to be set dynamically at runtime.
	
	    c. **Redfish: Set Service Property** - Allows modifying Redfish Service parameters at runtime.
	
	    d. **Redfish: Get All Subscriptions** - Retrieves the list of active Redfish Event subscriptions for monitoring or diagnostics.

- Event delivery follows the Redfish Event Service model, including filtering and retry behavior.

- Event logging: JSON format, up to **1000 entries**

- Full support for **EventService**, **EventDestination**, and **Event** resources; up to **50 subscriptions.**

Certificate Handling Updates:

- Redfish now distinguishes **CA-Signed** and **Self-Signed Certificates**.

- Projects upgraded from older versions map previous certificates to CA-Signed automatically.

Mutual TLS (mTLS) Support:

- Redfish Server now supports **mutual TLS authentication**.

- When enabled, the server accepts connections only from clients presenting a valid certification signed by a trusted CA. Client authentication is verified using an imported client CA certificate.

Cooling Model Updates:

- The Cooling model has been updated to Redfish version 1.23 (2025.3)

- **Cooling Units**, **Cooling Loops**, and **Coolant Connectors** now include additional identification fields, new optional properties, and enhanced valve-control functionality.

- UniLogic automatically generates the relevant structs and ActionInfo resources when these features are enabled.

Valve Control:

- Both sensor-based (ValvePositionPercent) and command-based (ValvePositionControlPercent) elements can be linked directly in Redfish Space.

- A new ValveControl action is available, allowing you to set valve state and state reason.

Licensing Support:

- Redfish licensing is now included in **UniStream License management**.

- Requires a license purchase, available from your Unitronics' sales representative.

- **One-hour Trial Offer:** This free, fully functional trial offer enables you to explore UniStream's Redfish functionality for 60 minutes at a time.

Additional Enhancements:

- Redfish resources and structs have been expanded.

- Maximum character limit for object descriptions extended to **100 characters**

- REST API: You can now select **text/xml** as both **Content Type** and **Accept** for REST API requests.
  In addition, the predefined XML and JSON types have been standardized to use application/xml and application/json.

- UniLogic now supports the **GSM-KIT-50 modem** for reliable SMS send and receive functionality over a 4G network.

- IO-Link now supports a new temperature analog Hub; **ULK-08AIRT-M2P6 - IO-LINK HUB, 8AI Temp, MI2, IP67**

- BACnet Server: You can now use a **searchable drop-down list in the Units property** when defining BACnet I/Os attributes, enabling faster selection from the full BACnet units set.

- HMI Editor Additions: Use the new **Bitmap Grid** widget to display PLC-controlled, grid-based graphics on the HMI. The PLC writes color values to a buffer and triggers a redraw to render deterministic and repeatable visual content.
  Note: Supported on iMX6 platforms only.

- UniApps: Network>Ethernet>Debug: Enhancements to network storm handling introduce a unified **Debug** interface, allowing configuration of **Storm Detection Sensitivity** and **Traffic Rate Limits** for improved protection and analysis.

- System>Storm Detection Struct: A new system struct has been added to improve network storm debugging.
  - The struct records details of the last packet received before a storm is detected, including MAC address, IP address, packet type, and the first 100 bytes of raw packet data.
  - The struct adds storm counters, with Ethernet MIB counters updated periodically on IMX25/IMXRT platforms.

- RTC: UniLogic now supports **Network Time Protocol (NTP)**. A new Ladder function, **Sync Clock Using NTP**, has been added to synchronize the PLC time using a specified NTP server and optional time zone offset. The UniStream Panel network is implementing this functionality.

- VNC Client now includes an **Auto Stretch** function that optimizes display scaling for seamless viewing across different screen configurations, improving "All-in-One" performance on Built-in & USL controllers. This enhancement reduces rendering overhead and boosts system efficiency. The scroll bar has also been improved for easier navigation.
  To enable Auto Stretch, navigate to UniApps>System>Network>VNC Client and select Stretch.

Bugs fixed in this patch

- UniLogic might crash when compiling projects if tag names were changed without revalidating operand assignments. This occurred in two scenarios:
  - Web Server projects, where renamed tags caused crashes or invalid HTML links.
  - Projects using Custom Controls, where renamed tags led to invalid or null operand references.

- HMI:
  - The PDF Viewer did not load properly when the file was missing, showing the initialization screen due to a path resolution error (filename not appended to the directory). This issue could cause the HMI to collapse when interacting with the PDF element.
  - In certain cases, the HMI could freeze on power-up when reading the MAC address via the HMI Service, leaving the touch screen unresponsive and the alarm banner stuck.
  - An HMI overload could occur due to an EGL context crash, resulting in repeated errors and a black screen on USP-104-B10 controllers.

- Alarms:
  - UniLogic allowed creating an empty Alarm Group, which caused alarms not to be identified correctly.

- When using the Alarms module with 'Display Mode: Simple', the Alarm Summary list failed to load and caused the HMI to freeze.
- The Alarm Status View widget did not display any text in the Name column.
- The Alarm Summary list failed to indicate active alarms.

- WebServer:
  - Accessing the WebServer resulted in an Error 500 (Internal Server Error) message.
  - Using a Hyper Link element configured with a constant link (#"/") caused the WebServer to display Error 500.
  - Timers on web pages configured with editable preset values (read-only unchecked) caused an internal server error.

- REST API:
  - When a POST/PUT request was created with a JSON or XML content type and included content tags, duplicating the request and changing its content type to *text/plain* or *octet-stream* might cause UniLogic to crash—either immediately upon opening the duplicated request or after saving and reopening the project.
  - Special characters such as $ in query parameters were not handled correctly, causing requests to fail.
  - REST requests could remain stuck in "IN PROGRESS" when the target URL did not respond as expected, requiring a PLC reboot to recover. A new timeout mechanism was added.
  - When creating a POST request with a JSON payload, the Content Parameters section did not provide a buffer option, preventing large payloads or tokens from being sent.

- Redfish:
  - In certain cases, the pump speed (RPM) value in the Redfish interface did not update, even though the corresponding tag displayed the correct value.
  - In certain cases, the PLC could incorrectly report *'Too Many Registrations'*, when the Redfish server resets.

- Certain 'Load Screen' actions could cause a QML crash, resulting in an indefinite hourglass and preventing the screen from loading. The issue was caused by incorrect User Control syntax.

- The Power Flow color selection drop-down menu was unavailable.

- In certain cases, UniLogic might crash when changing the PLC model in projects containing linked Data Tables.

- COM Module Ports: The *'Time from First Byte'* and *'Number of Bytes Waiting'* struct members were not updated by the firmware on US15-B10-B1 controllers.

- UniLogic might crash when using the 'Set Value' action within a Custom Control.

- BACnet Server: Connection to the server failed when the PLC time zone was set to a negative value.

- BACnet Client:
  - **Ethernet:** Aperiodic requests could take 3–7 seconds to complete when multiple devices were present on the network.
  - **MSTP:** MSTP responses could be extremely slow (~20 seconds or more) or not received at all under certain network conditions, even though devices responded normally in external tools.
  - The **BACnet Client Send Request** Ladder element supported only UINT8 indexes, while the client tag list allowed indexes up to 1023. Setting values above 255 caused failures.

- Motion: Importing the VFD diagnostic application caused a compilation error.

- MQTT: The *'Last Will'* message payload was sometimes sent incorrectly, resulting in partial or corrupted text being received by the broker.

- Load UDTF from File: Updated status message -5: File not found. Verify and correct the file path.

- UniApps: The *'Ignore Popups'* setting did not display the Enable/Disable check box as expected on US15-B10-B1 controllers.

- Copying and pasting a *'State Machine Button'* could cause UniLogic to crash.

- Downloading retained tags via **UniStream Management → Download Retain Tags** could fail after adding non-retained tags to the application. The issue occurred even when the new tags were unrelated to retained data.

- UniLogic could remain stuck in a status polling loop after successfully formatting an SD card via **UniStream Management → Format SD.**

- OPC UA: Changing the PLC IP address did not update the OPC UA Server Certificate, preventing clients from connecting after the IP change.

- UAC: Compiling a project with UAC enabled could cause UniLogic to crash if a Custom Control element on a screen was configured with **Level = None.**

- RTC: In certain cases, PLC Date/Time errors may appear during startup or after synchronization due to a timeout while retrieving the public IP as part of the time-API request.

- Ethernet/IP: EDS files (version 1.41.212) were incorrectly parsed, causing Input and Output data definitions to fail during import.

- UniLogic might crash when formatting SD cards larger than 32GB directly from UniApps.

- Modbus:
  - When converting a remote slave from Modbus TCP to Modbus Serial, compilation could fail due to an invalid Slave ID error, even after the Slave ID was updated to a valid range.
  - Remote slaves imported into the project were correctly displayed in the Modbus configuration; however, their associated struct tags were not available for selection in the Modbus Aperiodic Ladder Function block.
  - In certain cases, modifying the Modbus Master configuration would cause the PLC to become stuck during download and could only be recovered by rebooting the controller.
  - In US5-B3-R18 configurations using Modbus slave Ethernet with multiple US5-B5-TR22 units, restoring power could cause Modbus communication to stop and the HMI to become unresponsive, requiring an Ethernet disconnect and PLC power cycle to restore operation.

- FTP Server: In certain cases, when using USP series controllers, file uploads to the server failed regardless of the related configuration checkbox state.

- SNMP: When using SNMPv3, traps sent from UniLogic PLCs could be received by trap watcher tools but not decoded, resulting in unreadable trap data and misleading statistics, where SNMPv2 received counters were incremented while SNMPv3 counters remained unchanged. This occurred when authentication and privacy were enabled but not properly enforced. The fix enforces correct SNMPv3 authentication and privacy handling.

- Web Server: When setting values in a BIT Array via the Web Table, updates could appear successful but revert after a few seconds.

- The VNC Client could display a cursor at the top-left corner on iMX6 platforms even when **Cursor → Disable** was selected.

Change Summaries for Previous Versions begin on the following page.

UniLogic® V 1.41.213 UNISTREAM® OS 1.41.142 December, 2025

This build contains only a new UniStream OS (BIN).

Bugs Fixed in this version:

- Alarms summary view configured to a simple mode causes an endless "hour-glass".

- The alarms banner is shown while the alarm summary list is empty.

UniLogic® V 1.41.213 UNISTREAM® OS 1.41.139 November, 2025

Due to a technical issue (effective November 5th, 2025), UniLogic version 1.41.212 may experience connectivity issues with the UniStream product series. **Unitronics has released updated UniLogic versions that resolve this issue without requiring a PLC OS upgrade.**

Please note that PLCs operating in the field continue to work normally. The issue affects only the connectivity between UniLogic and the PLC.

To restore connectivity, it is mandatory to upgrade UniLogic to version 1.41.213.

Change Summaries for Previous Versions begin on the following page.

UniLogic® V 1.41.212 UNISTREAM® OS 1.41.139 September, 2025

UniLogic 1.41.212 introduces a brand new powerful software feature to broaden your project potential: **BACnet Client**. This feature complements the existing BACnet IP Server support, enabling UniLogic PLCs to communicate with BACnet-compatible devices via both Ethernet and Serial MS/TP. Both communication methods can operate concurrently.

The BACnet Client allows integration with multiple BACnet servers and supports both periodic and aperiodic data exchange. Configuration is straightforward and integrates with Ladder logic, enabling seamless data transfer between UniLogic and building management systems.

This release also introduces a performance enhancement: **Improved Compilation Time**. This upgrade delivers faster and more scalable compilation by resolving key performance bottlenecks. Through comprehensive optimization and the introduction of parallel processing across multiple system components, download times have been reduced.

BACnet Client	This feature complements the existing BACnet IP Server support with BACnet MS/TP and BACnet IP client functionality, enabling seamless integration with building management systems through straightforward configuration that integrates directly with Ladder logic. Note that BACnet Client requires a license purchase, available from your Unitronics' sales representative. Unitronics offers you a One-hour Trial Offer to enable you to explore this new exciting feature. Note that each time you power up your controller, you can restart the One-Hour Trial Offer. To learn how to activate the Trial Offer, refer to the **BACnet Client topic in the UniLogic Help**. <u>**Note:**</u> The BACnet client is available for the UniStream Built-In and the UniStream PLC series.
NEW in Remote URB I/O	Hardware Configuration now offers new I/O modules to our line of URB Remote I/O. These models use 18 RTD (push-in) terminal blocks instead of the existing 20 pins (URS-08RT-2 and URS-08TC-2). • **URS-08RT-8:** This thermal module features 8 Analog Inputs, RTD/Resistance Input. • **URS-08TC-8:** This module features 8 Analog Inputs, TC/mV Input.
Improved Compilation Time	This enhancement addresses performance bottlenecks that were causing extended download times, delivering faster and more scalable compilation processes.

OPC-UA	**OPC-UA Authentication Enhancements:**
	
	• OPC-UA now supports **Username/Password** authentication in addition to the existing Anonymous mode.
	
	• In the Server Settings, a new field allows you to select the Authentication Mode.
	
	• When Username/Password is selected:
	
	   a. A new **Users** section is available, where you can define users, passwords, and assign them to one of two fixed groups: Admin or User.
	
	   b. In the **Address Space**, a new Access Level option is available: **Admin Group Read/Write** - Admin users can read and write to data tags within the PLC, while all other users will have read-only access.

	OPC-40082-2 for Plastic/Rubber Industry (EUROMAP 82.2) Hot Runner Device (HRD) Support:
	- UniStream now supports the OPC-UA HRD (Hot Runner Device) Address Space.
	- Requires a license purchase, available from your Unitronics' sales representative.
	- **One-hour Trial Offer:** This free, fully functional trial offer enables you to explore UniStream's HotRunner functionality for 60 minutes at a time.
	- Supports up to **3 zones.**
	- Provides structured access to diagnostics, machine configuration, maintenance, operation, and zone management.
REST API	- **GET FILE Request Method:** you can now download files directly from web servers to SD card or USB storage using the new GET FILE request method.
	- **File Parameters Configuration:** Use the new dedicated **File Parameters** for configuring file paths, storage location selection, timeout settings, and retry attempts for reliable file downloads.
	- **Authorization Method:** you can now use long QAuth tokens up to 1,100+ characters (previously limited to 256), with **buffer-based storage** for seamless API integration.
SD Card Management Improvements	- **Safe Remove SD:** Use this Project-level Action with an optional Status Tag to monitor removal progress and results.
	- **Re-mount SD Card:** Together with Safe Remove SD, the Re-mount SD Card action eliminates the need to remove or reinsert the SD card physically. In some instances, it can also unlock a locked SD card and enable you to continue working without rebooting.
	- **EXT4 Support:** You can now **format SD cards** and **DOK devices** as EXT4 directly from the system. EXT4 offers improved resilience against power failures, reducing the risk of data corruption compared to FAT32. This is particularly important since Windows cannot format to EXT4 file system. **Note:** - You must reboot the system after formatting for the changes to take effect. - Make sure only one DOK is connected during formatting.
UniCloud Asset Registration	You can now register PLCs, create assets, and activate UniCloud communication directly from UniLogic. - **New PLC UniCloud Connectivity:** Register PLC, Create Asset, Activate Asset, Enable/Disable Remote Access, and Start/Stop data transmission. - **Integration Checklist:** Navigate to and verify configuration of Tags, Alarms, Remote Access, and Data Backup (marked ✅ when complete). - **Safety Enhancement:** 'Select Asset Type' is disabled if an asset type already exists in the project to prevent accidental changes.
Alarms	Alarms now support several new features: - **Alarms Struct:**

- New Global tags enable you to track the total number of alarms pending reset, acknowledgment, or viewing, along with a flag indicating if any alarms are pending.

- New Group tags enable you to include an array to track the number of active alarms for each group, as well as arrays for alarms pending reset, acknowledgment, and viewing, organized by group. Each array will have a size of 32 to accommodate all groups. Additionally, it will have a bitfield indicating if any alarms in a group are pending (Reset, ACK, or View).

- **Properties Window:** Alarm Limits

To reduce panel RAM usage and enhance performance, the default values for Alarm configuration have been modified to limit the number of Alarm rows in both Summary and History widgets to a maximum of 32.

A compile warning message has been introduced for projects in which these limits exceed 32.

- **Properties Window:** Terminology Updates

The terminology in the Alarms Properties Window has been updated to improve clarity:

Previous Term	New Term
Notification Banner	Alarm Indicator
Banner Color Mode	Indicator Color Mode
Banner Color	Indicator Color
Banner Location	Indicator Location
Banner Type (drop-down options)	Alarm Indicator Type (drop-down options)
• Large	• Icon + Banner
• Small	• Icon only
• None	• None (No icon or banner)
Is visible when idle	Show when Idle
Is Snooze Button Visible	Show Snooze Button

These changes are visual terminology updates only and do not affect existing functionality.

New Default Project Options	The latest update introduces the ability to configure existing project options as default global settings, improving consistency and efficiency when creating new projects. These settings can be accessed under **Project > Options**, which simplifies the setup process for new projects.

- **General** - You can now set default values for auto-starting online mode, using ping for discovery, showing project differences, enabling MODBUS advanced functions, configuring power flow color, and defining the Ladder editor's initial zoom level.

- **HMI/Web Designer** – Added the ability to configure default settings for auto-fitting HMI screens and web pages, setting a default web page background color, and selecting a default theme for new projects.

	• **Print Options** – You can now define default Ladder tag input sizes with options ranging from Normal to Extra Extra Large.
	• **Default Regional Settings** – Introduced the ability to pre-define CSV delimiters, thousands separators, and decimal symbols to match regional preferences.
	• **Default Panel IP Settings** – New global defaults enable you to pre-configure IP addresses, subnet masks, and gateways for new panels.
	• **DNS Servers** – You can now define default primary, secondary, and tertiary DNS servers.
	• **DHCP** – A new option enables or disables DHCP by default for automatic IP assignment.
	• **Default CPU IP Settings** – You can now configure default CPU network settings, including IP address, subnet mask, gateway, and TCP keep-alive parameters.
	• **Default VNC Passwords** – Introduced the ability to pre-define VNC access settings, including enabling VNC, full-access passwords, and view-only passwords.
	• **Proxy Settings** – You can now set default proxy configurations, including no proxy, system proxy, or manual proxy settings with server, port, username, and password fields.
	• **Alarms Default Configuration** – Added a new global setting to pre-define default alarm configurations for all new projects.
	• **Logging** – You can now enable or disable log downloads by default to streamline troubleshooting and analysis.
Global Tags	You can now quickly find the desired tag type using a **searchable combo box** in the Tag Editor. When selecting a type, a **filter text box** appears if there are **7 or more** available types, allowing case-insensitive filtering with highlighted matches. The drop-down resets upon reopening, ensuring a streamlined selection process.
Password-Protect ALL Project Elements via Solution Explorer	You can now secure your entire project with a single action by right-clicking on the Project in the Solution Explorer, selecting **Protect All**, and establishing one password for comprehensive protection—later, simply right-click the Project again, choose **Unprotect All**, and enter your password to unlock all elements simultaneously.
New HMI Elements	• **Simple Elements:** Now includes an **Ellipse** widget, used to display a static elliptical shape. • **Graphs/Meters Elements:** Now includes a **Stacked Chart** widget, used to visualize multiple data series stacked in a single chart. • **Legacy Elements:** A new Legacy group has been added. It includes widgets that rely on legacy data structures and workflows using direct memory access - such as integer arrays representing ASCII strings. The Legacy group elements include: a. **ASCII String** widget, used to display text from an array of integers as ASCII characters. b. **Password ASCII String** widget, used to input masked text stored as ASCII values in an integer array.
HMI Editor Additions	• **Data Table:** Use the new **'Tag: Edit Enabled'** option in the **Data Table (DT) widget** to assign a BIT tag to enable or disable the **Edit** button dynamically. The Edit button remains functional only if the Data Table is not marked as **Read-Only**.

	• **Combo Box:** Use the new **'Dynamic'** option in the **Location** parameter to enable the use of String tags and constant strings in the Options list. This provides greater flexibility for creating context-sensitive drop-downs while maintaining copy/paste and export/import functionality. **Note:** Dynamic combo boxes are not supported in web server exports. • **Numeric Box:** Use the new **Ranges** property for Numeric Box elements to dynamically change background and foreground colors based on tag values.
Web Server	You can now secure your PLC web applications with HTTPS protocol support, bringing improved security and data protection to your web server communications.
LF: Store Not Bit	Use this Ladder function to invert the state of an input bit and **store its logical NOT value** into a destination bit.
LF: Gray Code to Decimal	Use this Ladder function to **convert data received in Gray Code format** into its equivalent decimal value.

Additional Features

- Connection Cancellation: You can now cancel PLC connection attempts that are in progress. When initiating a Download or going Online with a PLC that isn't properly connected, you'll find a new Cancel button on the "Connection Verification" dialog.

- Motion: CAM Table enhancements and system updates.

- FTP Client: added support for selecting FTP Transfer Modes (Passive/Active) and specifying custom Port or Port Ranges for Active mode.

- Via Hardware Configuration, you can now configure VNC Server settings to include visible pointer control and touch input functionality, ensuring compatibility with UniCloud.

- User Access Control: We've introduced an improved user session control feature in the UAC properties, **Auto Logoff, and Return to Home Screen. Note:** to enable this functionality, you must enable **'Set Touch bit'** at UniApps>Network>VNC Server>General.

- Find and Replace: This functionality, accessible from **Ribbon > Edit > Find and Replace** OR by pressing **CTRL+H**, is being enhanced to allow more flexible type replacements while maintaining logical compatibility. **Note:** incorrect replacements may result in compilation errors; therefore, verify that the proposed replacement maintains the intended logical flow and data integrity of the program.

- Message Composer: You can now use constant values in the Decimal Point Location field for Number Variables in scanned messages.

- Options > Localization: This version includes German language localization.

- Buffers: You can now create and use buffers size up to 8192 bytes (8 KB).

- UID-0808THS counters now support INT32 (signed) format, enabling proper counting in both directions without underflow when pulses move backward. **Note:** projects using UID-0808THS counters with modules running boot version **1.1 or lower** cannot be upgraded to this version or higher.

Bugs Fixed in this version

- ForEach Loops:
  -Copying and pasting Ladder elements within a ForEach loop could create a duplicate "Current Item" variable (e.g., "Current Item_1") if the type was different, causing the loop to become unusable.
  -using "Current item" in a 'Copy buffer to tag' function within a 'For Each' loop caused compilation errors.

- Custom Control:
  -UniLogic enabled assigning a Writable Parameter tag of a different type in the HMI than the type defined in the Custom Control (CC). **Note:** This fix may cause **compilation errors** in existing projects where the Writable Parameter tag type in the HMI does not match the type defined in the CC. You should review and update your projects accordingly.
  -when using a Message Box with a Set Bit action on a button inside a Custom Control, the message box did not function correctly if the bit tag was passed as a parameter.

- Calendar Widget Date Range Extension: The date range has now been expanded to support selections through December 31, 2037.

- The FTP Server now supports usernames containing backslash characters.

- FTP Compare File: In some instances, the function would complete successfully (with the FTP server variable indicating completion) but fail to populate the status variable in the main application.

- Data Sampler:
  - The Sample Time column in CSV files used period ('.') as decimal separator even when comma (',') was selected in Data Sample structure. **Note:** This setting is specific to the Data Sampler's internal number formatting and is unrelated to the CSV Delimiter setting in regional options.
  - active .usmp files were not properly backed up during system powerup, preventing data loss during power cycle events.

- HMI:
  - In certain cases, **Password Box** and **Numeric Password Box** widgets would lose their authentication-specific action properties (succeeded/failed options) when copied between HMI screens, incorrectly displaying generic input actions (press/release/click) instead.
  - In certain cases, copying and pasting a **Linear Gauge** with an INT32 Value (Range Bar) on the same screen caused a compilation error.
  - In certain cases, when entering Online mode, HMI lines would disappear.

- HMI/Web Elements: copy-paste and repositioning of grouped HMI/Web elements no longer cause incorrect misaligned placement after editing in the property grid, downloading to PLC, or reopening the project.

- CAN Layer2: US15 received its own transmitted CAN messages, causing undesirable behavior in certain cases.

- The VNC Touch Bit now remains ON while a screen button is being pressed and turns OFF only upon release.

- Modbus: Using the Write/Read Multiple Registers function with a Modbus serial slave set to Version 2.0 caused data overlapping, where read addresses incorrectly displayed values intended for write addresses.

- Project-level Global Action **'Safe Remove SD'** could incorrectly trigger an 'SD Lock' and delete SD card contents.

- ST Logic: Comparing negative values multiplied by an expression (e.g., *variable x*) returned incorrect results.

- Alarm Summary checkbox status column no longer displays a double check mark.

- UniLogic would crash during project compilation when a TC8 module was connected through an IO Adapter in US15 projects.

- EtherCAT: Initialization Status may return status 4, Initialization Failure, when using more than 4 total cyclic and virtual axes combined. A compilation error has been added to prevent runtime failures and provide clear feedback.

- OPC-UA client: The system incorrectly used the hostname instead of the static IP in certificates, even when no hostname was configured, causing "BadHostname" errors during client connections.

- Corrected object addresses for Stopper Torque and Blocking Time parameters in CANopen Homing Methods.

- In certain cases, PLCs could not go online due to unsupported cipher suites, causing TLS handshake failures.

- UniApps, Auto-Sync: PLC time synchronization failed due to cached API output.

- UID-0808THS: Incorrect actual position displayed during PTO back-and-forth movement.

- Data Tables: When the 'Show Array Member Names' checkbox was enabled, names were not displayed and toggling the option had no effect.

- UCR Router: Initialization might fail if the password contained special characters or if the model was incorrectly identified.

Change Summaries for Previous Versions begin on the following page.

UniLogic® V 1.40.136 UNISTREAM® OS 1.40.139 November, 2025

Due to a technical issue (effective November 5th, 2025), UniLogic versions 1.40.xxx may experience connectivity issues with the UniStream product series. **Unitronics has released updated UniLogic versions that resolve this issue without requiring a PLC OS upgrade.**

Please note that PLCs operating in the field continue to work normally. The issue affects only the connectivity between UniLogic and the PLC.

To restore connectivity, it is mandatory to upgrade UniLogic to version 1.40.136.

Change Summaries for Previous Versions begin on the following page.

UniLogic® V 1.40.135 UNISTREAM® OS 1.40.139 July, 2025

This Service Pack provides the new functions and bug fixes listed below.

Note: This version requires you to update your PLC firmware.

New Functions

- UniCloud: now includes a new feature enabling users to programmatically control the Secure Remote Access (SRA) functionality directly from Ladder Logic, providing more flexibility and automation options for remote access management.
  Previously, SRA control was only available through UniApps, limiting when and how users could enable or disable remote connections.
  The new feature adds two Global Actions; **Stop UniCloud SRA** and **Start UniCloud SRA**, that become available automatically when UniCloud is enabled in the application, and can be triggered from various UI elements and logic conditions.

- MQTT: Subscription Parameters now supports saving parsed JSON results directly to SD file storage.

- REST API: Response Parameters now supports exporting parsed JSON responses directly to SD file storage.

- USL Displays: configuration options now include selection by hardware model for easier setup. Navigate to *Hardware Configuration>Controller Model>Properties Window>VNC Server Resolution* to access this feature.

Bugs fixed in this patch

- LF: SD File Operations: when using literal strings as file path parameters, the 'Read Line from File on SD' Ladder function would fail with status -2.

- Modbus: when changing a Modbus TCP slave IP address through UniApps, the Modbus TCP master would freeze despite this configuration change being a supported operation.

- UMD-B5: when selecting torque limit units other than "0.1% Tn" in the UMD-B5 Axis configuration, users encountered an issue where attempting to enter values resulted in "NaN" being displayed.

- HMI: when creating rectangles with rounded corners in UniLogic HMI screens, the corner radius settings would reset after restarting the application. This issue specifically affected users with UI language settings in Polish, Chinese, Czech, Korean, Russian, and Turkish.

- HMI:
  -when tag names containing ("\u") were used in Audit values, the HMI Service would fail to start, displaying an indefinite hourglass and eventually a black screen.
  -when Custom Control names contained quotation marks (") and included HMI elements with actions, the PLC would become unresponsive after download, showing an hourglass screen or black display instead of the expected startup screen.

- RedFish Protocol:
  -Incorrect Redfish version returned by Chassis endpoint
  -Incorrect Thermal Equipment response body text that used "CoolingUnits" instead of "CDUs"

- Emails: when configured to use port 25 with both *Use TLS* and *StartTLS Support* disabled, Sendmail incorrectly attempted to send emails using SSL.

- CANbus "Sniffer Filter": in certain cases, struct members or array elements used as tags in CAN sniffer configurations were not properly recognized, particularly when defining operational modes with power-up values.

- When certain analog input pairs were configured with mixed signal types (voltage/current), the voltage input would read at half its proper range (0-5V instead of 0-10V) and current inputs would display incorrect fixed values. May impact TA32 models.

- LF: Set DTI Column Value: when negative index values were passed to DTI column operations, CPU errors occurred.

- SMS: in certain cases, when sending SMS messages with string variables in the message body, the first digit of the variable was incorrectly appended to the destination phone number, causing messages to be delivered to wrong recipients.

- Export Project File: entering a valid serial number under "Allowed PLCs" during project export or download file creation would result in the value not being saved.

- Ethernet/IP: Structured-Text compilation error when referencing EIP structs with consecutive underscores.

- Retained tags' initial values not loaded when importing applications via USB DOK.

Change Summaries for Previous Versions begin on the following page.

UniLogic® V 1.40.103 UNISTREAM® OS 1.40.112 March, 2025

This Service Pack provides the new functions and bug fixes listed below.

Note: This version requires you to update your PLC firmware.

New Functions

- Redfish: now includes significant enhancements to the Redfish Protocol, the new **Control Object** brings control capabilities that were previously unavailable in the protocol, including the ability to connect sensors, define allowable values, associate with multiple sensors, and link to related system components. The update introduces robust control mechanisms for cooling systems, including start/stop functionality, parameter adjustments, and mode selection.

- Load Config .INI:
  -now enables setting the 'PLC Name', allowing machine differentiation without sharing the UniApps password.
  -now enables setting the 'CANbus baud rate', allowing configuration without accessing UniApps for enhanced cyber-security.

- REST API: now enables configuring custom HTTP **Headers**. This enhancement supports projects that require custom headers to be set by the user.

- IO-Link: now supports 2 New Digital Hubs
  ULK-1616N-M2P6 - IO-Link HUB, 16 I/O ,NPN, M12, IP67
  ULK-0808N-M8P6 - IO-Link HUB, 8 I/O, NPN, M8, IP67

- Web Page Password Box Elements: now include the **Actions** property.

Bugs fixed in this patch

- IP Settings Edit HMI Widget: UniLogic would crash when 'IP Address Type' was set to CPU or DNS.

- In certain cases, SQL queries crash, and I/O Bus errors occur after a PLC upgrade, requiring system reboots.

- Resolved an issue where the 8th input module on a Remote IO URB-TCP was not read correctly and sometimes showed incorrect high-state bits for modules 7 and above.

- LF: Bits to Num: Bits in the resulting number were not reset properly.

- Web Server denied access when a favicon was unintentionally used in the application.

- RestManager authorization using a token from a tag failed, resulting in the tag not being registered and returning an empty value.

- HMI Rectangle: widgets with a black border were not displayed correctly. Additionally, white rectangles were not visible on the screen.

- The alarm banner appeared even when the **Banner Type** was set to 'Small'.

- In certain cases, the 'FTP Put' command would fail silently when the command length exceeded 256 characters, showing a successful status despite not actually writing files to the FTP server.

- When importing EDS files in UniLogic V 1.33 and beyond, input and output variables are incorrectly imported as bit-type format instead of the expected INT format.

- TCP server on US15 PLCs rejects new client connection attempts following client disconnection events.

Change Summaries for Previous Versions begin on the following page.

UniLogic® V 1.40.71 UNISTREAM® OS 1.40.91 January, 2025

UniLogic 1.40.71 introduces performance enhancement: **Improved download time**. After the initial compilation, subsequent downloads are now completed faster compared to previous versions. This upgrade reduces development time and increases productivity.

This version supports the **UAC: Audit** feature to ensure compliance with **FDA 21 CFR Part 11**, supporting secure and traceable record-keeping.

Improved Download Time	After the initial compilation, downloads are now completed faster compared to previous versions. This upgrade reduces development time and increases productivity. Note that: • Older UniLogic versions (previous to 1.40.xx), will not be able to communicate with controllers running firmware OS 1.40.xx and higher. • Attempting to download to a controller running older firmware will raise a warning, informing the user that the download cannot be completed until the firmware is updated. • If the PLC is running firmware version 1.40.xx or higher, UniLogic versions earlier than 1.40.xx will be unable to communicate with it. As a result, downgrading the firmware using UniLogic 1.39.xx is not possible. In such cases, use a USB stick as explained in the UniLogic Help topic Firmware>How to Downgrade Firmware.
UAC: Audit	The new **Audit** feature is especially needed for ensuring compliance with FDA 21 CFR Part 11, supporting secure and traceable record-keeping. This feature logs system events and user actions across various elements, including: • **User Access control (UAC):** Tracks login, logout, and authentication changes. • **Date & Time:** Logs changes to date and time. • **VNC:** Records remote connection and disconnection events. • **Alarms:** Captures alarm acknowledgments and clear actions. • **Actions:** Monitors global and local actions, such as tag modifications and bit operations. • **HMI:** Tracks interactions with elements like buttons, sliders, and data tables. The feature also introduces a Global Action: **Export Audit Trail**, which generates digitally signed CSV reports using user-defined separators. This ensures data integrity, traceability, and compliance with regulatory requirements.
Project-level Actions	Actions now include the ability to **Load Last Screen**.
Third-party Protocol Functions	New Ladder function for **Build Message Indirect** provides dynamic message selection.

MQTT	Subscription Configurations now support parsing nested JSON objects using the new **Complex JSON** format, including the ability to capture entire JSON structures with the **BUFFER** parameter.
HMI Editor Additions	• HMI Numeric Elements: now includes a **Password Numeric Box** • HMI Graphs/Meters: now includes a **Dynamic Linear Gauge**, enabling dynamic changes to widget properties. • HMI Digital Date and Digital Time: now include additional **format** options • HMI Rectangle Elements: now include the **Actions** property • HMI Numeric Box Elements: now include **Linearization** options
WE: Web Page Widgets	• WE Text Elements: now support **Password Box** widgets. • WE Simple Elements: now includes an **Ellipse** element

Alarms	Alarms now support several new features:
	
	• Global:
	
	   o Default Summary Sorting
	
	   o Suppress All Alarms
	
	• Each Alarm now includes:
	
	   o Log To History - by unchecking this option, you decide which Alarm events should not be recorded in the Alarm Log folder on the controller's SD card and displayed in the Alarm History widget.
	
	• New Alarm Ladder Elements:
	
	   o ACK / ACK & CLR Alarms

AOI: Detect Color Ladder Elements	Use the **Detect Color from Image** and **Detect Color from Camera** Ladder functions to enable optional noise filtering and Region of Interest (ROI) settings, with LAB color space facilitating precise color difference calculations using Delta E.
LF: SD File Functions	SNMP: You can now use the *.ini file to change the destination IP Address of an SNMP Trap.
LF: Toggle Bit	Use this Ladder function to toggle a specific bit's state within an array of bits whenever a designated condition is met.
LF: Num to String	Use this Ladder function to convert a number into a formatted string.
LF: Buffer Tools	Use the **Copy Buffer to Array** and **Copy Array part to Buffer** Ladder functions to streamline data handling by efficiently transferring information between buffers and arrays.
Reset UniLogic Connection	You can now reset the Server via UniApps> System> Control> Reset> Reset UniLogic Connection.
Message Composer	You can now configure a **Checksum Only** option in the Message Composer Group Properties, enabling the use of a checksum without requiring an ETX character, enabling compatibility with devices that use only a CRC16 checksum for message termination.

Additional Features

- Emails: the list of configurable elements in an email now includes **Line Break Type**, allowing you to customize line-break formats for better compatibility across various systems and platforms when composing emails in Outlook. Options available:
  - LF: for Unix/Mac OS X systems
  - CR: for Mac OS systems (pre-X)
  - CRLF: for Windows

- HMI & Web Server Rectangle Elements now enable you to adjust the Corner Radius.

- Passwords: to ensure the password stored in the exported file is applied to the controller during application import, select the new **Overwrite Import/Export App password** option under Project>Downloads>Export project and firmware to a File>Passwords.

- SPA Track: the Solar Position struct now includes 3 additional Output parameters: Sunrise Hour, Sunset Hour and Hour Angle.

- Save As Enhancement: the "Save As" function now defaults to the folder where the current project was opened, rather than the last accessed folder.

- CANopen: FunctionIN tags are now supported for the "F" ear (Input Buffer) and used in the SDO Download function block.
  Note that the SDO Upload function block remains limited to Global tags.

- MODBUS: UniLogic now includes the ability to **Import Slaves** in the Protocols>MODBUS>Slaves section.

- System > Panel Events Struct: a new read-only status bit, Screen Saver On, has been added. This bit indicates when the system is in screen-saver mode.

- Options > Localization: this version contains Korean language localization.

- **Touchprobe** functionality is now available for the E3 servo drives.

Bugs Fixed in this version

- Unnecessary pop-up messages appeared on every power-up when using a USB keyboard/mouse/HID device, incorrectly indicating device malfunction.

- When using the Divide function block on a UINT32 tag, the result is incorrect for values greater than 2,147,483,647, which is the midpoint of the UINT32 value range.

- When activating the Hardware via Online mode with a working connection, a connection error message is displayed even though the activation is successful.

- DataTable HMI Widget: in a Read-Only Data Table widget, the "Enter Array On" button incorrectly appeared, despite no array being defined and no editing being allowed.

- Modbus: the SWAP Bytes operation is now restricted to appropriate data types.

- CANopen: resolved a crash occurring in certain high-load CANopen drive applications.

- Alarms:
  - the change detection mechanism failed to identify changes to the 'Show suppressed alarms' property,

incorrectly indicating no differences between the project and the PLC.
- the alarm banner reappeared in full size after using the snooze button and switching HMI pages.

- UAC: failed HMI logins displayed an error but did not allow retry or cancellation.

- LF: Shift and Rotate:
  - Incorrect byte-based calculations caused Shift Left/Right function to return an Errno for lengths exceeding 8 bits. Bit arrays were unaffected.
  - Rotate Right function always set the Carry bit to zero when used with bit arrays. Rotate Left function was unaffected.

- LF: Linearization: INT32 inputs failed to overflow correctly and produced inaccurate results for large numbers.

- Cyclic Live Trend: UniLogic would crash when a Cyclic Live Trend with curves is copied and pasted multiple times on the HMI.

- Redfish: when disabling Redfish and saving the project, the user could not re-open the project.

- Message Composer: REAL numbers are missing when sending TCP messages via the server TX command on the Built-in models.

- "Data entry complete":
  - tag of an HMI element Numeric Box did not trigger when a value of "0" was entered.
  - bit for a Numeric Value Box (REAL number type) only triggered for non-integer inputs (e.g., 11.2) but not for whole numbers (e.g., 11 or 11.00).
  - Find in Array FB did not work when using an array for the data entry completed event in an HMI widget.

- Capture Image: the "PeriodicTaskManager" would crash during project download/import if there was no camera connected. This would prevent the camera from functioning until the system reboots.

- REST API: assigning REST 'Response/Query Parameters' tags over 1024 bytes caused REST services to fail.

- Quick Sync: when using the 'Sync' button to download tag changes, images and other elements would disappear from the HMI.

- EtherCAT:
  - UniLogic would crash when importing the 'Keyence.xml' definition file from the EtherCAT Slaves Library.
  - Initialization Status may return status 3, Topology Mismatch, after changing cyclic drive type.
  - Updating the EtherCat module firmware must be done with a USB stick, max USB partition capacity: 16GB.

- Online Mode: Local function tag values were not displayed in the grid during online Ladder function monitoring.

- Uni-I/O modules: I/O bus error [Code 0] triggered, when connecting a UAG-CX-XKP module on the Built-in US15 controller.

- UniApps, Auto-Sync RTC: in certain cases, the Auto-Sync feature failed due to a malfunctioning worldtimeapi API, causing the "Sync Now" button to become unresponsive and require a system reboot to update the time.

- VNC Server: in certain cases, due to reverse DNS lookups, VNC clients experienced a few seconds delay when connecting to the UniStream VNC server.

- Custom Controls: in certain cases, using the increment action on a tag passed indirectly (e.g., via a Writable Parameter) concatenated the value instead of increment it (e.g., 1 became 11). Direct writes were unaffected.

Change Summaries for Previous Versions begin on the following page.

UniLogic® V 1.39.103 UNISTREAM® OS 1. 38.55 December, 2024

UniLogic 1.39.103 introduces: Redfish-embedded PLCs. Natively supported by Built-in controllers only, the Redfish RESTful interface API enables UniStream to control data center cooling. This version also launches the new UniStream US15-B10-B1, a powerful PLC + HMI with a big, quick-response 15.6" touchscreen, additional features and bug fixes.

Redfish: Data Center Cooling	Redfish is a RESTful interface API based on a JSON data format, designed for data center management.
New UniStream Built-in US15-B10-B1	The new US15-B10-B1 PLC + HMI Built-in offers: • Enhanced Performance: a significant boost in processing power. • Faster Real-Time Task Execution • 15.6" Touchscreen HMI • No Built-In I/Os—Create the configuration that exactly meets your requirements: snap on Uni-IO to create an on-board configuration, and expand remotely with Uni-IO, Ethernet Remote I/O, EtherCAT, and IO-Link modules. • EtherCAT Compatibility: The US15-B10-B1 is the first UniStream Built-in model to support our EtherCAT master module—and discrete, multi-axis EtherCAT motion.
Online Test Mode: Increased Functionality	• Alarms: you can now click an Alarm, and view all of its properties. Note that the properties are view-only. • HMI Widgets: you can now click an HMI widget, and view all of its properties, including any assigned Actions. Note that the properties are view-only.
AOI: Get RGB Ladder Element	Use this function for identifying the RGB (color distributions), in various objects.
LF: SPA Track	The Solar Position Algorithm (SPA) Ladder function enables UniStream to direct solar panels at the sun all day long for maximum exposure.
LF: Modify Alarm Property	Use this Ladder function to modify an Alarm's description.
LF: Digital Signature Sign	This LF enables you to digitally sign SD generated user log files.

Additional Features

- IO-Link: in the Master's Properties window, you can now set the Pin2 Safe State.

- USB Action files can now be set to require a user password.

- LF: SD File Functions: You can now use the *.ini file to change the IP address of a URB Remote Ethernet I/O in your project.

- User Access Control: In UAC properties, you can now select:
  - Text input to cause the user to type in the user name.
  - Drop down, to allow the user to select the user name from a list.

- OPC UA: You can now rearrange tags by hovering your cursor in the left column to reveal the hamburger menu and dragging the tag to a new location.

- SD Management: You can now save captured images in the following SD card folders:
  - "/SD/Media/Camera"
  - "/SD/Media/Camera/AOI"

Bugs Fixed in this version

- PTO:
  - PTO would crash when a move of one pulse was requested.
  - In certain cases, requesting Immediate Stop would behave inconsistently.

- Calendar Date, HMI widget: selecting a Day of Week via the HMI did not update the Day of Week tag in the RTC struct.

- VFD Write Raw Modbus: CPU would crash when using this Ladder Function.

- Telegram:
  - when building a message, the user could not include read-only tags, the user can now include both read-only and writable tags.
  - within messages, UniLogic identified tags that were linked to parameters as 'unused tags'.
  - UniLogic did not correctly include the values of string ASCII tags.

Change Summaries for Previous Versions begin on the following page.

UniLogic® V 1.38.64 UNISTREAM® OS 1. 38.68 August, 2024

Service Pack 1 for UniLogic, 1.38.64

This Service Pack provides the fixes listed below.

Bugs fixed in this patch

- CPU OS 1.38.29 (included in BIN 1.32.68), caused the On-Board temperature input to return incorrect values.
- BIN version 1.32.68 caused the screensaver to behave unexpectedly.
- Library import might fail due to Timer usage.

UniLogic, 1.38.62 supports a new series of Servo drives and Motors. The new B5 & E5-S* Servo Series expands your Motion potential with a wider power range of up to 7.5kW (10 hp), common DC bus, enhanced tuning, built-in STO (Safe Torque Off), TouchProbe functions supported by new PLCOpen MC Function blocks, and more.

New Servos, Motors, MC Functions	UMD-B5 and UMD-E5-S servo drives and motors are now available in Hardware Configuration. These models offer Touchprobe functionality, supported by two new FBs: • MC TouchProbe Use this to record an axis position at a trigger event. It records an axis position at the point in time of a digital signal (measuring probe function). • MC AbortTrigger This Function Block interrupts a measuring probe cycle initiated by MC_TouchProbe
Servos: Modulo Axes	You can now define Modulo Axes for both EtherCAT and CANopen
Cyclic 'Live' Trend	Cyclic Trends enable you to display a specific time frame of a running variable integer value, for example, the last 10 seconds, as a curve on a Trend graph. The values are not drawn from a Data Sampler, and Cyclic Trends do not store any values, log any data, or create any files.
DataTable HMI Widget	Data Table Properties of Appearance now provide a new option, Scroll Bar Width.

Additional Functions

Enhanced security for Numeric Boxes in both HMI Elements (HE) and in the Web Page Editor. Use the new 'Mask Entry' checkbox in UniLogic to enable this feature.

New Help Topics

- Shift-Rotate functions now have expanded Help topics.
- String functions and Array functions are now fully documented.
- The Schedule Ladder Function topic has been improved.

Bugs Fixed in this version

- UID-0808THS: Stop request during PTO acceleration or deceleration would cause the PTO to freeze, THS OS 10.10.

- UID-0808THS: PTO maximum speed was not updated according to units ratio, THS OS 10.10.

- OnBoard IO: Overflow on 14-bit analog inputs in the OnBoard IO wasn't detected, depending on production calibration. May impact RA28, TA30 and TA32.

- ST Bitwise AND & OR operations are not functioning correctly.

- UID-0808THS - Scenario 3 queue mode fails on frequencies 50KHz and higher.

- "Data entry complete" tag of an HMI element Numeric Box sometimes changes in state is not immediate.

- Pressing Reset Display when using a USB keyboard/mouse/HID device, might cause the screen to turn black.

UniLogic® V 1.37.79 UNISTREAM® OS 1. 37.79 June, 2024

Service Pack 1 for UniLogic, 1.37.79 provides the fixes listed below.

Note: this version requires you to update your PLC firmware.

Bugs fixed in this patch

- Data Tables:
  - Entering Online Mode when working with a Data Table would cause Online Mode to terminate
  - Dragging (undocking) a Data Table would cause UniLogic to freeze, requiring the user to close and reopen UniLogic.

- Printing: when a project was printed to .pdf, the Structured Text functions were not included.

- Screen Saver: continued to run when turned off from UniApps.

- Camera Capture: width and height tags are optional; however no image would be captured if these tags were left undefined.

- SD Management: selecting to clear the Camera folder did not remove AOI debug files.

- UCR Routers; name error: UCR Routers delivered after June 1st, 2024, require this version of UniLogic (Service Pack 1 to 1.37.00) or later.

Also included in this release: MODBUS>Advanced Properties Window: Float Type has been renamed to 4-Byte Swap Type.

UniLogic, 1.37.00 supports a new series of Servo drives and Motors.
The new B5 & E5-S* Servo Series expands your Motion potential with a wider power range up to 7.5kW (10 hp), common DC bus, enhanced tuning, built-in STO (Safe Torque Off), TouchProbe functions supported by new PLCOpen MC Function blocks, and more.

E5-S EtherCAT drives are coming soon.

New Servos, Motors, MC Functions	UMD-B5* and UMD-E5-S servo drives and motors are now available in Hardware Configuration. These models offer Touchprobe functionality, supported by two new FBs: • MC TouchProbe Use this to record an axis position at a trigger event. It records an axis position at the point in time of a digital signal (measuring probe function). • MC AbortTrigger This Function Block interrupts a measuring probe cycle initiated by MC_TouchProbe *The current version of the diagnostic application does not support the B5 series*
Servos: Modulo Axes	You can now define Modulo Axes for both EtherCAT and CANopen
DataTable HMI Widget	• Data Table Properties of Appearance now provide a new option, Scroll Bar Width. • The HMI DataTable widget UAC configuration now offers Element Restrictions, which offers an Invisible option; when enabled, the widget will appear only to users who log in with the correct user level. Note that you must enable User Access in order to reveal the Invisible option.

UniApps	• Open Menu: by default, to open UniApps, the end-user must touch and maintain contact for several seconds with the upper right corner of the HMI Panel touchscreen until the UniApps sidebar menu appears. You can now change the location of the point of contact in Hardware Configuration>Controller Model>Properties Window>UniApps Side by Side menu. • User Access Control: the interface has been improved; when adding users, only the groups and users that are used in the project, and that have assigned roles, are now shown.
Live Trend	The number of curves for a single Live Trend graph has been raised from 4 to 8
UniCloud Data Backup	If you have a UniCloud subscription from Basic Data subscription or greater, you can backup data stored on your controller's SD to the cloud. The data is stored in the cloud in a .zip file, and can be downloaded, or restored from UniCloud back to the PLC.
USL Displays	In UniApps, you can now connect via hostname, as well as IP address, by accessing UniApps Network>General IP/Hostname, and selecting Hostname.
HMI Widgets	Circular Gauge widgets now offer the option Whole Circle; selecting this option results in the gauge numbers and ticks covering the entire 360 degrees of gauge.
Project-level Actions	Actions now include the ability to actviate and deactivate the Screen Saver
TextBox widget	The numeric keyboard now offers commas and dots

Bugs Fixed in this version

- Load Config from INI: when done from DOK, was not supported by the USC-B3 models.
- REST_API: Minor changes might result in 'Download All with Reset' when it was not necessary.
- BACnet: "Access Denied" error would result when trying to write to Binary Value.
- Servo Ladder Functions: Loading a Servo configuration after Storing it would result in Configuration Mismatch Error (-5).
- UniApps Timzone: setting timezone from UniApps did not update the localtime file with the new timezone link.
- "Set value" HMI Action took excessesive time (~1s-2s).
- Live Trend Widget, Web Server: "Curves" button did not work.
- UniStream UAC: User names were case-sensitive, and allowed duplicate usernames.
- Router INIT Ladder function would fail (-9) when there was no SIM card installed.
- The option to change the Open UniApps side menu location was visible, but did not take effect.
- C Functions:
  -Global variable tag values did not change on nested C function calls
  -If a Global tag was used in a FunctionOut call, the value did not update
- Asset Type: UniLogic would crash after refreshing an Asset Type, if a Demo Asset Typewas selected.
- UAC struct: if a user was changed to different group via UniApps, the "comment" in the UAC struct did not update the name of the changed group.
- Load Certificate Status: the Error PopUp did not in the correct format.
- THS: PTO Move would stop running after a period of time.
- Call Function: the hyperlink to calling function was missing, if the called function was type C or ST.
- 0808THS module: Counter+scenario 3 encoder A/B did not function properly.

UniLogic® V 1.36.44 UNISTREAM® OS 1.36.44.xx March, 2024

This version of UniLogic supports the new B7 VFD series that supports EtherNet and provides closed-loop control, a new analog IO-Link hub, the ULK-0808AIO-M2P6, Telegram messaging, and more.

VFD: New Series	VFD B7 is the successor to the B5 series, bringing you motor control for torque, speed, and boosts safety with built-in STO. These expandable inverters offer advanced motor control with features typically found in specialized drive solutions. Optional: Ethernet communication, I/O, and closed-loop encoder cards.
IO-Link: New Analog Hub	The new analog IO-Link hub, **ULK-0808AIO-M2P6**, provides 8 input/output channels that can be set to either current or voltage.
Telegram	UniStream controllers now support Telegram messaging via UCR router. Integrating Telegram support into your machine can offer several advantages: • Real-time monitoring and machine control via Telegram's fast messaging service • Automation: for example, in your UniLogic project, you can build a program that sends alerts or reports about machine performance to a Telegram BOT. • Security: Telegram messages are highly encrypted, which can aid in protecting sensitive machine data. • Multi-platform Access: Telegram allows you to access your chats from multiple devices--from any location. • Free of Charge: Since Telegram is free for unlimited use, it is a cost-effective solution. • Team communication: the ability to create groups or channels in Telegram can aid in various ways, including support.

Additional Features

Change VNC Password	You can now use a Ladder function block to change the VNC Server Password and Management Level.
VFD: Read/Write Direct	New Ladder Elements, VFD Read Raw Modbus and VFD Write Raw Modbus enable you to directly read and write to a VFD.
HMI Element: Slider	A new property has been added, Preserve Margins. This is checked by default; uncheck if you wish to decrease the padding around the slider.

Bugs Fixed

• B1 VFD models: in certain cases where the rated voltage was changed, the configuration was not saved.

• Digital Time HMI Element: behavior was Read-Only without regard to the actual setting.

• IO-Link:
-The IODD parser would incorrectly set the master's port configuration value.
-Adding 4 device IIOD's toone IO-Link master wouldcause compilation error.

- WebServer password protection: if protection was removed and project then saved and closed, when reopened the webserver in the project would still be password-protected.

- Application Download: after upgrading from BIN 1.32.112 to BIN 1.35.47, users could not download a UniLogic application to the controller.

- HMI Action - Set Value: if a HEX value was given, the specific action was not applied, and other actions were ignored as well.

- Servos: Drives would not recover communication after a power outage.

UniLogic® Service Pack UNILOGIC® V 1.35. 227.92 UNISTREAM® OS 1.34.47 December, 2023

This version of UniLogic, released in January 2024, provides security enhancements to protect networked controllers from cybersecurity threats.

(*Special thanks to Noam Moshe of Claroty Research - Team82.*)

Note that the Equipment Level cybersecurity measures described in the Unitronics' document hosted on our website, 'Unitronics Cybersecurity for UniStream PLC Series' are now mandatory.
In addition, the Network Level protection measures described in that document, including using a VPN to secure communications and protect equipment, are strongly recommended. Implementing Network Level protection is the responsibility of the user.
This version of UniLogic requires you to change the default PLC communication password and to implement complex password. In addition, this version requires you to implement a VNC password.
Unitronics strongly recommends that users with existing applications comprising networked UniStream controllers update to the current version.

Security Features

PLC Password	As of this version, UniLogic **requires** you to change the default PLC communication password, and requires you to assign a complex password the first time you establish UniLogic to UniStream communications to a particular PLC, for example at application download, or to run online Test mode.
	The PLC password must be at least 8 characters long and must contain at least 1 digit, lower case letter, and upper case letter, in addition to at least 1 symbol.
	Once a password is assigned to the PLC, UniLogic stores that password for that specific user (the user currently logged into Windows).
	When any user attempts UniLogic to UniStream communications, UniLogic authenticates the user access permission to that specific PLC.
VNC Password	As of this version, enabling VNC requires you to create a strong password. The option to enable VNC without a password has been disabled.

Addtional Feature

2 VFDs via RS485	Relevant for Built-in and UniStream PLCs, not UniStream Modular. You can now add 2 serial RS485 Add-on Ports to your hardware configurations, and define the port of each to VFD.

Bugs Fixed

- IO-Link:
- RPI (Requested Packet Interval) was linked to the total number of linked devices, when should be linked to the total number of masters.
- IODD files were sometimes incorrectly parsed

- Modbus Slave IP: in certain cases, updating a slave IP manually or via TCP did not write the new address to the Modbus slave.

- VNC Client, UniApps: the cursor was visible when Disable Cursor was turned ON.

- AOI, compilation errors: in certain circumstances, AOI rectangle coordinates were not assigned to the correct struct tags.

- UniLogic might shut down when a project was saved as 'Save As', reopened, and a module (HMI. Ladder, Web) was added.

- Web-server:
- Copy&Paste of of Numeric Box and Timer Box into a web page would cause UniLogic to shut down at compliation.
- Numeric values were sometimes incorrectly displayed with thousands separators.
- Numeric box: configuring Language> Regional Settingsa to show a thousands separator would show the separator in UniLogic, but the number would be displayed without the separator.
- Numeric box: values configured as normal text would appear as bold text.
- After editing, Web pages would sometimes appear with incorrectly-sized fonts, incorrect background colors, and incorrectly-underlined values.

- Quick Sync mode, Online: a project is verified **before** entering Online mode. For this reason, Quick Sync no longer reestablishes connection and re-verifies project.

- HMI Timer box: 'Text Before' would not be displayed if 'Text After' was not configured as well.

- Structured Text: using 'TO_ REAL' inside a FOR Loop would cause a compilation error.

- Set DTI Column Value inside a ForEach loop causes compilation error.

- Load Config from INI: did not allow a remote URL to be set for the FTP client.

- C functions: creating a C function, upgrading the UniLogic version, and adding additional lines of code caused compilation errors.

- EDS files:Ethernet IP Structs with INT arrays did not load correctly in Unilogic 1.34.192.

- Changing COM port settings from UniApps: if the port was set to Modbus, the change did not take effect.

- SFTP client: PLCs failed to send files via SFTP when the password contained an ' (apostrophe).

UniLogic® Service Pack UNILOGIC® V 1.34.92 UNISTREAM® OS 1.34.78 October, 2023

The UniLogic version, released in October 2023 brings you the features and bug fixes listed below. Powerful new features include support for both IO Link masters and devices, Structured text, AOI, the ability to open and run up to 3 instances of UniLogic, and more.

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New Features

IO-Link	UniStream controllers now support IO Link. All UniStream controllers support the new Unitronics IO-Link Master products. Specific models of masters and modules as well as cables are available from Unitronics; these models are visible in UniLogic's Hardware Configuration. In addition to the specific IO-Link modules offered by Unitronics, you can include other IO-Link devices and import the device's IODD (IO Device Description) that is supplied by the device manufacturer.
Structured Text	UniLogic now offers a Structured Text editor, along with library of functions such as MAX MIN, LOG, EXP, Trig functions and more. You can build Structured Text functions and use them in the same way you use standard ladder or C functions. You can call them just like standard ladder functions, reuse them, and export/import them via the Library. You can also refer to Ladder functions. Structured Text: - Enables text-based development, that is compact and easy to read - Is highly portable--and allows you to copy developed functions from other brands - Allows easy comparison and source control
AOI (Automatic Optical Inspection)	New Compare Image Ladder functions now enable you to compare: • Images from a connected USB Camera to an image stored on the controller's SD card • Two images stored on the controller's SD card You can select the algorithm family and specific algorithm that the function will use to compare them. Algorithm families include: • Pixel-wise Comparison • Histogram Comparison • Template matching • Feature Detection and Matching
UniLogic: Multiple Instances	You can now open and run up to three UniLogic projects at the same time to compare them. You can also transport the following elements between them:

	• Drag & Drop, or copy & paste Ladder elements and rungs from one open UniLogic project to another open project. • Copy HMI/web page elements, including all of the elements on a screen/page, from one open UniLogic project and paste it into to another open project. Note that UniLogic automatically creates tags and structs as needed.
MC Motion Functions: Buffer Mode	The parameter Buffer Mode has been added to the MC Function Blocks listed below. Note that this mode is relevant only for Cyclic or Virtual Axis motion. • MC GearIn • MC GearOut • MC GearInPos • MC CombineAxes • MC MoveAbsolute • MC MoveRelative • MC CamIn • MC CombineAxes
Motion: Virtual Axis	In Motion > Axis, you now have the option to add a virtual axis. You can then use it as a virtual machine shaft, master axis, or any other intermediate axis for complex relationships between master axes and slave axes.
Camera Ladder Functions	Camera ladder function Capture Image now includes Image Width and Image Height parameters. You can use this feature to capture images of the correct dimensions for AOI.
UniCloud	You can now use Asset Type as a template to: • Allow the share of a defined Asset Type on equipment using different types of hardware • Reuse configured dashboards without the need for using Tag Types
REST API	**XML response support:** • New Content Types: in addition to JSON, UniStream now also supports xml, Text/Plain, and x-www-form-urlencoded support • Requests: you can now select to accept JSON or XML for all request types. **JSON Content Parameter Levels:** these have been increased from 3 levels to 5.
C: Online Mode and Global Tags Property	You can now: • Enter OnLine Mode when viewing a C function and view the value of individual tags, as well as view all of the struct member values. • Include global tags in your C code, enabling you to use them via online mode, without having to pass them as a parameter.

Quick Sync	When in online mode, you can enter Quick Sync Mode then change logic and tag assignment.
Router: Get/Set IOs	New ladder functions enable your to read from and write to the status of I/Os on Unitronics B5 and B8 routers.
Rung comments	Double-clicking on the rail now allows you to add/open a rung comment.
Tag Groups	You now have the option to group global and timer tags. You can also right-click a tag group and rename it; all tags in that group will be automatically assigned to the new name.
UniApps in Spanish	The UniApps interface now supports Spanish; to display different languages in the UniApps interface, select the desired language in Hardware Configuration> Controller Model > Regional settings.
Alarms	There is now an option in Alarms Banner notifications to link a bit that turns on when the end user presses the Snooze button.
LF: Load Config Ini	• MODBUS: You can now set ModbusTCP (IP Address, Port) parameters in your application via the Load Config - .ini ladder function. • Load from DOK: Load Config .ini now allows you to load a file from a DOK (USB stick) as well as from an SD card.
Ladder Elements: Up Down	Located in the Ladder toolbox under Basic Elements, these Ladder elements pass on the RLO of a rung--without being linked to a tag: • The Up element assigns TRUE to the output signal Out for one cycle only when the input signal In changes to TRUE. Otherwise, the value of Out is FALSE. • The Down element assigns TRUE to the output signal Out for one task period only when the input signal In changes to FALSE. Otherwise, the value of Out is FALSE
PC-PLC Password	You can now change the PC-PLC communication password via UniApps> System> PLC >System > PLC Password.
Project Password	You can now assign a password that will be requested by UniLogic whenever anyone attempts to open the project.
WE: Web Page Widgets	Web Pages now support Time and Date widgets; configure them the same as you do HMI Time and Date widgets

Additional Features

• When the VNC client is attempting to re-establish communications, a popup timer is now displayed, counting down the remaining time until retry.

• Modbus Slave IP addresses are now automatically updated when the IP address is changed via UniApps, a Load.ini file, via USBF, or via DHCP.

• C Editor: the status bar at the bottom now indicates both the line and the column location of the cursor.

- HMI Timers: a new option in the Timer Box allows you to enter any text you wish to set as a prefix to the numeral. You can also include special characters, such as a degree sign, by clicking the button on the right of the Text Before field.

- HMI/Web Numeric Box: you can now add a prefix of text and special characters to display in front of a numeric value.

- Arrays: you can now create arrays of up to 1024 elements.

- You can now export and import Switch Case instances.

- HMI Element File Selector: now includes an option to select the Camera Folder from the controller's SD card.

Bugs fixed in this version

- Polish virtual keyboard: the 'Y' 'Z' keys location were transposed.

- Alarms: modifying alarms from CSV files did not properly update the Alarm Banner, and sometimes caused Alarms to crash.

- 04PTN: in certain situations, Input 0 would freeze.

- Message Composer: did not work properly when numeric tag format setting in the message is Leading Zeros

- Web Timer Box, Seconds format: value was not displayed correctly
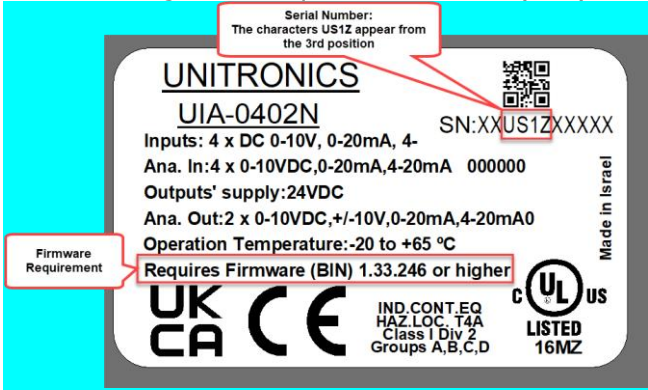
UniLogic® Service Pack UNILOGIC® V 1.33.373 UNISTREAM® OS 1.33.280 June, 2023

This UniLogic release, released in June 2023, includes firmware that supports a redesigned version of some UNI-IO models and hardens the Cybersecurity of your applications.

Read on to learn the details, and to see the bug fixes included in this version.

New Features

Cybersecurity	This security release hardens the UniLogic to UniStream communication mechanism, in order to reduce unauthorized access. Note that: • Older UniLogic versions (previous to 1.33.246), will not be able to communicate with controllers running firmware OS 1.33.246 and higher. • Attempting to download to a controller running older firmware will raise a warning, informing the user that the download cannot be completed until the firmware is updated. • If, for some reason, a firmware downgrade is required, use a USB stick as explained in the UniLogic Help topic Firmware>How to Downgrade Firmware. You will not be able to downgrade via UniLogic ribbon >PLC> UniStream Management -> Remote Upgrade In general, for better cybersecurity, we recommend that **you <u>always</u> use the <u>latest</u> firmware**.
Uni-IO: Firmware Update	The firmware included in this release supports all Uni-IO models, modules bearing a label containing the following: • Serial numbers with the characters US1 start from the 3rd position, for example: XXUS1ZXXXXX • Text warning "Unit requires Firmware (BIN) 1.33.246 and up "
Timer Box widget	You can now use more than 10 digits in the Keyboard Title property of a Timer Box widget.
New System Struct	A new System struct has been added, Regional Settings containing ASCII string members for CSV Delimiter, Decimal Symbol, and Thousands separator. At power-up, or when HMI language is changed, the controller will write the current regional settings into the struct.

Bugs fixed in this version

- Modbus RTU v2.0 did not update the RS485 port struct with TX/RX counters.

- Alarms group import did not preserve the exported alarm IDs.

- Export of alarm group would fail.

- Export screen in UniLogic would sometimes fail.

- Exporting IO tags to Excel would create an empty table.

- DataTable widget, Time format column, min and max limits were not applied.

- Linear gauge: Anchor and Range did not work for negative values.

- Radio button widget: did not work on web pages when Font size was applied.

- REST API GET: did not support an authorization token with special characters.

- UAC: Logged in users were sometimes logged out after download.

UniLogic® Service Pack V 1.33.xx UNISTREAM® OS 1.33.xx MAY, 2023

This UniLogic version, released in May 2023, brings you new features including new HART functions ,DHCP, Motion functionality, and more.

Read on to learn about the new features and bug fixes in this version.

New Features

HART New Functions	New Ladder functions for Build and Parse HART commands simplify implementing HART in your applications.
Motion	• EtherCAT Multi-Axis MC functions: a new Ladder element Get Cyclic Mode Error Description enables you to load the ASCII description into the linked ASCII string tag. • Motion Status and error codes are now collected into a single topic for easier troubleshooting. • CAM Table Plot: Select a CAM recipe, and from the Recipe tab, select Show CAM Table Plot, then use the Configuration tool to adjust the view.
Password-Protect via Solution Explorer	You can now right-click additional items on the Solution Explorer to password-protect many parts of your application, for example in Hardware Configuration, Communication, Motion, and more. The next time the project is opened, the password must be supplied before the item can be edited.
DHCP	New options in PLC Communications> Panel IP and UniApps> Network> IP Config> Panel DHCP now allows you to enable DHCP and, when DHCP is selected, to override DNS server.
UniApps	You can now: • View Logs for events such as download, upgrade, powerup in UniApps>System>System Logs> Customer Logs. • Filter Wireshark communications.

	• You can now see a connected EtherCAT firmware version and upgrade it - even if the PLC does not contain an application • Set a PLC Hostname.
Languages, Regional Settings	Regional settings for each language are now available via Solution Explorer> Languages.
HMI and Web page Widgets	• Radio buttons: You can now arrange radio buttons simply by entering the number of columns in the widget parameters; UniLogic automatically arranges the buttons in Columns. • Data Table Widget now allows you to: - Set colors for Odd and Even Rows. - Set Font Size. • File Selector: Camera files have now been added to the selection list. • Timers, Minimum/Maximum: you can now set limits for timers. • Text Boxes: you can now align text boxes in 9 directions.
HMI Screenshots	In the HMI Editor>HMI tab> Screenshots, you now have the option to export all of the screens in your application at once as screenshots.
I/O Module UID-0808THS	New Scenario 4, Counter, PWM, PTO enables you to command trapezoidal motion at run time via the module struct.
Loops	A new Loop Data Block parameter, Is Busy, allows you to know the status of the block.
Email: TLS	When you configure an email account, a new column, TLS, in the account options can be checked to support Transport Layer Security (*TLS*).
VNC	The number of VNC clients that can connect to a PLC has been raised from 8 to 16; if the connection is via UniCloud, the maximum number of connections is limited to 8.
Actions	A new action, UAC Log out Request, enables logout as a result of ladder condition.
Alarms	• New LF: Get Alarm Name - use this Ladder element to get the name and description of an Alarm, according to its index number. • Alarm logs: Previously, the Is Alarm Created bit and the the Last Alarm Log Zip Filename were only updated if Create Zip File was checked. Now, these parameters are updated even if only XML/CSV files are created.
USB serial devices	UniStream can now support USB serial devices at a baud rate of 230400 bits/sec

 Please note that you cannot use the Rename File on SD Ladder Function to rename a file that is located in the Alarm Log folder. The Help topic has been amended to include this issue.

Bugs fixed in this version

- WebServer Widgets set to Min/Max linked to constant tags did not work

- Update Application Ladder element did not work with String tag as path

- SMS Receive from Router (UCR) was only 7 words long

- Tags: Could not type non-Latin characters in tag description when creating new tag, however Ctrl+V could paste from external source

- REST: Requests with Hard-coded content parameters did not work

- Screen Saver configured to 'Power Off' mode on B10 Modular PLCs did not turn the display completely off

- If "MoveSDFileToDOK" on Copy\Move File ladder element failed, the reason (-8 no source file) was not displayed

- Changing COM port settings from UniApps did not have an effect if the port was set for Modbus

- HMI Schedule widget did not work in Custom Control

REST API	• UniLogic now supports REST API GET, POST, PUT, DELETE queries and the Authorization methods of No Authorization, Basic Authorization, OAuth 1.0, OAuth 2.0, and Custom Authorization. • Content: you can now add JSON members and content to your POST and Put queries. • You can now right-click a REST API request to duplicate it.
USL Password	You can now apply a password via UniApps that will be saved to the PLC via the new System> Password tab.
Export BOM	You can now generate a BOM (Bill Of Materials) report that matches the Hardware Configuration of your project by selecting the Tool tab on the ribbon and clicking Export Project's BOM.
UniApps: Update	Update App and firmware now allows users to scroll though and select desired files.
VNC Server	UniStream VNC server "Set Touch Bit" is now checked as default value; this allows the screen saver to recover from VNC.
External Keyboard	The interface for entering Numeric values and Text has been improved for external keyboards connected to UniStream.
HMI Disable popups	Via UniApps, users can now choose to ignore specific popup messages by selecting this on the System Log tab, and selecting the desired popup to disable.

ⓘ   Please note that you cannot use the Rename File on SD Ladder Function to rename a file that is located in the Alarm Log folder. The Help topic has been amended to include this issue.

Bugs

- If the SD card was not found, the system would issue an I/O bus error although there would be no I/O error.
- In certain cases, the Router status was set to Fail inappropriately.
- Compilation warnings were issued for Alarms when one was not used in the application
- "Screen Power Off" mode on USP-070-B08 did not power off display as expected.
- UniLogic would crashes at compilation after a copy-paste call of a function with a Function-In parameter
- In certain applications, HMI screens could not be exported.
- In some cases, certain elements on Custom Controls did not work, or prevented HMI screens to load.
- HMI message boxes sometimes blocked HMI actions and buttons.
- Pasted ladder elements with constant inputs would appear invalid.
- Older applications using REST API, did not open with UniLogic 1.33.213
- Images and video from USB camera were not captured.
- Modbus: Success counter of Read operations would continue to increment after slave was disconnected.

- Trends, Web:"History" button on web pages did not work.
- UniLogic did not Download & Reset after REST configuration changes.
- Alarm Logs: the Is Alarm Log created was not set to ON if zip files were not selected.

UniLogic® Service Pack V 1.33.xx UniStream® OS 1.33.xx, September 2022

Major Features

EtherCAT Motion: Multi-Axes functions	When you use an Unitronics EtherCAT master module and configure the axes Mode to Cyclic, the master acts as a motion controller, generating the motion profile and controlling the drives to enable you to implement Multi-Axes functions such as Camming and Gearing.
UniLogic Infrastructure	UniLogic versions previous to 1.33 were based on SQL 2012 LocalDB, which reached end-of-life and is no longer supported by Microsoft; therefore Microsoft will not patch possible security vulnerabilities in SQL 2012. After you install this UniLogic version, all projects of any version that are opened and saved on this PC will be automatically structured to SQL 2019 LocalDB.
EV Charger (OCPP) Support	New Ladder elements now support and enable you to implement Electrical Vehicle Chargers Protocol (OCPP v1.6), the protocol is available only for UniStream Pro (B10/C10) series models and requires a license.
Loops	UniLogic now supports the following types of Ladder Logic Loops: For, For Each, and While. Users can manage the number of iterations per scan.
Update UniStream Firmware and Application	You can now update UniStream firmware and the UniLogic application via both UniApps and Ladder functions. The files may be located on either an SD card or an USB DOK stick.
Camera: Capture	New ladder elements allow you to capture images and video from a USB Camera
Screen Saver Mode	Screen Saver is a new option in Hardware Configuration>Controller Model>Properties>Screen Saver. When you check this, it enables the UniApps Screen Saver mode. Via UniApps, you can then activate Screen Saver to enable its options: you can power off the screen, and enable recovery via VNC. You can also set Wait time from last touch, when this timeout elapses, the screen will turn black. You can also control brightness to save power.
MODBUS Improvements, New Options	MODBUS has improved functionality, and supports new options: • Modbus>Add New Operation now offers an Add New Batch Operation option.

	• Floating point MODBUS registers can be swapped automatically during read or write operations. • MODBUS RS485: when there are multiple slaves, and some of these are disconnected, the system performance is improved.
HART: New Features	This version provides new HART Ladder elements: HART Command Builder, and HART Response Parser.
Serial communication over USB: USB to RS485	UniStream Built-in & UniStream PLCs now support specific HID USB to RS485 adapters, from Silicon Labs/DTECH and FTDI.

Additional Features

Protect Application Intellectual Property	You can now include a specific UniStream's serial number in a Exported Project File. Attempting to install the file to a different controller using Update Application ladder functions will give error -9
System Error struct	Use the System Error struct to troubleshoot errors.
System Events Log	A log on the SD card located at SystemLogs/UniStream.log records major events such as download, upgrade, powerup, and more
Data Sampler	• The Data Sampler properties window now offers a new option, Sign Files. Check this to create a signature for your BIN/.csv files. • The Data Sample struct now enables you to set a Delimiter character to be used in the CSV file
Alarms	In Alarms general properties, you now have the option to create .xml, .csv, and .zip Alarm logs and sign them.
Application Signature	Via UniApps>System> UniLogic App, you can now view the App Signature in addition to the application name and version.
Email	• Composer: you can now include a string variable in email messages. • Send email Timeout: You can new set a Timeout • A new status message has been added to the email struct: -10 unable to get local issuer certificate' when sending an email
SD/DOK Status Notifications	When the SD/DOK is locked, or almost full, the system error struct is updated.
Ethernet IP EDS	EDS tags now include descriptions
VFD	VFD Run Frequency - the Frequency parameter is now an optional setting. When frequency is not set, the current set frequency will be used.
High Priority Ladder Task	High Priority Ladder Task now offers new Ladder elements: Reset counter + Reverse Counter
SMS	You can now add more than one contact in the SMS address list.

User Files	CSV and XML filenames inside a .zip attachment will now include the timestamp
LF: Copy/Move folder to DOK	A new FILE>Copy/Move folder to DOK ladder function allows you to move folders to a USB DOK.
UCR Router	New members have been added to the UCR Router Struct for Daily/weekly/monthly data usage counters
	UCR Incoming caller ID identification has been added.

Minor Features

- Structs: You can now right-click a Struct to duplicate it and edit its members.
- OPC-UA: You can now:
- Import an OPC-UA file from the SD Card, not only from a DOK flash drive.
- Set the OPC-UA namespace from UniLogic in the OPC-UA Settings
- URB: Allow to duplicate URB coupler structure and configurations.
- HMI and Web page element Actions now enable you to Reset a Numeric Value.
- UniApps: you can now import and export application configuration parameters from and to a DOK flash drive, such as FTP, email, modem, SMS configurations and more.
- UniApps clock, auto-sync: if you select auto-sync is ON, an attempt to sync the clock will now be made every 12 hours, in addition to every action that requires HMI reset, such as reboot, and download.

Bugs

- Keyboard: would show Cyrillic-Serbian instead of Serbian-Latin
- Data Sampler: CSV+Zip would not be saved to history on power-up.
- Online Mode:
  o did not disconnect when updating the application from a ladder
  o when using constants, incorrect tooltips were displayed
- SQL DT->SQL: would fail when DT "From Row" was above INT16
- UniLogic C Function: When referred to a struct, wrong comments were added
- UniCloud: Creating an Asset on the PLC causes HMI Overload on some scenarios
- USBF action: Change Password was not working
- Servo:
  o Servo Homing Method – Positive and Negative velocity were greyed out
  o Importing a motion application could cause the UniLogic to crash
- HMI: HMI Overload occurred after reboot when Start/End Sampling bit was on at start-up
- Router Success bit and Signal Quality did not update when there was no connection
- UniApps->Network->Serial: only the first serial port was available
- VNC: Connection count and Connected Bit did not update after disconnecting
- BACNet:
  o I/O properties were not saved
  o Server IP did not refresh automatically
- OPC-UA: Will not require reset on every download
- Remote upgrade was not cancelled after the connection was made to PLC
- UniLogic, PC-PLC Communication: when download port 22 was incorrectly configured, UniLogic approved PC-PLC Communication with a green checkmark and provided inaccurate communication error messages
- Email:
  o Mail Configurator Widget did not add recipients to email

- o Sending an email with multiple TO/CC/BCC would fail if the 1st address was an empty string
  - o Send email from UniApps - always sent from the first account
- SFTP Client: would fail due to Failure establishing SSH session
- MQTT: Wildcards having 'A/B/+/+/C' did not work correctly
- CANopen:
  - o Did not send 2 SDOs in a row
  - o A sequence of "Init Node EDS" ladder functions being executed one after another could cause a CPU error
  - o CANopen Auto-Start could cause a CPU errors
- UniCAN:
  - o Incoming messages were lost
  - o After CANBus Disconnection, there's no need to reset PLC to re-establish the communication
- Modbus Master on USB port would sometimes stop working
- Alarms: suppressing Alarm with ID higher than 255 did not work, and would suppress the wrong Alarm
- CSV: Convert CSV to UDTF failed after download
- I/O:
  - o UIA-0402 outputs did not work properly
  - o UIS-08TC did not show temperature when "Noise Rejection" set to 10 Hz. Other values worked properly.

UniLogic® Service Pack V 1.32.xx UniStream® OS 1.32.xx, January 2021

Ths service pack brings you the features and bug fixes listed below.

VNC Server Management	• 'Portrait Mode', UniStream PLC and UniStream Built-in: Portrait Rotation is set to 90% by default.
	• VNC Server Management has been moved from Passwords to its own location on the Solution Explorer tree, directly under PLC Communications.
	• The VNC Server Password is now in this section, and not in Passwords.
SD Management	• Note that the option **'Is Rule Enabled' is now checked by default** for all file types for all projects. In addition, updating an older project will check the option for all file types.
	• SD management has been moved up the Solution Explorer tree to a new location, directly under Hardware Configuration.
TCP/UDP Socket	CPU communications: a project that uses TCP or UDP Tx functions must also contain an Rx function. UniLogic now issues a compilation error if Rx functions are not included in the project.
SMS	You can now include up to 10 numbers in the SMS number list.
VNC	The System>General tag Number of VNC Connections will be initialized when the system recognizes that the Ethernet cable is disconnected, turning the System>General tag bit Ethernet Port Link OFF for the port.
New Help Topic ERRNO	UniLogic provides ERRNO - Error Codes that report and retrieve errors for Ladder functions.

	Under System > Ladder ERRNO, you can find tags for the Function Index and Error Number.

Bugs fixed in this version

UniLogic

- Animated .gifs: previously, in cases where a display contained more than one language, UniLogic did not check the number of animated .gifs per screen; the limit per screen is 4. UniLogic now issues a compilation error for all displays containing more than 4 animated gifs.
- CANopen EDS files containing space characters would fail to load; UniLogic now compensates for spaces.
- Router struct name can now be edited after re-opening a project.
- UniStream PLC: setting/changing passwords via USB did not always work properly.
- Data Sampler: CSV+Zip was not saved to history on power-up.
- Remote upgrade: the user could not cancel remote upgrade after the PLC was connected.
- Unnecessary compilation error was given when the last I/O module was removed from the configuration.
- Find in Array Back ladder function could not search for a bit data type.
- Mail Configurator Widget failed to add recipients to emails.

UniStream

- Alarms: selecting an Alarm ID higher than 255 would result in the wrong Alarms being suppressed.
- Disconnecting/Reconnecting I/O might cause a CPU Error.
- Ethernet/IP counters: values were not stored.
- UniApps, RTC auto-sync: would stop working after 24 hour. Now, when auto-sync is on, the controller will attempt to synchronize the RTC every 12 hours, and at every PLC reset.
- CANopen:checking the Autostart option would cause CPU errors.

UniLogic® Service Pack V 1.32.xx UniStream® OS 1.32.xx, December 2021

Features

HMI: **New Action**	Use Reset Numeric to enables your users to reset a value via the HMI.
Find	- Finding 'Todo': searching for ToDo now includes Region Comments. - You can now also search for text in Comments - The Find Results pane now maintains a history of up to 15 searches.

LF: Struct to/ from Buffer	These functions now work within UDFBs, as 'Function In' elements.
Message Composer	You can now right-click Devices and Messages and export/import them between applications.
BACnet IP	Via UniApps, the user can: • Enable/Disable BACnet • Set Object ID from UniApps
Ethernet/IP	When exporting an EDS file that contains ASCII strings, a message now appears to recommend that the user convert the string using the Tag to Buffer Ladder function, thus enabling the strings to be exported.
email	• The list of elements that you can include in an email now includes String Variable. • email Recipients: Strings can now display recipient addresses. • If the 'From' field has been left blank, a compilation message now appears.
Alarms	Alarm widget: 'Severity' columns can now be translated
OPC_UA	You can now Export/Import Address Space.
MODBUS	Now, as you add/delete each Modbus operation, UniLogic increments/decrements their number.
UniApps, VNC Server	UniApps>Networks> VNC Server now displays a list of up to 8 connections. When the list exceeds 8, the controller automatically disconnects.
FTP/SFTP Passwords	Cases where the programmer uses illegal characters in creating a password now display a warning, and also gives a compilation error.

Bugs fixed in this version

UniLogic

- Motion:
  - In certain situations, compilation would fail due to the Drive struct
  - Adding the Servo and VFD diagnostic applications caused a compilation error
- Tag Import: duplicating a tag name that was used as an alias would crash UniLogic
- DOK: in certain cases, updating the DOK would crash UniLogic
- XY Trend: background was not transparent when selected
- UniStream keypads: if two keypads were opened on screen, the first remained onscreen, but was not responsive
- 'Load config from INI': DNS settings were not always supported
- HMI, .gifs per screen: a message now appears to warn the user if the number of gifs exceeds the recommended level.
- Functions called via Switch Case: would be mistakenly given a compilation warning.
- UniStream model, webserver: if the PLC model was changed from one that supported webserver to a model that did not, the user would be warned that webpages woud be deleted-- even if the project did not contain a web server configurayion.

UniStream

- Downloading a blank application (download + Reset) might cause a CPU Error
- BACnet Server IP - Binary Value/Input object did not allow writes

- VNC Server:
  - after downloading certain projects, VNC server did not allow connection
- - when VNC server resolution was changed in UniApps, the resolution was not retained after reboot
- SMS: If a phone number was not set, Sending SMS via Router provided an incorrect error (SMS_ROUTER_GENERAL_ERROR = -7) when the correct error was SMS_TEL_NUM_ERROR = -3 (
- VFDs: :
  - writing configuration files to 2 VFDs resulted in a CPU error
- -VFD is Connected bit sometimes rose to True too early, before the authentication process had been completed.
- IO module (UID-W1616R) power LED blinked in certain cases where Message Composer was included in the project
- UniStream Built-in - in cases of Boot error, a 'check physical connection' was incorrectly displayed; this has now been replaced with a 'Contact Support' message.
- Mail Configurator Widget: selecting To/Cc/Bcc resulted in 'HMI Application Overload'
- FTP client: failed to connect when the $ symbol was used in the password
- Rest API: Send Value requests sometimes resulted in outdated values being sent

UniLogic® V 1.32.00 UniStream® OS 1.32.00

Features

VFD: Ready-made VFD Motion code	UniLogic's Ready-made VFD Motion code enables you to get moving immediately—and does most of the work for you.. The application includes both Ladder & HMI screens to enable you to run Diagnostics. You can also edit it to suit your application. You simply import the code, call it into your application, download it—and start moving.
HE: VFD Drive Selector Widget	Place this widget on an HMI screen to enable the end user to select a VFD drive via the UniStream panel.
Data Tables	LF: DTI to File You can now select to retain formatted files: .csv .udtf, and csv.zip files.
UniCloud: GPS Router Support (s	***Note that this feature is not yet supported in UniCloud, but will be included in a future version.When you created a UniCloud Asset type, you can enable Router Settings> Use GPS Location. If your UCR Router supports GPS, this will cause the Asset location to be harvested along with all of the other Asset data.

Bugs fixed in this version

- DOK: Safely removing a DOK (USB memory stick) would cause an incorrect message to be displayed.
- Ethernet/IP EDS:
  - • EDS Import functioned improperly in certain cases of tag conversion and Assembly arrays.

- o • I/O struct names would appear editable upon reopening project.
- o • Short string import might cause an error
- Log upload: in certain cases, passwords were not correctly validated.
- Alarm History Widget: was empty after re-boot.

UniLogic® V 1.31.177 UniStream® OS 1.31.69

Features

Store DTI to file	As of this version, the defined decimal format is retained for .csv files.
Export Data Table to File	Array member names are now visible
Languages	This version contains Polish language additions
MQTT	As of this version, MQTT subscriptions ending with '+' are supported.

Bugs fixed in this version

- VNC: the value in Number of Connections was reset after a disconnection.
- UIS 04PTN: incorrect values were shown
- VFD Configurations: attempting to write configuration values to multiple VFDs might cause a CPU error
- Data Tables, UniLogic: when defining Data Tables in Web server, the text 'Undefined' was displayed instead of the actual value.
- EtherCAT: Adding a new PDO would sometimes cause UniLogic to crash

UniLogic® V 1.31.70 UniStream® OS 1.31.60, June 2021

UniCloud, New Feature Support	This version supports new UniCloud widgets **Switch** and **Update Asset**.
	Note that in order to use them you must update your UniStream OS, included with this version of UniLogic; in addition, note that the tags in the Asset type must be set to Read/Write. For full details regarding UniCloud updates, log into UniCloud.io and open the Help menu. Version changes are listed in the Welcome topic
UniApps: Auto-Sync RTC	You can now sync your PLC's RTC with the current time for your time zone with the server at https://worldtimeapi.org/timezones. A new option, Auto-Sync, enables a PLC with an internet connection to remain synchronized with the server, and automatically change to/from Standard to Daylight Savings time.
New Ladder Element	The new Ladder element Read Line from File enables you to this to read a line from a file on the SD card into a buffer.
Controller Popup Messages	System Popup screens for HMI Overload now provide instructions to the user

XY Trends	In XY Trends Curves, you can now set the Y-axis to REAL, using up to 6 decimal places.
CSV Decimals	In CSV files, REAL numbers can now show values including up to 6 decimal places

Bugs fixed in this version

- Ethernet: changing serial remote slaves ID via UniApps caused the remote slaves list to be empty
- MQTT:
  - After broker reconnection, subscriptions did not work properly
  - Certificate import sometimes caused brokers to be automatically created
  - HMI Overload screen would be displayed, when MQTT auto-connected to broker and Connection interval is 0
- REST API Queries: INT16 and INT8 could not be used in query parameters
- REST API Requests: using tag parameters after hard-coded parameters did not work properly
- DT columns, HMI widget: column headers did not display properly after scrolling left and right
- Ladder comments: could not be opened if comment height was insufficient
- Download: in certain circumstances, projects would crash when compiling a project for download
- Keyboards connected to UniStream via USB port did not recognize certain characters
- UniApps:
  - Serial configuration could not be edited.
  - VNC: after changing the VNC server resolution from UniApps and rebooting, the resolution was not retained
- Alarms:
  - Banner, 15" UniStream: Text frame was incorrectly sized, when using "by Highest Severity" banner color mode.
  - Alarms occasionally crashed in certain situations.
- email: in certain cases, the 'fail' indication was set to ON, even though the email was successfully sent.
- UniLogic Hardware Configuration:
  - a popup for I/O UID-0808T upgrade would be displayed, even when the UID-0808T was not included in Hardware Configuration
  - Compilation error: in certain circumstances, a compilation error was shown if UAG-CX-XKPLXXXX was included in Hardware Configuration
- Router: When the router is disconnected from the controller, the Router Success bit and Signal Quality value remained unchanged.

UniLogic® V 1.31.146 UniStream® OS 1.31.122, March 2021

Features

REST API	REST API now supports: • HTTPS Servers. • The Buffer data type, in the Response parameters.
MQTT	Broker Connections now support MQTT/SSL -- Google Cloud IoT

UniApps	• MODBUS: in UniApps, under Network> MODbus, you can now access Ethernet Master and Slave with an ID#=0. • HMI Reset: in cases where the HMI application requires reset, the re-designed message screen now instructs you to extract the system log to USB or PC, so that you can send it to Unitronics Support.
Alarms	• Show Suppressed State in Alarm Summary and History: if, in the Alarms global Properties, you check the option Show Suppressed Alarms, 'Suppress' will be displayed in the Value column for suppressed Alarms. • German: Alarms Status, History, and Summary may now be viewed in German
Project Signatures	The signature log has been expanded to include: import of Ladder, HMI, Web, Message Composer, Formula, Import Data Sampler, Remote Modbus Slave, and Alarms, as well as converting HMI displays to Web pages

Bugs fixed in this version

- PLC communication password: In certain cases, UniLogic requested a password when no password was required.

- REST API: in some cases, slashes at the end of End Point Resource were ignored.

- Alarms:
  -Version 1.31.125: names were not preserved at import.
  -If a user cancelled Alarms Export, UniLogic showed an 'Alarm Export Failed' message.
  - Alarm headers occasionally aligned incorrectly
  -In certain circumstances, icons did not display at 1024x600 resolution
- Ethernet/IP:
  -In certain cases, importing an Ethernet/IP EDS file containing bit arrays caused errors.
  -In certain cases, an Ethernet/IP EDS file exported with minor Errors (set Run Idle bit).
  -Commas used in parameters names were incorrectly read as delimiters.
- HMI Editor, Panel Orientation:
  -Changing models sometimes affected panel orientation (landscape/portrait)-When the project was based on UniStream PLC (USC) models, changing the panel orientation sent the UniLogic window backwards.
  -In portrait mode, the Title of the Alarm History widget overlapped the CLR button.
- Structs:
  -Minor errors sometimes occurred in autocomplete.
  -Adding a Description with two lines caused a compilation error.
- In Hardware Configuration, the URB module URA-0008Y was shown as AO08W.
- WebServer: occasionally projects including webserver showed an error after download.
- Including the character " \" in the Caption in the Properties window of an HMI or Web Data Table caused an "Error while reading data", and in certain may have caused a CPU error.
- Remote upgrade: changing to another IP without refreshing before beginning the upgrade would cause the window to close.
- In certain cases the controller required HMI reset; in most cases, the controller will now recover without user intervention.
- URB modules were sometimes missing from Function In after re-opening project
- OPC-UA: operands sometimes did not update correctly.
- BACnet: operands sometimes did not update correctly.
- Alarm headers occasionally aligned incorrectly.
- UniCloud: Sync Asset Type with UniLogic automatically created structs

UniLogic® V 1.31.116 UniStream® OS 1.31.94

This is a Service Pack for version UniLogic 1.31 Rev106 and UniStream OS1.31.81 released in January 2021.

Features

- UniStream 'Cloud' controllers: All 'C' series model numbers are now available in Hardware Configuration. UniStream 'Cloud' controllers are an industry first: a PLC with built-in, no-cost cloud services. Each UniStream Cloud PLC is supplied with a pre-paid 5-year Start-up Subscription plan-there is no monthly subscription fee.

- You can now export the error and status messages generated in UniLogic, via new Export to Excel tab in the Error window.

- New Baud Rate added to CANbus: 100Kbit/s

Bugs fixed in this version

- EthernetIP: could sometimes not upload an EDS file.

- Modbus TCP: did not support Unit ID 0.

- OPC UA: would sometimes duplicate Tag names.

- Application import did not work in certain circumstances.

- In certain cases, older applications did not open.

- Emails: in certain circumstances, the controller did not send emails.

UNILOGIC® V 1.31.106 UNISTREAM® OS 1.31.81

Unitronics first 2021 Release supports EtherCAT, the industrial fieldbus protocol that drives powerfully precise processes in factories across the globe, is now easily implemented by UniStream® PLC* series.

Our new EtherCAT Master module enables you to integrate:

- Unitronics EtherCAT Servo_Drives
  When you use a Unitronics drive, EtherCAT data exchange is transparent. You can implement motion using UniLogic's Motion function blocks. A single UniStream can support up to 8 drives. Plus, you can easily adapt any Motion application based on CANopen to EtherCAT simply by making a few changes in Hardware Configuration
- Unitronics URB EtherCAT adapter
  Via an EtherCAT URB adapter, you can communicate with Unitronics URB Ethernet-based I/O modules
- Third-party EtherCAT slave devices
  You can import a device's definition file, and exchange data via Ladder using SDO requests.

A single UniStream can support one EtherCAT master module, which can support a total of 32 EtherCAT nodes. This includes EtherCAT Servo drives, Remote URB adapters, and third-party EtherCAT devices.

*EtherCAT is currently supported by USC-B5 and USC-B10 only.

Features

EtherCAT Master Module *****Required for ALL EtherCAT communication	Hardware Configuration now offers a new EtherCAT Master Communication module, the UAC-01EC2. This new COM master module enables you to base Motion applications on EtherCAT, to use Unitronics' URB I/O via EtherCAT, and to include third-party EtherCAT device in your applications.
Servo Motion via EtherCAT	You can now use Unitronics new EtherCAT Master module in conjunction with Unitronics new UMD-E3 EtherCAT servo drives to easily build Servo Motion applications. All of UniLogics' PLCopen-compliant MC Function Blocks are supported over EtherCAT as well as Ready-Made Motion code.
URB EtherCAT Adapters	Hardware Configuration now offers the URB-EC1 EtherCAT adapter, which can support up to 16 URB I/O modules per adapter.
Third-party EtherCAT	You can import the ESI file of a third-party EtherCAT device and include it in your application, communicating data via EtherCAT SDO Read and Write Ladder functions.
URB TCP Adapter LFs	New Ladder Elements enable you to reset, and to set the timeout of, a URB TCP module.
UniCloud	This release is the first to support UniCloud, a complete, no-code IIoT Cloud Platform specifically designed for the OEM and Machine Builder.
Export Project File	You can export a complete project to a local or external drive, and then import/upgrade the exported Project File into any number of PLCs as a new project, or use it to update an existing base project. You can import a project file via UniApps, or via a new Ladder function, Update Application.

Additional Features

Alarms	• **Banner Color Mode**: a new property in the Alarm Property Window enables you to assign an Alarm banner color according to the highest (severity) active alarm level, instead of a fixed color. • **Alarms Struct**: new tags enable you to keep track of the count of the number of alarms in the Alarm History and Alarm Summary. • **Alarm History Widget, Clear Button**: in the widget properties, the new Show Clear Button enables you to display a CLR button that can be pressed by the user to clear the Alarm history.
OPC UA	You can now set tags to read /Write or to Read only in the Address Space window; under Access Levels.
Ethernet Favorites	These can now be saved within your project.
Ladder Rungs & Comments	You can now drag the borders and resize them.
Data Tables	• A new parameter, Digitally Sign file, in the Ladder function Store DTI to file enables you to assign a Data Tag to determine whether or not to digitally sign the file: 0 = Don't sign 1 = Sign • Improved Array appearance
Buffers	• The functions Tag to Buffer and Buffer to now support a BIT array tag type. • Buffers now support Load from Array and Store in Array.
XY Trends	**View Data Values**: Your users can now touch the curve and view the sampling value & time while an XY Trend view is in Stop mode. Touch View Data, then touch the active curve to display two yellow lines that intersect at the touch point. Use the arrows to move the point along the curve.
Ladder: Find element via F12	If you select one of the following elements in the Ladder, you can press F12 to find all instances. • Call function ladder element • Switch case ladder element • Jump to region • Formula • Send SMS • Receive SMS • Send mail • SQL elements
Toolbox	You can now search for toolbox elements while in online mode
Ladder	Right-click any Ladder element and select Pin to Bottom Bar to add it to the Ladder element bar at the bottom of the Ladder Editor
Trends, Curve Width	During runtime, the Trend represented on the panel now offers a button that the user can press to toggle the width of the curve line.

Bugs fixed in this version

- EthernetIP Node Struct: when adding a Scanner node using an EDS file, the new 'Config' tag did not appear hyperlinked
- Importing tags from Excel did not always function correctly.
- Application Download: in certain cases, users could not download applications, in version 1.30
- WebServer: Press /Release button function did not work as expected on mobile device browser
- BACNet server: appeared to be in Init status, although it was running
- Modem Signal Quality: if a Modem and a Router were in the same application, the signal quality was reported incorrectly
- Trends: in certain circumstances, using the Time Span option caused the system added an 02 before the actual time in X axis
- UAC Account would sometimes lock in certain circumstances after downloading an application
- XY Trend: a user needed to Stop the Trend in order to switch to the next curve
- Ping Ladder element Time out did not take effect, affect when pinging from the CPU
- UAC Idle timeout did not work from VNC
- A Compilation Error would appear at download if the file name in Write VFD Parameters was changed
- Alarm History Widget: would stop presenting new data after approximately 10 days
- Network Error sensitivity improved

UNILOGIC® V 1.30.62 UNISTREAM® OS 1.30.51

This is a Service Pack for version UniLogic 1.30 Rev62 and UniStream OS1.30.51 released in December 2020

Bug Fixes

These bugs are fixed in this service pack:

- In certain cases, UniStream PLCs (USC series) could not boot up due to SD card installation errors.

- UniLogic HMI Editor: the HMI Element Properties window loaded slowly when moving between elements.

UNILOGIC® V 1.30.58 UNISTREAM® OS 1.30.43, September 2020

This is a Service Pack for version UniLogic 1.30 Rev52 and UniStream OS1.30.31 released in September 2020

Bug Fixes

These bugs are fixed in this service pack:

- PTO sometimes functioned incorrectly
- VNC Server:
    - Using a direct contact element for the "General.VNC Touched Bit" would cause a compilation error
    - Checking the "App resolution" checkbox would cause the "With cursor" and "Set 'Touch bit'" checkboxes to be disabled
- Library, C functions: importing a C function from the Library would cause UniLogic to delete the code from other C functions in the project

Improvements

- Trends:
    - Trend widget loads faster
- Now supports axis values
- Global tag import: now includes a 'Cancel' import option
- REST API:
    - if the Base URL is invalid, UniLogic now gives a compilation error
    - REST API compilation errors now allow you to click in the error list directly to the error location

UNILOGIC® V 1.30 REV52 UNISTREAM® OS 1.30.31 September 2020

Unitronics Fall 2020 release launches a new member of the UniStream series: a UniStream Built-in controller with a big 10.1" panel offering 1024 x 600 (WSVGA) resolution.

As a PLC + HMI + I/O, UniStream 10.1 is available in a broad range of expandable, built-in I/O configurations, and is available in Standard (B5) and Pro (B10) models. Both models support advanced communications, including MQTT, VNC, FTP, SNMP, email and SMS messaging. The Pro version also offers built-in Webserver, video support and SQL.

UniStream Built-in benefits include auto-tuned PID, data logging, data tables and recipes, data sampling displayed via built-in Trends and Gauges, Alarms, multi-level passwords, portrait mode, and plug & play communications for CANopen, CAN Layer2, MODBUS, EtherNet/IP, Servo made Simple, and more.

Other release features include support for:

- New USL external VNC display panels for UniStream: 'big-screen' USL 15.6" & USL 10.1"

- REST API

- PTO, via I/O Module UID-0808THS

New Hardware

**NEW
UniStream Built-in 10.1**
With a big, 10.1" Panel offering 1024 x 600 (WSVGA) resolution, UniStream 10.1 is available in a broad range of expandable, built-in I/O configurations - available in Standard (B5) & Pro (B10) models.

Both versions support advanced communications including MQTT, VNC, FTP, SNMP, email and SMS messaging. The Pro version also offers built-in Webserver, video support and SQL.

UniStream's built-in benefits include auto-tuned PID, data logging, data tables and recipes, data sampling displayed via built-in Trends and Gauges, Alarms, multi-level passwords, portrait mode, and plug & play communications for CANopen, CAN Layer2, MODBUS, EtherNet/IP, Servo made Simple, and more.

Models	Features
US10-B5-B1 US10-B10-B1	No built-in I/Os
US10-B5-TR22 US10-B10-TR22	10 Digital, 2 Analog Inputs, 2 Transistor outputs, npn, including 2 PWM outputs. 8 Relay outputs
US10-B5-T24 US10-B10-T24	10 Digital, 2 Analog Inputs, 12 Transistor outputs, pnp, including 2 PWM
US10-B5-RA28 US10-B10-RA28	14 Digital, including 2 HSC,2 Analog Inputs, 2 Temperature inputs, 8 Relay outputs, 2 Analog outputs
US10-B5-TA30 US10-B10-TA30	14 Digital inputs, including 2 HSC, 2 Analog inputs,2 Temperature inputs, 10 Transistor outputs, pnp, including 2 PWM, 2 Analog outputs
US10-B5-R38 US10-B10-R38	24 Digital inputs, including 4 HSC, 12 relay outputs
US10-B5-T42 US10-B10-T42	24 Digital inputs, including 4 HSC, 2 Analog inputs, 16 Transistor outputs, pnp, including 2 PWM
NEW USL Displays	Big-screen UniStream USL Displays 10.4" and 15.6" are, included in this release. UniStream Displays are a series of color touch-screens that support VNC.

REST API

A UniStream controller can operate as a REST API client and can request specific data from a server. In order to communicate with an API REST server, you build a request, comprising Query and Response Parameters.
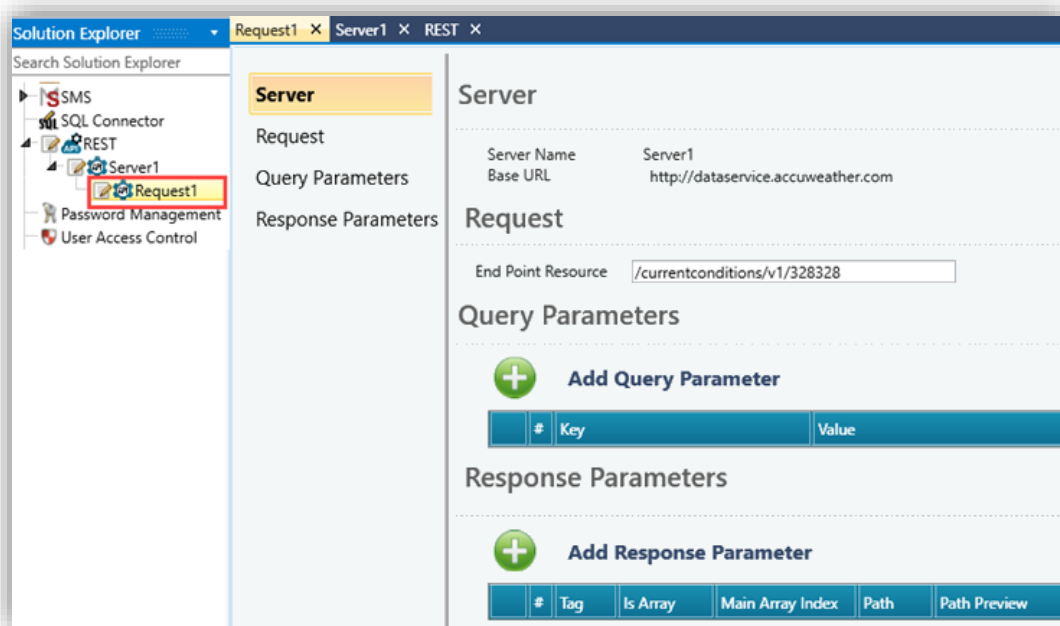
PTO

You can now implement Pulse Train Output (PTO) via the high-speed outputs of I/O Module UID-0808THS.

Using PTO you can, for example, build Motion/Speed profiles that are appropriate for stepper motors.
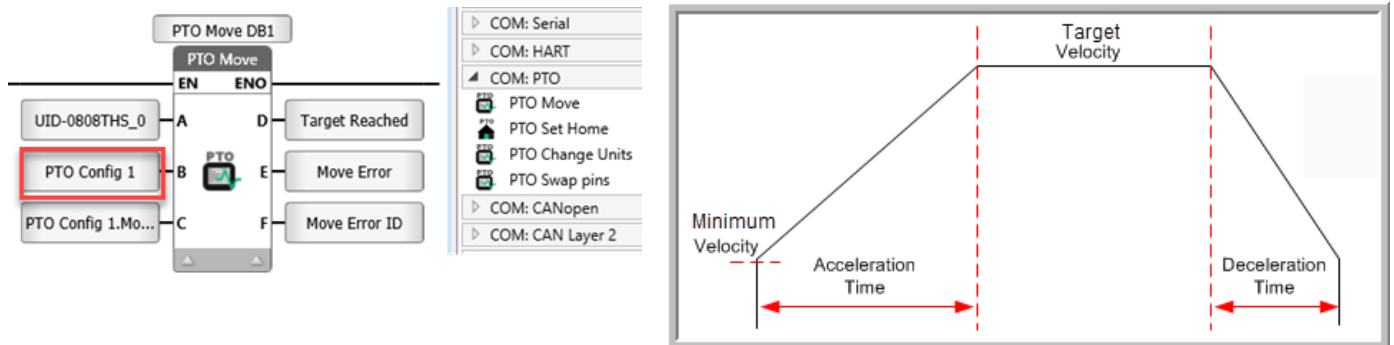
New Time-savers: Development Mode & Quick Sync

Development Mode and Quick Sync are time-saving features that can help you to develop UniLogic projects more efficiently. You can use them independently, or both together.

- **Development Mode**: when enabled, this mode saves time by temporarily suspending, for 1 hour, the password verification process performed between UniLogic and UniStream at download.
- **Quick Sync**: downloads small changes in Ladder, Message Composer, Switch Case, and Formula, while other changes are ignored. This can save significant download time during project development.

UAC: New Features

The new UAC features listed below are useful for all, but are especially needed for UAC projects supporting the standard CFR-21 part 11:

UAC User Groups, new Password features:

- **Expired On**: Password ageing, the number of days a password will be in effect for a member of a group before it expires.
- **Lockout Timeout**: Determines the number of minutes the user will be locked out before being allowed to attempt to log in.
- **Login Attempts**: The number of Login attempts a member of a group may attempt to login before being locked out.
- **Alarm Status Viewer widget:** If you enable UAC, you can select if buttons--ACK, CLR, Disable and Shelve Alarm--will be visible to a specific User Group.

Additional features

- HMI Trends:
  - When a Trend graph is displayed, you can now press a new button in the top left corner to hide the buttons and increase the viewing space, and press again to display them.
  - Trend properties now include an option to change the background color of the Curve text (the default is black)
- Via UniApps, you can now enable UniStream to register when a connected VNC client screen is touched. In UniApps, access the Network tab-> VNC Server, check the Set 'touch bit' and press apply. The VNC server will restart with the VNC "touch" identification option enabled.
- USB Action Files: you can now include a PLC Password, selecting either to retain the default password, or overwrite the current password with a value that you provide.
- Modems: when you add a modem, you can now add a Signal Quality Refresh Rate.
- Message Composer: now supports REAL tags.

Bugs fixed in this version

These have been fixed in the current version:

- MQTT   Minor bug fixes
- Modem / SMS / Email: emails were received from certain servers without a 'From' header.
- USL: sometimes was is disabled in UniApps.
- UAC: Users could log in, although another user was already logged in; a notification will now pop-up requesting logout.
- Ethernet/IP In certain circumstances, EDS import would fail.
- HMI keyboard: in Portrait view, the alphanumeric keyboard was missing the Z character.
- UniApps: Project Export to USB stick did not request a password.

UNILOGIC® V 1.29 REV103 UNISTREAM® OS 1.29.128 May 2020

Unitronics Spring 2020 release introduces brand new hardware and powerful new software features to broaden your project potential!

New Hardware

- New Ethernet-based URB components:
  - I/O modules: Loadcell/Strain-gauge, PWM, and Pulse I/O modules
  - I/O adapter:URB-TCP2, a compact, competitively-priced adapter that supports up to 6 URB I/O modules.

- Introducing Unitronics 4G Routers! Our new 4G/LTE & WiFi cellular Routers support embedded SMS functionality, RS232, RS485, GNSS (GPS), microSD, USB interface, and on-board Digital & Analog I/Os.

New Software

- BACnet IP Server: Yes, UniStream controllers as BACnet IP Servers! The broad range of Services, Objects, and Tasks enables you to blaze new ground in Building Automation and Environmental Control. Compatible with all UniStream controllers. We invite you to activate the trial license to check it out!

- High-priority Ladder Task + Immediate Ladder Functions: *Supported by the following models: US5/7-B5/10-T42 and USC-B5/10-T42. .

- Motion Control: - Update Firmware Wizard: | New Motion Control Functions: Apply Torque / Apply Force | New Actuators: Rack & Pinion, Roll-feeder / Conveyor |- Upload Axis Parameters to PC

- EtherNet/IP: New EDS Features: Scanner: Import a manufacturer's EDS configuration| Adapter: create and export an EDS file for adapter nodes you define in UniLogic.

- Authentication New!: Embedded user authentication now requires a PLC password before executing commands and tasks; simply install this UniLogic version, upgrade UniStream firmware--and gain increased security.

Regarding Authentication: Unitronics tracks the dynamic challenges that cybersecurity present to industrial automation. This version requires users to enter a PLC password before executing commands and tasks. UniLogic includes a default password. **Please change the default password** to minimize exposure to un-authorized cyber users.

We highly recommend you take this opportunity to benefit from the increased security offered in this version release.
To do so, you must update your UniLogic software, upgrade UniStream firmware, and download an application created/updated in this current version.
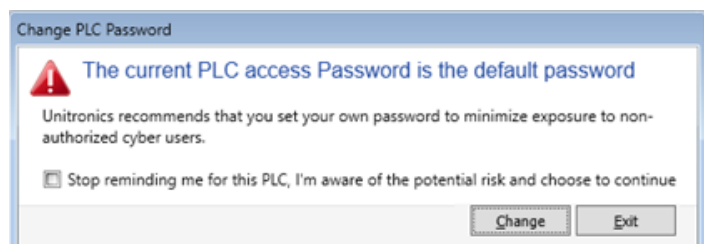
Read on to learn of other exciting features in this release, including new servo Motion Control functions, new Actuators, and more!

Spring 2020 Feature List

NEW in Remote URB I/O

Hardware Configuration now offers new additions to our line of URB Ethernet-based Remote I/O:

- Compact I/O Adapter URB-TCP2, which can support up to 6 URB I/O modules
- New I/O modules, including Loadcell/Strain-gauge and PWM modules

Model	Feature
URS-02LC-8	Load Cell
URD-04PW	PWM, 4 Channels
URD-02PW	PWM, 2 Channels
URD-02PU	Pulse2 Channels
URA-0800T	8 Analog Inputs, Current
URA-0800U	8 Analog Inputs, Voltage
URA-0008Y	8 Analog Outputs, Current
URA-0008Z	8 Analog Outputs, Voltage
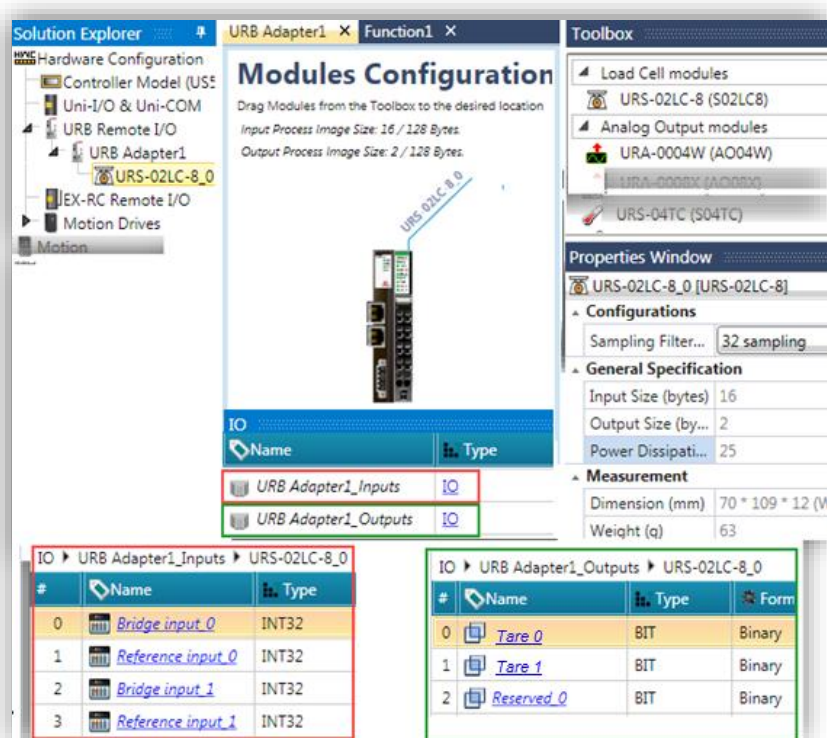
Routers

Unitronics new [4G cellular routers](#) enable you to send and receive SMS messages via Ethernet. Hardware Configuration now offers these models:

- **UCR-ST-B5**
  4G /LTE & WiFi cellular router with 2 Ethernet ports and I/O

- **UCR-ST-B8**
  Dual-SIM 4G/LTE & WiFi cellular router with 4 Ethernet ports, Digital & Analogue I/Os, RS232, RS485, GNSS (GPS), microSD, and USB interface
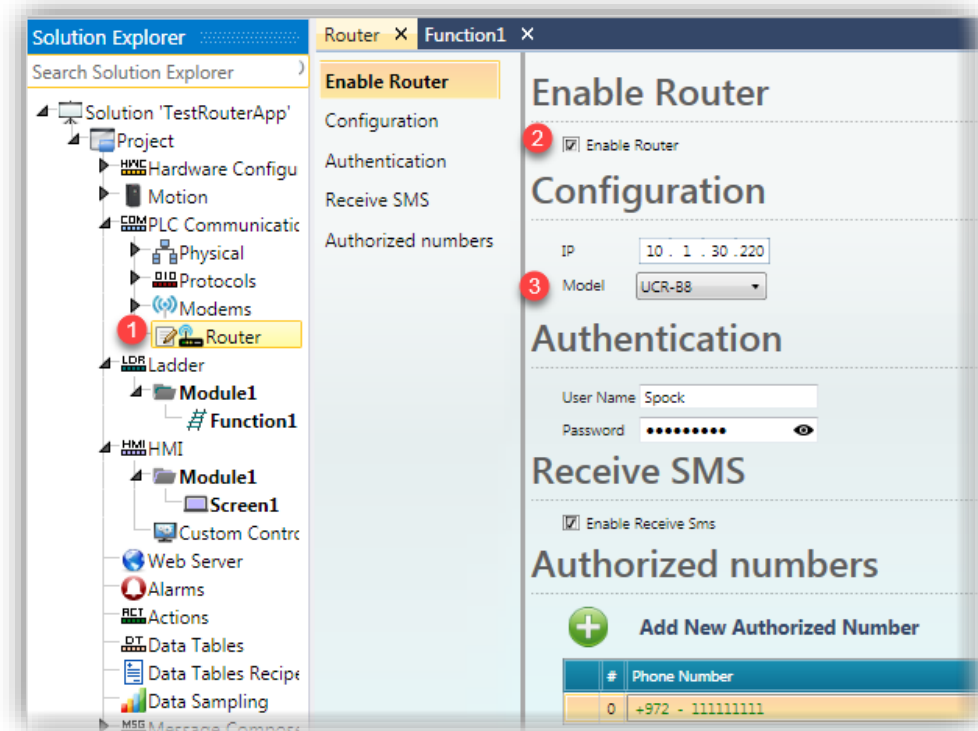
BACnet Server

A UniStream controller can now act as a [BACnet Server](), supporting a range of Services, Objects, and Tasks.
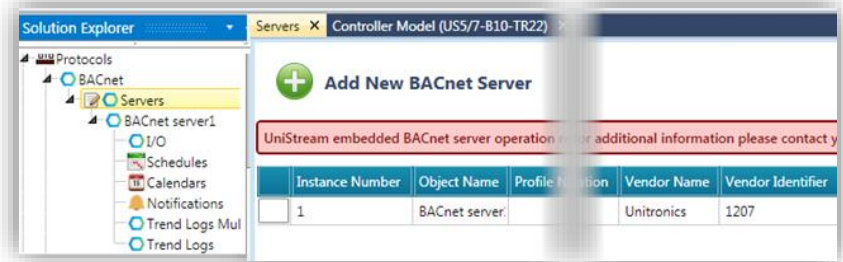
Note that BACnet Server requires a license purchase, available from your Unitronics' sales representative.

Unitronics offers you a One-hour Trial Offer, in order to enable you to explore this new exciting feature. Note that each time you power up your controller, you can restart the One-hour Trial Offer.

To learn how to activate the Trial Offer, refer to the BACnet Server topic in the UniLogic Help.
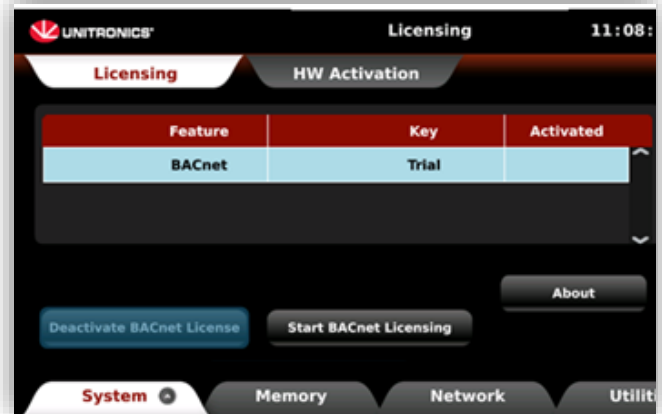
Ladder: High-priority Ladder tasks (Interrupts)

A High-priority Ladder task runs independently of your Ladder program according to a specific time interval. Use them with Ladder functions Immediate Read Input/Input, Immediate Set/Reset Output.

These features are only visible in UniLogic when you select supporting models in Hardware Configuration, such as the US5/7-B5x-T42 and USC-B5/10-T42; when unsupported models are selected, these features are hidden.
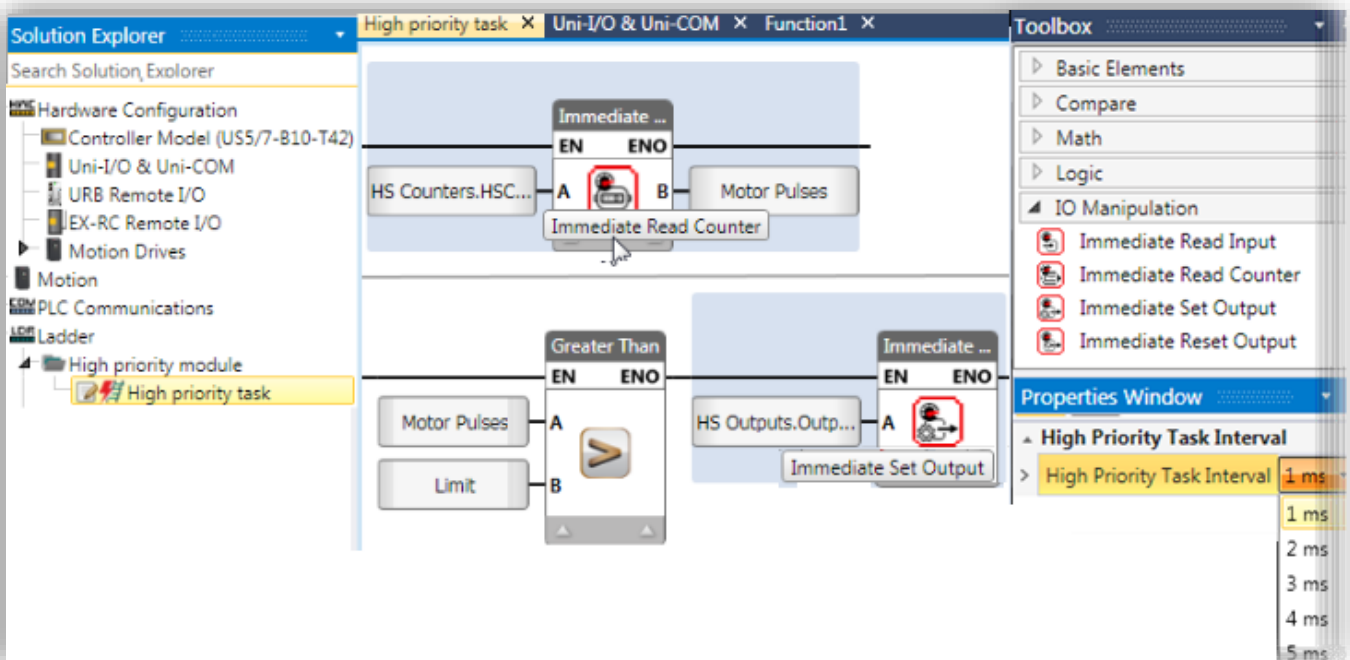
Authentication: UniLogic to UniStream

Starting with this UniLogic version and the accompanying UniStream firmware, Unitronics embedded user authentication measures into both UniLogic software and UniStream firmware. This enables you to prevent unauthorized access to your UniStream controller.

For this reason, UniLogic requires users to enter a PLC password before executing commands and tasks that require UniLogic to UniStream communication.

The first time a user establishes UniLogic to UniStream communications to a particular PLC, for example at application download, or to run online Test mode, UniLogic prompts the user to change the default UniStream access password.

For details, including how to restore the default password, refer to the Help topic Authentication: UniLogic to UniStream

Motion Control

This version offers several new Motion Control features, plus a new Servo Firmware Update wizard.

Update Firmware Wizard

You can easily update your Unitronics' UMD Servo firmware via the Wizard, now available on the Servo Drives ribbon tab.
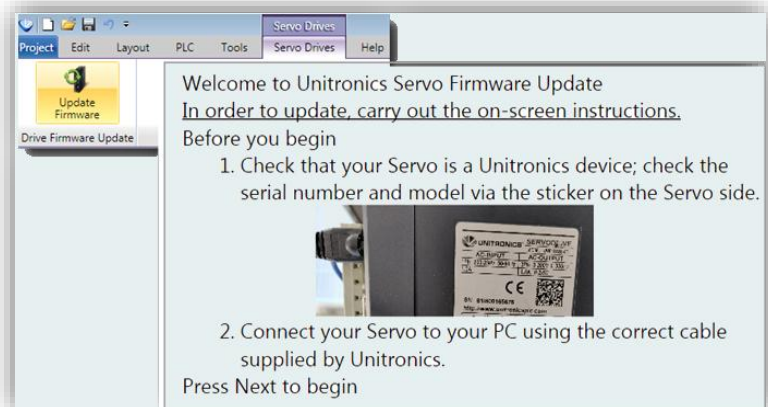
New Motion Control Functions
The Ladder Toolbox offers two new MC functions:

● MC Apply Torque
Enables you to set Torque and apply it according to the physical values you define in the Axis Configuration, regardless of the motor specification.

• MC Apply Force
Enables you to set Force and apply it according to the physical values you define in the Axis Configuration, regardless of the motor specification (linear actuators only).

In addition, MC Move Relative and MC Move Additive now support Continuous Update; set a bit to evaluate input parameters at each cycle.

New Actuators
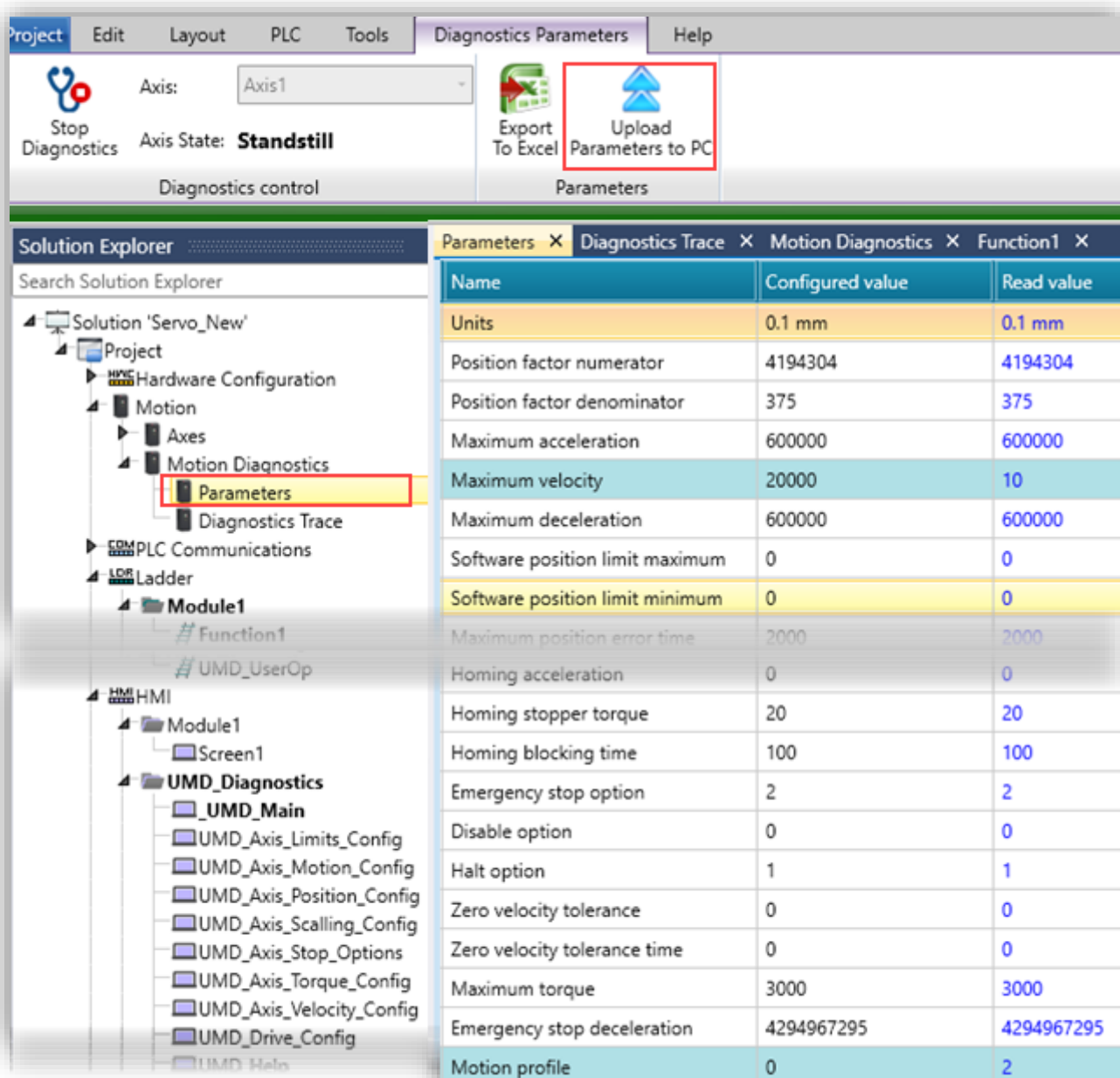
Two new actuators are available: Rack & Pinion, and Roll-feeder / Conveyor, allowing you to convert rotary movement to linear values.
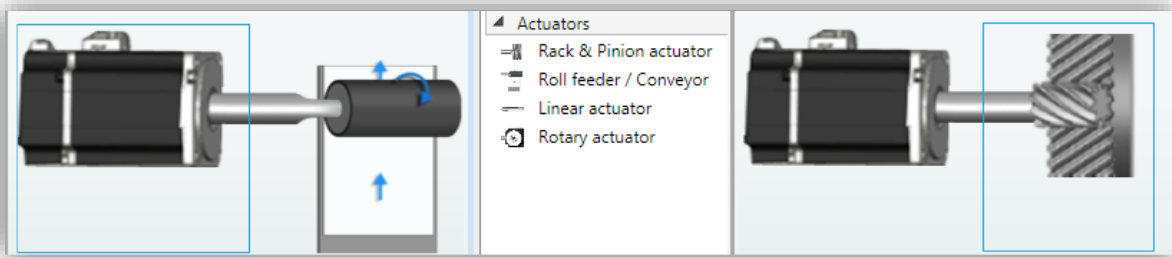
Upload Axis Parameters to PC

When you configure an axis, the values you enter in the Axis Struct are written to the axis at power-up. When you enter values from the HMI, the axis functions according to these values, but the values you have entered will be overwritten at power-up.
To overwrite the values in the axis struct, use Upload Parameters in PC.

Additional Motion features

Axis Interface: Automatic conversion and rounding in Actuator properties. When you change the
Unit setting, UniLogic now converts the value; for example, if Unit was set to μm and the value was
1000, setting the units to mm converts the value to 10.

Custom Units: You can now select Custom Units when working with linear actuators.

**EtherNetIP:
NEW EDS
Features**

You can now:

- Import a manufacturer's EDS configuration, when you set UniStream
  to act as as a scanner.
- Create and export an EDS file for adapter nodes you define in
  UniLogic.

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Additional Features

MODBUS	• New Operations: MODBUS command 0x17 Write/Read Multiple Registers - Periodic and Aperiodic. These operations perform a combination of one Read operation and one Write operation in a single MODBUS transaction. • You can now export and import a UniStream MODBUS Master's slave definitions, via a proprietary Unitronics file. • You can now assign a MODBUS slave a Unit ID of 0
CANbus "Sniffer Filter"	The addition of a CANbus "Sniffer Filter" can help you monitor--and debug--only the specific CANbus units you specify, according to ID. Note that this can be helpful in Servo applications.
MQTT	• You can now assign a machine identifier to an MQTT topic: {PLC.MAC},{PLC.SN},{PLC.NAME}; PLC Names are assigned in UniApps. • The user name in MQTT Broker Connection has been increased to 128 characters.
VNC Server	Now supports 1024x768 resolution
OPC UA	You now have the option to import client certificate files.
Alarms	• You can now Export/Import Alarm groups • At reboot, the Alarm Summary is now retained
UAC	New option - numeric keypad instead of alpha numeric
DT widget	You can now display the Descriptions of array members; formerly you could only display the index number
RTC Time zone	Now supports partial hours.
Schedule HMI	Times can now be entered in 12h format (AM and PM)
Emails	The email TLS version was upgraded to TLS1.2
FTP	Limit the access to FTP to specific folder

Bugs fixed in this version

These have been fixed in the current version:

- Data Sampler History file: in certain situations, Force Sample did not function correctly.
- UniCAN Communication: When CAN cable was disconnected and reconnected, or CAN power cycled, Tx between UniStream and V1040 would fail
- Initial values of retained tags: Sometimes did not update in PLC after regular Download
- Web Trend: Curve Names in Legend, were not visible when the Plot was set to white Fill
- Alarm Summary\Banner: When the alarm name contained the characters " ' " the alarm did not display in Alarm Summary\Banner
- SQL Query: Using a constant with parameters that included non-English caused a 'CPU Error'.
- UID-0200E and UID-0200D: Configuration sometimes did not download to PLC.
- Web Server: State machine button would show a false positive compile error when linked to a numeric tag that was not INT16
- 'MQTT Send Aperiodic': when sending values that were stored on the same Ladder net, would send old values
- email: email with data sample attached as csv.zip, could not be sent
- Store DTI to File: If Append + only CSV options was selected, no file would be generated
- Modem Init Ladder function: In certain cases the function returned Success, when using a modem without a SIM
- USBF: Could not write retained tags to the file
- URS-04RT: Would use a UINT16 instead of an INT16, which does not provide for negative temperatures. To fix existing projects, the I/O module needs to be removed from Hardware Configuration and re-added.
- Alarm file: not all Alarms were saved after after reboot
- MQTT: Cannot connect to Broker with a tag bigger than 1kb
- Message Composer:
- -CRC was not calculated correctly in specific numeric values
- -sometimes failed to build a message if it included a UINT32 value

UNILOGIC® V 1.28 REV34 UNISTREAM® OS 1.28.58 December 2019

This is a Service Pack version, UniLogic 1.28.34, OS 1.28.58. This service pack is for the previous UniLogic version 1.28.26 and OS 1.28.39 released in September.

This version includes the features and bug fixes listed below.

Features

- The Receive buffer size has been increased to 4K RX, enabling larger messages to be received via the Rx COM port.

- UniApps now offers an Ignore Uni IO Popup button, located in UniApps under System-> System Logs.

- Store UDTF to File:
  -Using this function to append data requires a UDTF file. Therefore, if in parameter E, you select option 1, Append to File, you must select either options 1 or 2 to create a UDTF file in parameter F. If you select, selected either options 2 or 3 (create .csv only or create .csv.zip only), the status parameter will indicate -14: append UDTF file error
  -In addition, there is now a new status indication -8: signature file error

Bug fixes - fixed in this service pack

- UniCAN connection between UniStream and EX-RC/RC1: in certain cases, the connection was not re-established after disconnection.
- Ethernet/IP scanner: in some cases, the Ethernet/IP scanner was not able to re-establish connection with the adapter.
- Trend Widget History Button, HMI & Web: the button was greyed out and disabled in the previous version.
- Email: csv.zip Data Sample attachments could not be sent.
- System -> RTC Date -> Day of the week: when the day of the week was set to Saturday, the tag value did not update to 7.
- Mail Configurator Widget: under certain circumstances, selecting To/Cc/Bcc caused an HMI Application Overload.
- HMI:
  - Numeric box: at times, UniLogic did not allow the user to link an array member to a numeric box.
  - Custom controls: UniLogic displayed these on a black background, appearing blurred, instead of being transparent.
- AutoStart: in certain cases, the system did not recover from a crash, if a defined CANbus node was not found.
- Multi-Touch keyboard: in certain cases, the Virtual keyboard of multi- touch models did not respond.

UNILOGIC® V 1.28 REV26 UNISTREAM® OS 1.28.30 September 2019

Unitronics fall release for 2019 launches a major addition to our All-in-One Solution: Motion Control. Our full range of Servos and Motors is easily programmed in UniLogic; the Ladder editor offers PLCopen-compliant MC Function Blocks. In addition, Unitronics supplies you with Ready-made Motion code; this enables you to immediately get moving with your Motion system.

UniLogic greatly simplifies servo applications by enabling you to:

● Drag & drop drives and motors into your project: UniLogic automatically defines the correct configuration and automatically sets up communications for you

● Add up to 8 Axes, drag & drop actuators; UniLogic automatically converts units

● Benefit from automatic calculations: UniLogic analyzes the mechanical properties of your selections and recommends safe values

● Use the Ready-made Motion application to execute movements, such as Point-to-Point, Jog, and Homing--you can open this application and edit as needed to adapt it to your motion requirements

● Program Motion Control via drag & drop, using industry standard motion Function Blocks (PLCopen)

● Tune your system using a single parameter

● Diagnostics: View servo run-time performance via UniLogic's built-in powerful, high-speed scope
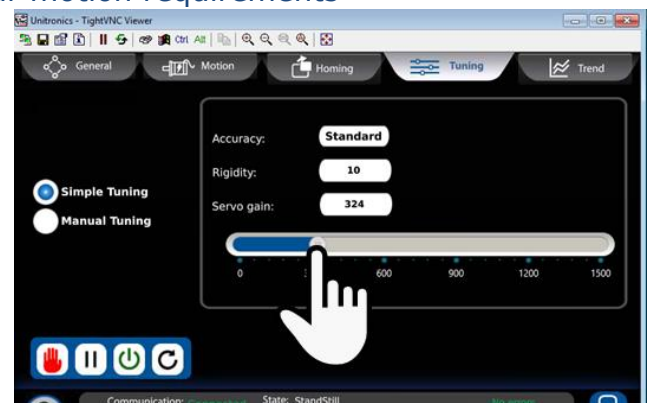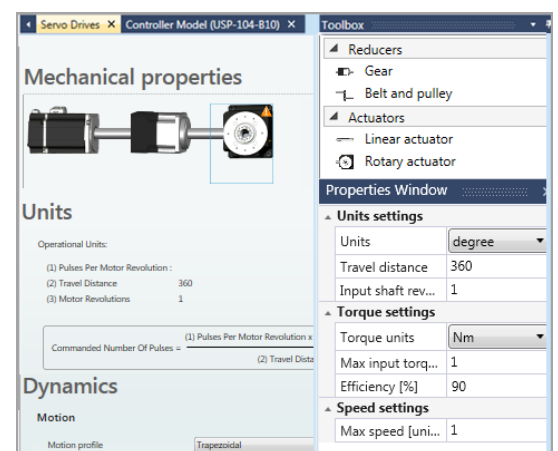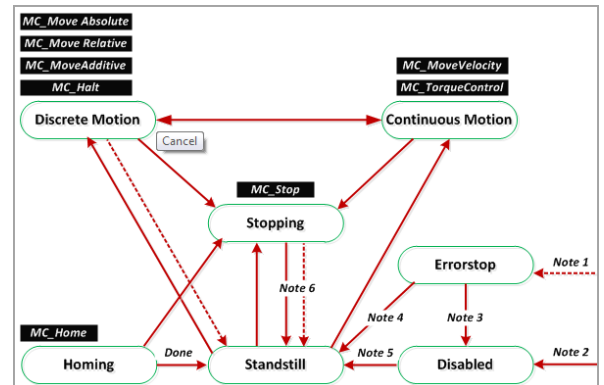
Another major feature of this release is **OPC UA** - UniStream controllers can now act as OPC UA servers.
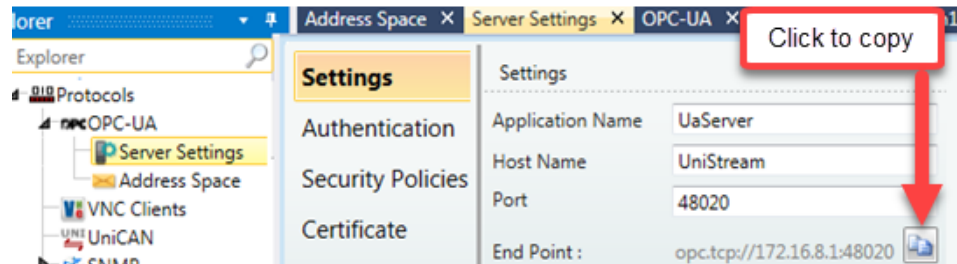
 This release also includes additional features.

Feature List

Motion
Hardware Configuration now offers Servo Drives and Motors.

In addition:

- The Ladder editor offers COM: Servo functions, and PLCopen-compliant MC Function Blocks
- Unitronics supplies you with Ready-made Motion code; this enables you to immediately get moving with your Motion system.

OPC UA
UniStream controllers can now function as OPC UA servers.

Digital Signature
The Data Table files generated by the function Data Table: Indexed> Store DTI to File are now automatically stamped with a digital signature.

Ladder: Draw
New Ladder Functions enable you to draw shapes, and groups of shapes on the HMI screen (Not yet documented)

RTC /GMT
UniStream now supports two clocks, Local Time and GMT. You can use these in Ladder elements, HMI Widgets, and set them via UniApps.

- A new parameter has been added to the RTC struct, Time Zone
- Existing Ladder functions Set PLC Time/Date now have a new parameter, Status.
- New System structs have been added, UTC Time and UTC Date

Additional features

- IO bus system struct now includes a tag: IO Boot Reset
- Web Data Table element now includes Show Last Update
- Web Data Table width limit reduced to 300px
- Caption of the table in Data Tables widgets (HMI/Web)
- SQL now includes Test Connection
- CANopen: CANopen nodes can now be duplicated
- HMI:
  - Message Boxes can now be aligned
  - Message Box Buttons: location can be changed
  - HMI Slider: ticks color may be changed
  - HMI Trends: Background Color, Grid Color and Plot Color can now be changed

- Alarms offer new options:
  - Alarms Silent ACK
  - hide the Snooze button
  - display the alarm banner only if there's an alarm
- CRC ladder element: new CRC_ASCII option
- User Access Control, User options, now has two new options::
  - Show User Name; un-check to hide a user's name in the Scroller at login
  - Allow Change Password, un-check to hide that option from the user
- Store DTI To file, new options:
  - 0 - No CSV File (Only udtf)
  - 1 - Create CSV File (ALL udtf/csv/csv.zip)
  - 2 - Only csv
  - 3 - Only csv.zip
- SD Management now includes Data Table files
- The following passwords now support up to 16 characters:
  - UniApps Administrator
  - UniApps Guest
  - Upload
  - Import/Export App
- Project Level Actions: Now includes Safely remove SD and Safely remove DOK (memory stick)
- String tags have been increased to 256 characters
- Online mode view: maximum tag size increased from 256 bytes to 514.

Bugs fixed in this version

- In certain cases, the Web tables index column ("#") would sometimes present only zeros..
- Using */ in region or rung comments would cause compilation errors.
- If the project was created when the UniLogic UI language was set to Chinese or Czech, SD Management did not work.
- Web-Server - HyperLink did not work when linked to a Const string tag
- While linking an array to FB in Ladder, when selecting the array with the mouse cursor, the keyboard input did not function
- If the user selected URB modules before selecting a power supply, the modules did not function correctly.

UniLogic V1.26 Rev 90 UniStream OS 1.26.91, May 2019

Hardware Configuration

UniStream PLC   Hardware Configuration now offers UniStream PLC +I/Os controllers.

The series is available in three versions: Pro, Standard, and Basic.

Note that a model number that includes:

- B10 refers to Pro version (e.g. USC-B10-T24)
- B5 refers to Standard version (e.g. USC-B5-RA28)
- B3 refers to Basic version (e.g. USC-B3-T20)

Features

Power Features	- Built-in Trends and Gauges, auto-tuned PID, data tables, data sampling, and Recipes - UniApps™: Access & edit data, monitor, troubleshoot & debug and more - Security: Multi-level password protection - Alarms: Built-in system, ANSI/ISA standards
I/O Options	- Built-in I/O configuration, varies according to model - Local I/O expansion via Uni-I/O™ modules, and UAG-XKxxxx I/O expansion adapters - UniStream Remote I/O Ethernet adapters and modules

COM Options	- Built-in ports: 2 Ethernet, 1 USB host, 1 USB device port
	- Add-on ports (UAC-CB), available by separate order:
	   ○ 1 CANbus port may be added to all models
	   ○ RS232/485 ports: according to model technical specifications

COM Protocols	- Fieldbus: CANopen, CAN Layer2, MODBUS, EtherNetIP and more. Implement any serial RS232/485, TCP/IP, or CANbus third-party protocols via Message Composer - Advanced: SNMP Agent/Trap, e-mail, SMS, modems, GPRS/GSM, VNC Client, FTP Server/Client - Remote Access via any device that supports VNC

Programming Software	All-in-One software for hardware configuration, communications, and HMI /PLC applications, available as a free download from Unitronics.

HMI	All UniStream PLCs can display HMI screens on the following devices:

- UniStream Display (USL)
- UniStream Modular HMI panel (USP)
- UniStream Built-in (on the panels integral to the device)
- Any device screen that supports VNC client

HMI screens are designed in UniLogic. In addition to the HMI screens, UniStream PLCs offer built-in HMI features, including:

- UniApps™: Access & edit data, monitor, troubleshoot, debug, and more
- Security: Multi-level password protection
- Alarms: Built-in system, ANSI/ISA standards

Differences between B10, B5, and B3

Feature	B10 Pro	B5 Standard	B3 Basic
I/O Expansion via Uni-I/O	Yes		No
Remote I/O Expansion via Ethernet I/O Adapter (URB)	Up to 8		1
VFD	32		2
MicroSD	Yes		No*
Add-on COM modules	3		2
System Memory	6GB	3GB	3GB
MODBUS Slaves	Unlimited		Up to 8
Ethernet/IP Scanners	16		1
Ethernet/IP Adapters	32		8
Web Server	Yes	No	No
SQL Client	Yes	No	No
MQTT	Yes		
PID Loops	64		2
Data Sampler/Trends	Yes		No
CSV files: creating/ reading	Yes		No
FTP, server/client	Yes		No
Saving Data Tables to SD	Yes		No*
Screenshots	Yes		No
Sending email attachments	Yes		No
USB device (programming port)	Yes		No**

* Note that B3 models do not support features requiring SD cards. In addition, Alarm History is not retained after PLC reset.

** Note that B3 models may be programmed only via Ethernet cable**.**

| UniStream PLC Models	The built-in I/O configurations are indicated by the last group of digits in the model number. For example, USC-B5-**TR22** and USC-B10-**TR22** have identical I/O configurations.
USC-B5-B1 **USC-B10-B1**	These models do not have built-in I/Os.
USC-B5-TR22 **USC-B10-TR22**	▪ 10 Digital inputs, 24VDC, sink/source ▪ 2 Analog inputs, 0÷10V / 0÷20mA, 12 bits ▪ 2 Transistor outputs, npn, including 2 High speed PWM output channels ▪ 8 Relay outputs
USC-B5-T24 **USC-B10-T24**	▪ 10 Digital inputs, 24VDC, sink/source ▪ 2 Analog inputs, 0÷10V / 0÷20mA, 12 bits ▪ 10 Transistor outputs, pnp, including 2 PWM output channels
USC-B5-RA28 **USC-B10-RA28**	▪ 14 Digital inputs, 24VDC, sink/source, including 2 High speed counter input channels ▪ 2 Analog inputs, 0÷10V / 0÷20mA, 14 bits ▪ 2 Temperature inputs, RTD / Thermocouple ▪ 8 Relay outputs ▪ 2 Analog outputs, 0÷10V / -10÷10V / 0÷20mA / 4÷20mA, 12 bits
USC-B5-TA30 **USC-B10-TA30**	▪ 14x Digital inputs, 24VDC, sink/source, including 2 High speed counter input channels ▪ 2 x Analog inputs, 0÷10V / 0÷20mA, 14 bits ▪ 2 x Temperature inputs, RTD / Thermocouple ▪ 10 x Transistor outputs, pnp, including 2 PWM output channels ▪ 2 x Analog outputs, 0÷10V / -10÷10V / 0÷20mA / 4÷20mA, 12 bits
USC-B5-R38 **USC-B10-R38**	▪ 24x Digital inputs, 24VDC, sink/source, including 4 High speed counter input ▪ 2 x Analog inputs, 0÷10V / 0÷20mA, 12 bits ▪ 12 Relay outputs
USC-B5-T42 **USC-B10-T42**	▪ 24x Digital inputs, 24VDC, sink/source, including 4 High speed counter input ▪ 2 x Analog inputs, 0÷10V / 0÷20mA, 12 bits ▪ 2x Analog outputs, 0÷10V / -10÷10V / 0÷20mA / 4÷20mA, 12 bits ▪ 16x Transistor outputs, source (pnp), including 2 PWM output channels
USC-B3-R20	▪ 10 Digital Inputs, ▪ 2 Analog Inputs ▪ 8 Relay Outputs
USC-B3-T20	▪ 10 Digital inputs, ▪ 2 Analog Inputs, 8 Transistor Outputs, pnp, including2 PWM Outputs

USB Action Files: Interact with the PLC	This is a special UniStream PLC feature; it enables the user to carry out certain task without the need to interact with the PLC via an HMI panel.
	Programmers can create Action files in UniLogic and save them to a USB mass storage device, such as a flash drive. The end user can plug the drive into the PLC's USB port, and then press the Confirm button on the front of the PLC to run the file and execute the Actions.

Actions include updating firmware and network settings, downloading applications, extracting log files, and more.

In order for Actions to execute, the PLC must have permission. USB Action Permissions are set in Hardware Co, and are written to the PLC at download
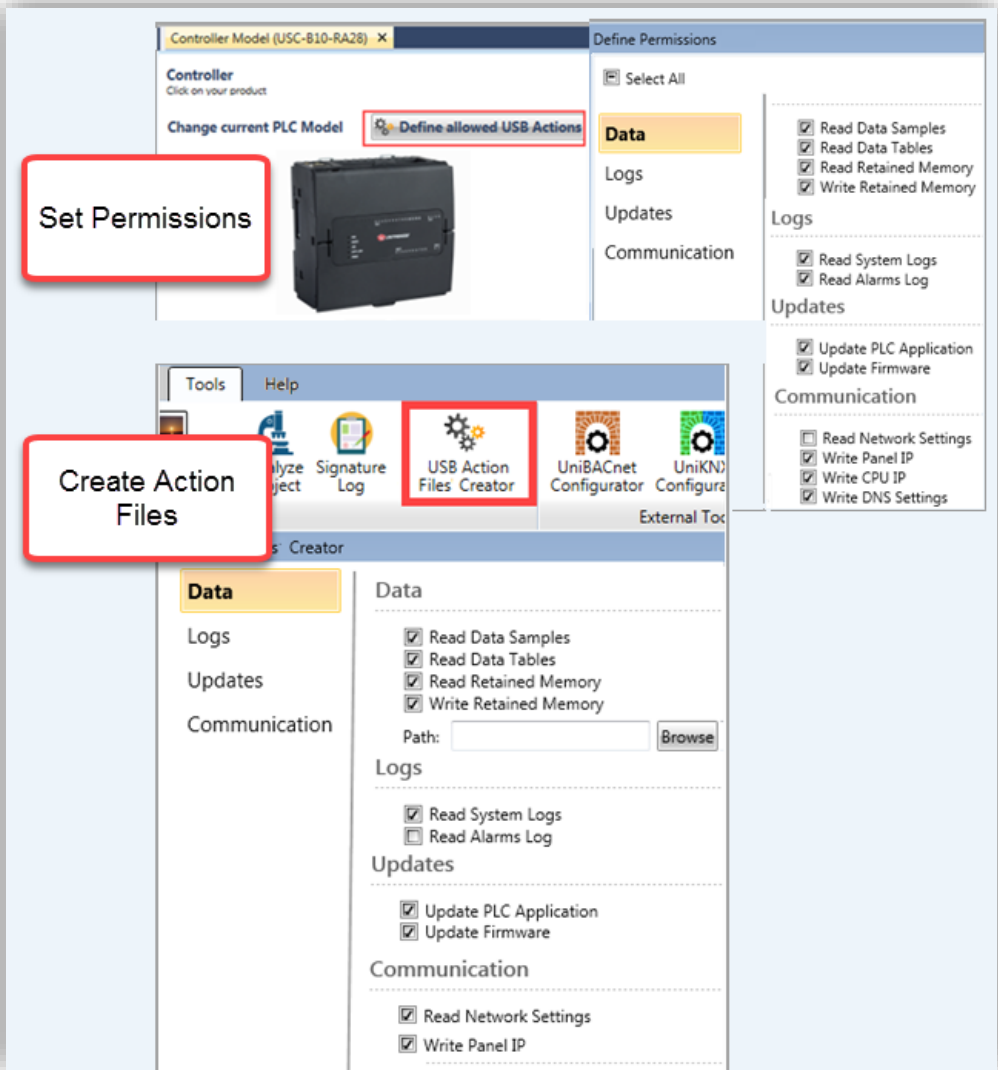
UniStream Remote I/O: New Models

Hardware Configuration now shows over 20 new UniStream Remote I/O modules.

Digital Inputs	
URD-1600-8	16 Digital Inputs (Sink / Source), 24VDC
URD-3200-4	32 Digital Inputs (Sink / Source), 24VDC
URD-0400B	4 Digital Inputs, 120VAC
URD-0400C	4 Digital Inputs, 240VAC
Encoder / High Speed Counters	
URD-0200E	2 High Speed Counters / Encoder Inputs, 24VDC
URD-0200D	2 High Speed Counters / Encoder Inputs, 5VDC
Digital Outputs	
URD-0008CI	8 Digital Outputs, (Source), 24VDC/2A
URD-0016CG-8	16 Digital Outputs, (Source), 24VDC/0.3A
URD-0032CG-4	32 Digital Outputs, (Source), 24VDC/0.3A
URD-0008NI	8 Digital Outputs, (Sink), 24VDC/2A
URD-0016NG-8	16 Digital Outputs, (Sink), 24VDC/0.3A
URD-0032NG-4	32 Digital Outputs, (Sink), 24VDC/0.3A
Relay	
URD-0004SK	4 Solid State Relay, 240VAC/DC, 0.5A
URD-0004SM	4 Solid State Relay, 110VAC/DC, 1A
URD-0004SN	4 Solid State Relay, 24VAC/DC, 2A
Analog Inputs 12 bit	
URA-1600O-8	16 Analog Current Inputs 12bit
URA-1600P-8	16 Analog Voltage Inputs 12bit
Analog Inputs 16 bit	
URA-1600T-8	16 Analog Current Inputs 16bit
URA-1600U-8	16 Analog Voltage Inputs 16bit
Analog Outputs 12 bit	
URA-0004X	4 Analog Voltage Outputs 12bit
URA-0016X-8	16 Analog Voltage Outputs 12bit
Analog Outputs 16 bit	
URA-0016Z-8	16 Analog Voltage Outputs 16bit
Temperature	
URS-04RT	4 RTD / Resistance
URS-04TC	4 Thermocouple / mV
URS-08RT-2	8 RTD / Resistance
URS-08TC-2	8 Thermocouple / mV

|	
HART Support: **New Uni-I/O**	The new UNI-I/O model **UIA-0800NH**, offers 8 analog channels with HART communication.
UAG-CX- **XKPLXXXX**	UniStream CX Long-range I/O expansion adapter + embedded Power Supply for UniStream controllers offering jacks, such as the UniStream Built-in series. Available in lengths of 600, 1200, 1500, 2000, 3000 cm.
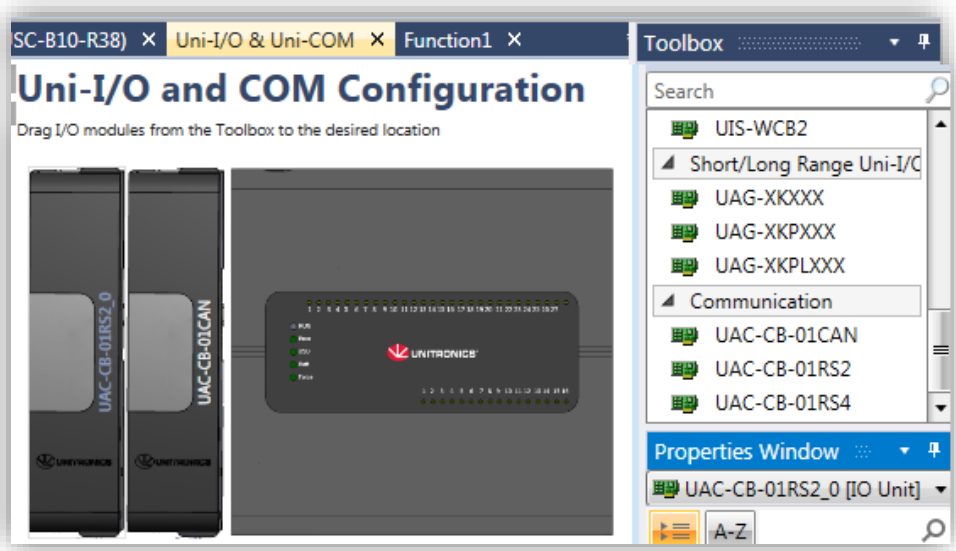
Additional Features

Set PLC Configuration **from file**	A new Ladder function enables you to load configuration files that modify the parameters shown below.
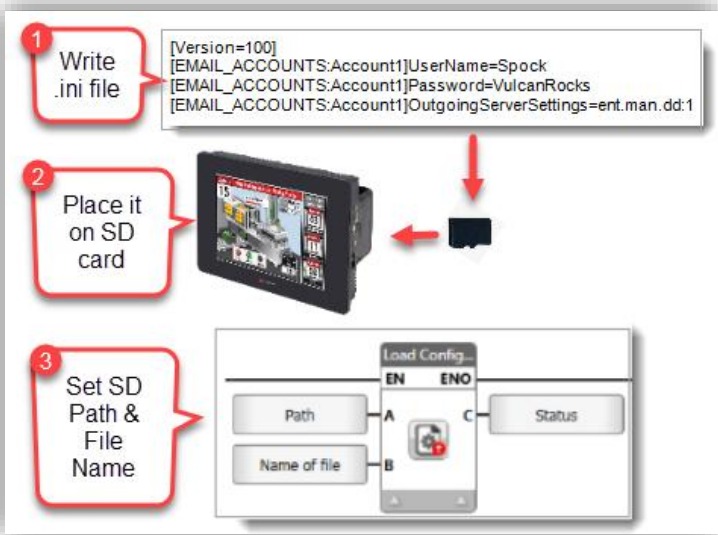
Function	Editable Parameters
Email Accounts	User Name, Password, Outgoing Server Settings, From
FTP Client	User Name, Password, Port, Remote IP
FTP Server	User Name, Password, Port, Read Only
FTP RAM Server	User Name, Password, Port
Panel: Network settings	IP Address, Subnet Mask, Default Gateway
COM Modbus	Baud Rate, Data Bit, Parity Bit, Stop Bit
COM txrx/com	

Switch Case	You can define groups of Switch Cases, and then run them via the Switch Case Ladder function. This enables you to run multiple Compare operations in a single case, and use the results to drive one or more events.
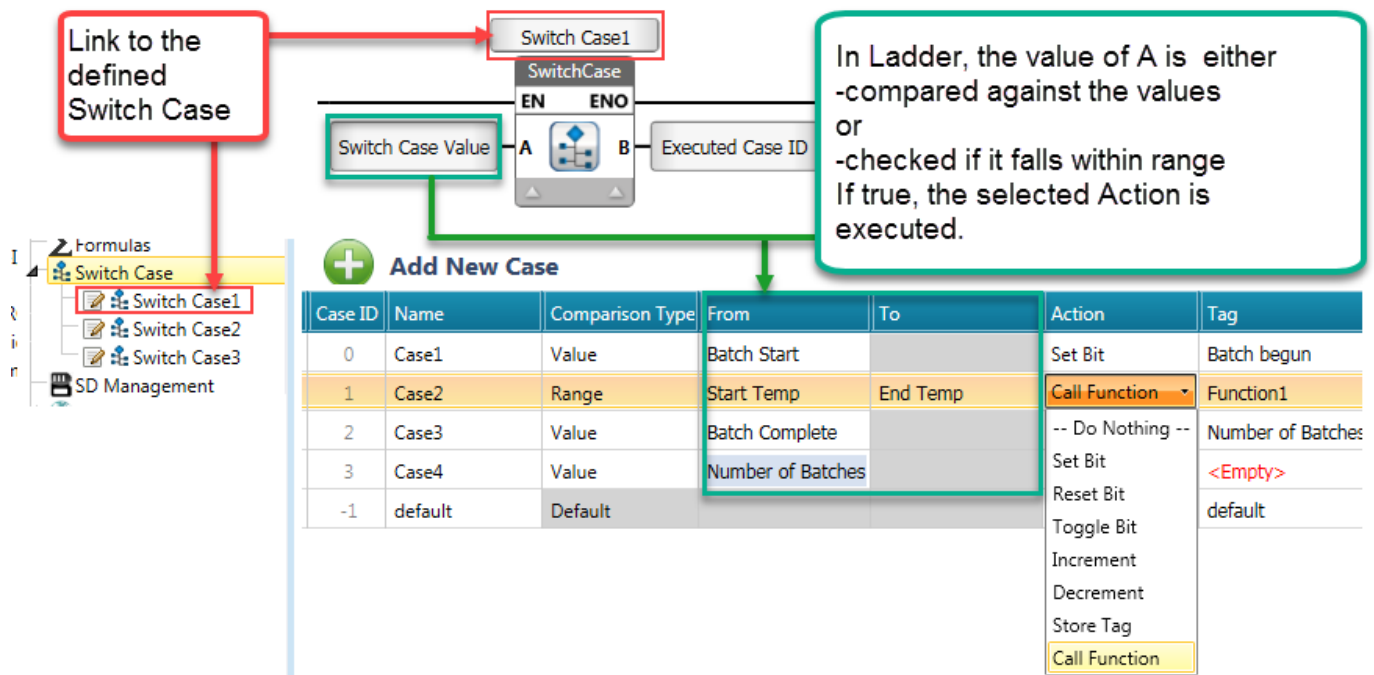
SQL: Stored procedure	When you run a stored procedure, you can ignore @ placeholders by checking the "Is Executing a stored procedure" checkbox for each query.

email Attachment, Alarm Logs	You can now attach Alarm Logs as a .csv file.	
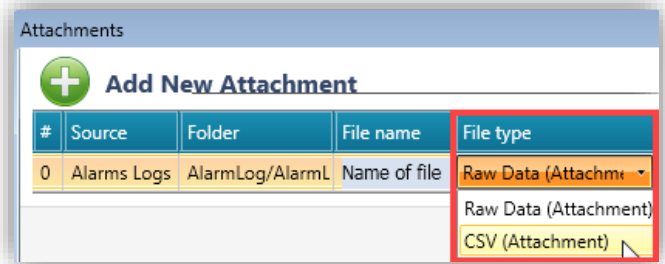
New Ladder Elements	• Zip File from SD: Locate a file in an SD folder, zip it in .zip or gz format, and place it in a destination folder on the SD. • FTP Compare File: locate a file on a remote FTP Server, compare it to a file on the controller's SD card, and overwrite the SD file if it is different.
HMI Editor Additions	• HMI PDF Viewer element: now offers Indirect file name support • UniLogic HMI Toolbox: sort custom controls according to ABC • Password box and Text Box HMI: now includes Numeric keypad support.
Alarms	Alarms now support several new features: • Global actions: o - Create/close and Zip Alarm log o - Clear all Alarms o - Clear and Ack all Alarms • Each individual Alarm now includes: - Alarm Cleared bit - Alarm Suppression bit • New HMI Actions: - Clear all Alarms - Clear and Ack all Alarms • New Alarm Ladder Elements: - Modify Alarm texts from CSV file - Reset cleared Alarm state
Default Language: Korean	You can now, when selecting a controller, under Properties/Regional Settings, select Korean, causing the controller to display the Korean keyboard when a user needs to enter data via the HMI screen.
Modbus	Modbus Groups have been increased to up to 128 groups

Bugs fixed in this version

- RTC Date/Time is now editable while in "Online" mode
- Web Server: State Machine buttons are now visible as expected
- Web Server: Web Page Roles can now be duplicated
- Online mode: Would sometimes disconnect randomly
- Table Recipe: If the name of the linked struct was changed, the table values would not be visible
- UniLogic gives compilation error if an SQL query includes an alias name
- Duplicating an array inside a struct would not keep members' names and comments
- Changing member of array name as Function In sometimes changed the current view