

UNISTREAM™



PLC + HMI in One Unit

UNISTREAM™

A new generation of control products by Unitronics

The UniStream™ platform comprises a versatile and powerful CPU, a variety of elegant HMI touch-panels, I/O modules and communication modules that are very easy to install and require minimal wiring.

Scalability

Automate a single machine – use the new All-in-One – it's as easy as 1-2-3.

- 1 Choose an HMI touch panel – 7" or 10.4" model.
- 2 Add a CPU – snap it to the back of the panel.
- 3 Select Uni-I/O™ and Uni-COM™ modules – snap them next to the CPU.

The result is a single, compact controller with an integrated HMI panel and on-board I/Os that suit your specific requirements.

Expand to control a complex process

A single UniStream™ CPU supports up to 2,048 on-board, local and remote I/Os.

Use UniStream™ in your factory-wide control project

Integrate third-party devices via Ethernet, CANbus or RS232/485 using MODBUS or CANopen.

Use the UniLogic™ Message Composer to adapt UniStream™ to other protocols.



Connectability

Access UniStream™ from anywhere at any time

Connect directly via Ethernet or USB, or use VNC to connect mobile phone, tablet, or PC.

Profitability

Reduce your Costs

- Free software
- Free support
- Less wiring, less space
- 50% reduction in programming time: faster Time-to-Market



The result of
over 20 years of
PLC development,
combined with
the strongest
trends in
automation

UniLogic™ Studio

Work Less – Do More

A new software generation for Control Automation programming:
Easy to use, time-saving: benefit from the most advanced
automation freeware in the field.



UniApps™

A Paradigm Change.

An expanding library of value-added PLC embedded Apps.

A UniApp™ for every need – reach your data base, edit
data, perform calculations, monitor, troubleshoot, and more.



Remote Access

Access your PLC from anywhere at anytime.



I/O or Communication modules
are easily snapped to the back
of the HMI panel without moving
any of the neighboring units.

UNISTREAM™

Building Blocks

Based on a highly modular architecture, UniStream™ enables you to create a compact control device that comprises the exact configuration you require for your specific application.

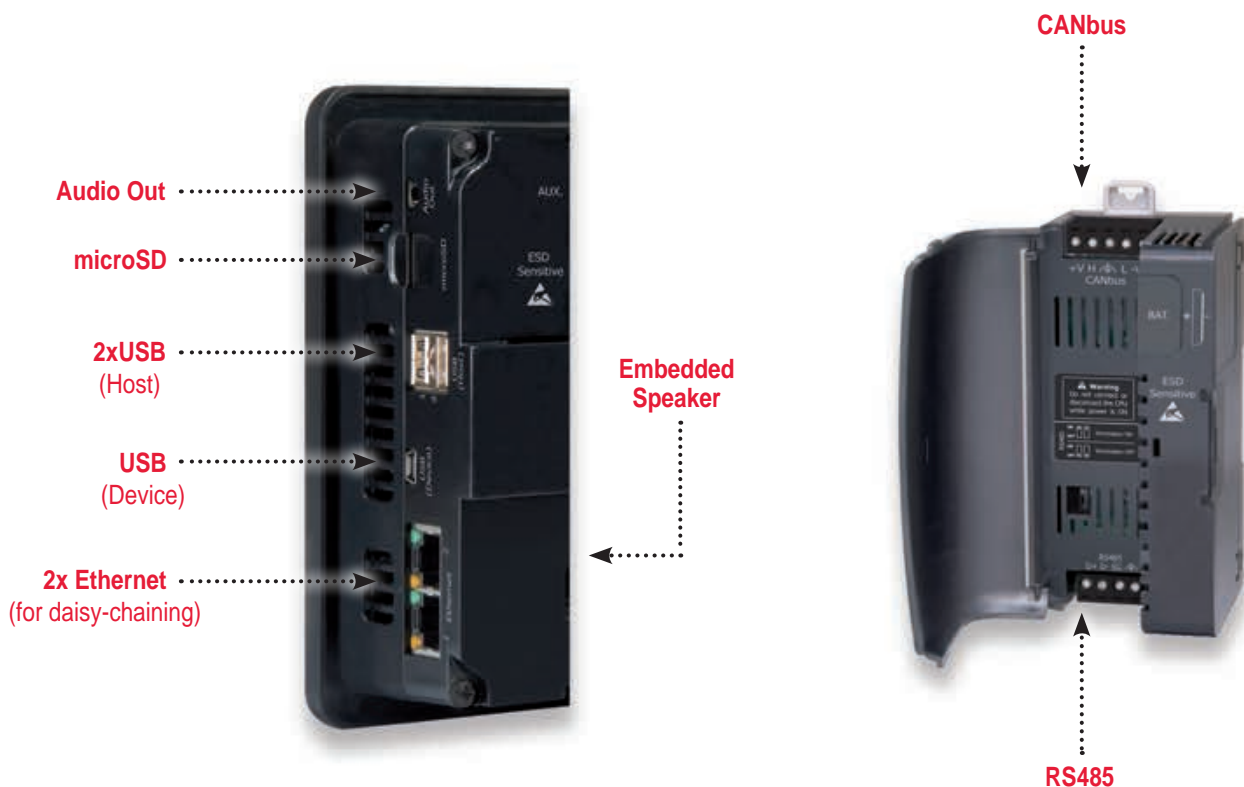
Select any UniStream™ HMI panel, add a CPU, and add the right I/O and COM modules to fit your requirements. The result is a compact control device that comprises the optimal configuration for your specific application.



All-in-One, simple configuration—saves on cabinet space and wiring costs

Use a Local Expansion Adapter to connect UniStream™ to additional I/O modules on a DIN rail.

Interfaces





	CPU + 7" HMI Panel	CPU + 10.4" HMI Panel
Part Number	USC-P-B10 and USP-070-B10	USC-P-B10 and USP-104-B10
Number of I/Os per CPU (On-board, local and remote)	Up to 2,048	
On-board Uni-I/O™ or Uni-COM™ Modules (All-in-One configuration)	Snap up to 3 modules on the back of a 7" HMI Panel	Snap up to 5 modules on the back of a 10.4" HMI Panel
Local Uni-I/O™ Modules	The UniStream™ CPU supports a maximum of 16 Uni-I/O™ (including the on-board modules)	
Remote I/O Expansion	Use EX-RC1 adapters to further extend the number of I/Os	
Bit Operation	0.13 μs	
Ladder Memory	1 MB	
External Memory	microSD and USB Flash drive	
Audio	Play MP3 audio files using internal speaker or use the audio-out jack for external speakers	
Power Supply	12/24VDC	
Backup Battery	CR2032, Back-up RTC values, system data and retained tags	
Communication		
Ports	2 Ethernet • 1 RS485 • 1 CANbus 2 USB host ports • 1 USB device port for programming	
Protocols	MODBUS, CANopen Message Composer for 3 rd party protocols	
HMI Panel		
Type	TFT, LCD, Touch HMI Panel	
Size	7" (16:9)	10.4" (4:3)
Resolution	800x480 (WVGA)	800x600 (SVGA)
Colors	65,536	
Display Backlight Illumination	White LED	
Environment		
Protection	IP66, IP65 and NEMA4X when panel-mounted ⁽¹⁾	
Operating Temperature	-20°C to 55°C (-4°F to 131°F)	

⁽¹⁾ UniStream™ complies with IP66 and NEMA4X only with the audio seal installed, please refer to the installation guide of the HMI panel for information.

* UL approval procedure for the UniStream™ is in progress.

UNISTREAM™ Expandability

On-Board, Local, and Remote

Select the perfect combination of I/O expansion modules and configure them to fit your application. Snap up to 5 modules on a 10.4" HMI panel, up to 3 on a 7" panel. Expand further either locally or remotely.

Digital Uni-I/O™ Modules

Part no.	UID-1600	UID-0808T	UID-0808THS ⁽¹⁾	UID-0016T	UID-0808R	UID-0016R
Inputs	16	8	8 ⁽²⁾ Up to 2 Shaft Encoders 250kHz max	-	8	-
Type	Sink or Source ⁽³⁾			-	Sink or Source ⁽³⁾	-
Outputs	-	8	8 ⁽⁴⁾ Up to 4 PWM; or, Up to 2 HSO, 250KHz max	16	8	16
Type	-	Transistor, Source (pnp), 24VDC			Relay, 24VDC (power supply)	
Isolation	All inputs and outputs are isolated					

⁽¹⁾ The UID-0808THS utilizes two high speed blocks that can each be assigned either to the inputs or to the outputs.

⁽²⁾ 4 inputs may be configured to function either as normal or as high speed digital inputs, and can support a total of 2 shaft encoders.

⁽³⁾ Sink (pnp) or Source (npn), 24VDC.

⁽⁴⁾ 2 outputs are high speed, up to 250kHz, and may function as normal or high-speed PWM outputs (same frequency and different duty-cycles).
2 outputs are normal speed, and may function as normal speed PWM outputs (same frequency but different duty-cycles).

Analog Uni-I/O™ Modules

UIA-0402N	
Inputs	4
Type	0-10V, 0-20mA, 4-20mA
Resolution	13 bit
Outputs	2
Type	0-10V, ±10V, 4-20mA, 0-20mA
Resolution	14 bit ^(*)
Isolation	No

^(*) 13 bit when set as current.

Uni-COM™ Communication Modules

Serial Communication Modules	
UAC-01RS2	1x RS232
UAC-02RS2	2x RS232



Local Expansion Adapter

Part No.	Description
UAG-XKxxx	Local Expansion Kit – locate modules up to xxx cm away from the CPU. Use when connecting up to 8 modules to a single CPU (including on-board modules).
UAG-XKPxxx	Local Expansion Kit with embedded Power Supply – locate modules up to xxx cm away from the CPU. Use when connecting more than 8 (and up to 16) I/O modules to a single CPU



Remote Expansion

UniStream™ and Vision Remote I/Os

UniStream™ connects to Vision Remote I/O modules via CANbus. A transparent software plug-in enables UniStream™ to communicate data via one or more EX-RC1s at distances up to 1,000 meter.

Unitronics' existing line of Temperature and Load Cell I/O modules, as well as a variety of Digital and Analog modules, allow you to meet all application requirements.



Digital I/Os							
IO-DI8-TO8	IO-DI8-RO4	IO-DI8-RO8	IO-TO16	IO-DI16	IO-RO8	IO-RO16	IO-DI8ACH

Analog and Special I/Os							
IO-AI4-AO2	IO-PT400	IO-PT4K	IO-AO6X	IO-LC1	IO-LC3	IO-ATC8	IO-AI8

Combo Digital/Analog I/Os	
IO-D16A3-RO16	IO-D16A3-TO16

UniLogic™ Studio

Free of charge

Work Less - Do More

UniLogic™ Studio provides a unified environment for hardware and communication configuration, Ladder, and HMI applications.

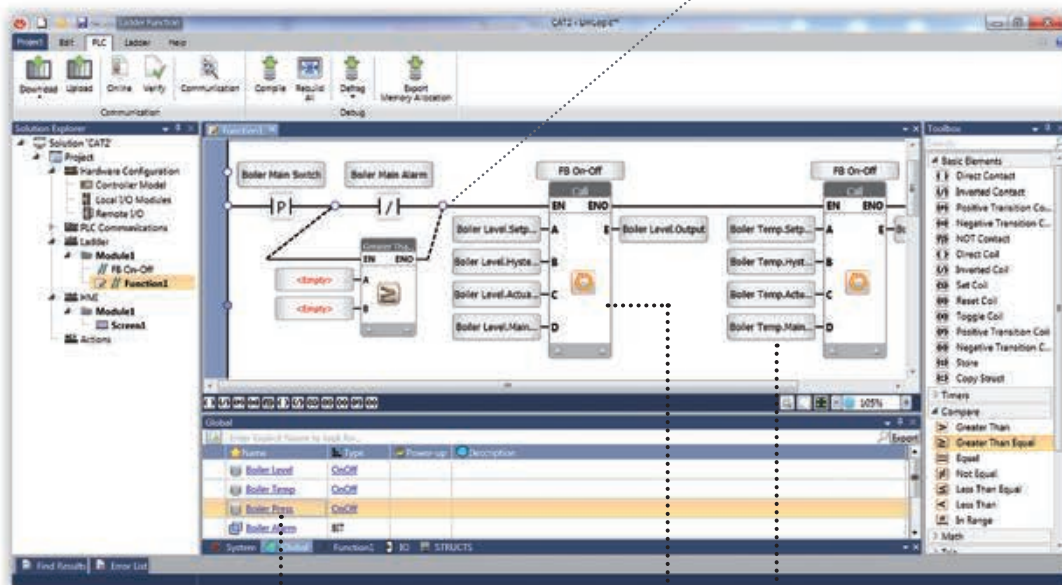
Intuitive and simple to use, includes a build-it-once and re-use paradigm that cuts application programming time.

The Ladder Programming Revolution

Cut your program development time in half

- Logically-organized programming environment - everything is visible
- Incredibly easy to use
- Customizable: pin, float, and dock
- Keyboard shortcuts

Click-to-place
or Drag & Drop



STRUCTS

Group different Data Types
into a single logical unit
Create your own Data Types
Use/reuse whenever applicable

User Defined Function Blocks

Build and store UDFBs
Use/reuse and port
between applications

Tags

In place of addressing
Name tags and select their
data types — addressing
takes care of itself

All-in-One: Ladder, HMI, Hardware Configuration, and Communication

Advanced HMI Design

Create the most amazing screen designs

- Multi-layer elements (with opacity)
- Complete object rotation
- Animated gifs, sound clips
- Drag & Drop widgets: user controls, pop-ups and more
- Unicode fonts



User-Friendly Hardware Configuration

- Drag & Drop modules
- I/O Tags, automatically created
- Easy I/O configuration



Drag & Drop I/O Modules onto the back of a 7" UniStream™ Panel

Flexible Communications

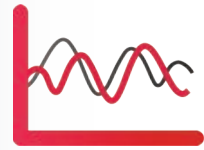
- Simply Configure & Communicate
- No Ladder Programming needed
- Multiple slave/master definitions per CPU



Multiple slave/master definitions per CPU

Data Logging & Trends

Use Data Sampler to simultaneously sample and log hundreds of different inputs. Data Sampler files can be viewed, exported or mailed. Use Trends to display different combinations of inputs in graphical form, both in real time or as histograms.



Data Tables

Create multiple Data Tables to implement Recipes and manage Data Logs. Populate data tables manually, or import data from Excel files. Use the Data Table Widget to enable user access to the Data Table directly from the UniStream™ screen in real-time.



Multi Language

Switch HMI language with a single touch. Create your application screens in several languages, and enable users to switch between them in real-time from the UniStream™ screen.



Remote Access

Connect directly via Ethernet or USB, or use VNC to connect a mobile phone, a tablet, or a PC.



Audio

Use audio files, either your own or those offered by UniLogic™, to emphasize HMI actions using sounds. Integrate alert, warning or confirmation sounds in your application to clarify the situation to the end user. Use the internal or external speakers.



Password Protection System

Multilevel password protection. Create permissions for entering UniApps™, uploading the application from UniStream™ to the PC, and for Remote Access.



UNISTREAM™ Product List

Product	Part #	Description
CPU	USC-P-B10	CPU-for-Panel
Panels	USP-070-B10	UniStream™ 7" – HMI Panel
	USP-104-B10	UniStream™ 10.4" – HMI Panel
Communication Modules	UAC-01RS2	Uni-COM™ – 1xRS232
	UAC-02RS2	Uni-COM™ – 2xRS232
Expansion Adapters	UAG-XK125	Short Range Local Expansion Kit, 125 cm (4 feet)
	UAG-XKP125	Short Range Power Supply Local Expansion Kit, 125 cm (4 feet)

Product	Part #	Description	Inputs	Outputs
Input/Output Modules	UID-0808R	Uni-I/O™ Digital	8	8 Relay
	UID-0808T	Uni-I/O™ Digital	8	8 Transistor
	UID-0808THS	Uni-I/O™ Digital – High Speed	8	8 Transistor
	UID-1600	Uni-I/O™ Digital	16	-
	UID-0016R	Uni-I/O™ Digital	-	16 Relay
	UID-0016T	Uni-I/O™ Digital	-	16 Transistor
	UIA-0402N	Uni-I/O™ Analog	4	2

Customer Experience

The Support Team

- Free support, always available by email, phone, or in person
- Open webinars on products and features

The Unitronics User's Forum

- A strong worldwide community of automation professionals working together for mutual benefit – a great place for discussions, exchange of ideas and for getting support.

The World Wide Distribution Network

- Over 160 distributors on 5 continents

The Company

- Professional, Experienced, Market-Driven



Free Technical Support

Call Unitronics – Speak directly with our support experts, +972-3-977-8866

e-mail – support@unitronics.com

Visit – <http://forum.unitronics.com> to get answers from forum members and Unitronics' experts.

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