UNITRONICS®

PLC
+HMI
ALL IN ONE™

One Integrated Solution for Control & Automation

Powerful Software | Full Range of PLCs | Complete Line of VFDs

Outstanding Support

About Unitronics

Unitronics designs, manufactures, and markets advanced control and automation solutions. Our extensive offering includes a complete line of PLCs with integrated HMI, full line of VFDs, a broad array of I/Os and complementary devices, as well as programming software for all aspects of control, motion, HMI, and communications.
Unitronics PLCs range from micro-PLC + HMI units for simple machine control, to complex controllers with advanced functions, a variety of onboard IOs and multiple communication options – including support for Industry 4.0 (smart factory) technology.

Easy to use, efficient, and affordable, our products have been automating processes, systems and standalone applications since 1989. Today, our field-proven products automate over 1 million installations in diverse fields, including petrochemicals, automotive, food processing, plastics & textiles, energy & environment, water & waste water management – anywhere automated processes are required.

Unitronics is represented by more than 160 distributors in over 55 countries around the globe, providing our customers with local support in their local languages.

Unitronics Benefits:

- **Full Product Range:** PLC + HMI controllers, I/Os, and VFDs to meet all application needs.
  All software and utilities are provided at no additional charge
- **All-in-One Software:** Configure and program PLC, HMI, VFD, and all other components in one easy environment
- **Industry 4.0:** SNMP, FTP, e-mail, SMS, GPRS/GSM, Remote Access via VNC Client / built-in Webserver, SQL & MQTT
- **Rich Features:** Auto-tuned PID, datalogging, Recipes, HMI Trends & Gauges, Alarms, multi-level passwords, multi-language support, Datacom via CANopen, CAN Layer2, MODBUS, EtherNetIP and more
- **Outstanding Support:** Unitronics exceeds the industry standard for customer care. You benefit from personalized, expert sales and technical support without fees or tiers
- **Customized Solutions:** According to customers' specifications

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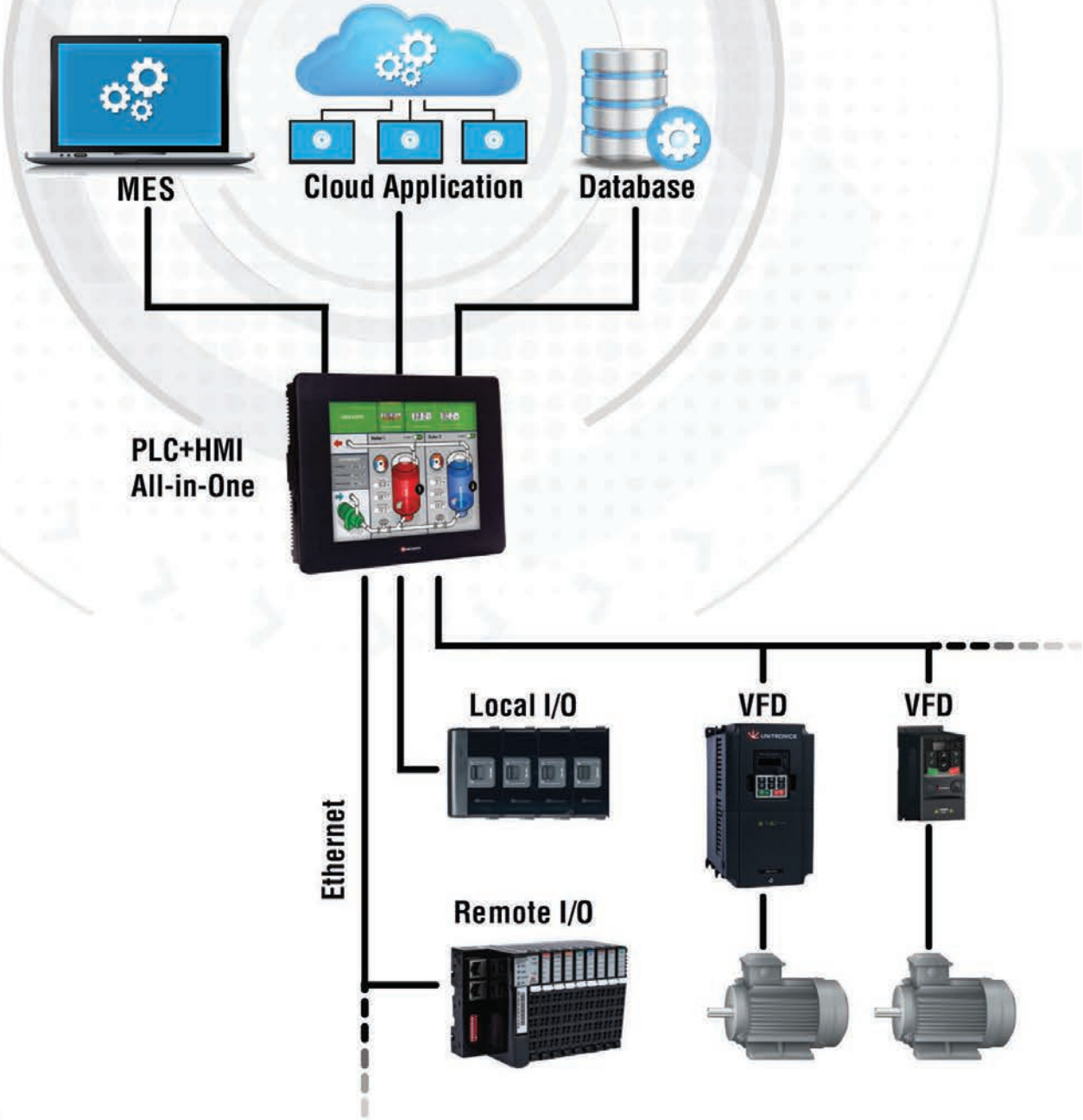
Before you place an order, please check the complete technical specifications for each product, located in the Unitronics website www.unitronics-cannabis.com.

One Integrated Solution for



Control and Automation

Complete Range of PLC+HMI

- Powerful, Multi-function Controllers
- Up to 2048 I/Os per controller
- Quality HMI
- Field-hardened
- Award-winning

Full Range of VFDs

- Easy to Program
- Simple to Use
- Setup & Program via Software or VFD Keypad

All-in-One Programming Software

- Program Ladder Logic
- Design HMI & Web pages
- Configure VFDs
- Hardware & Communication Configuration
- One Easy Environment

Total Solution for Industry 4.0

- MQTT
- SQL
- FTP
- SNMP
- Built-in Web Server
- Remote Access via free phone APP
- Smart Factory Technology

UniStream®

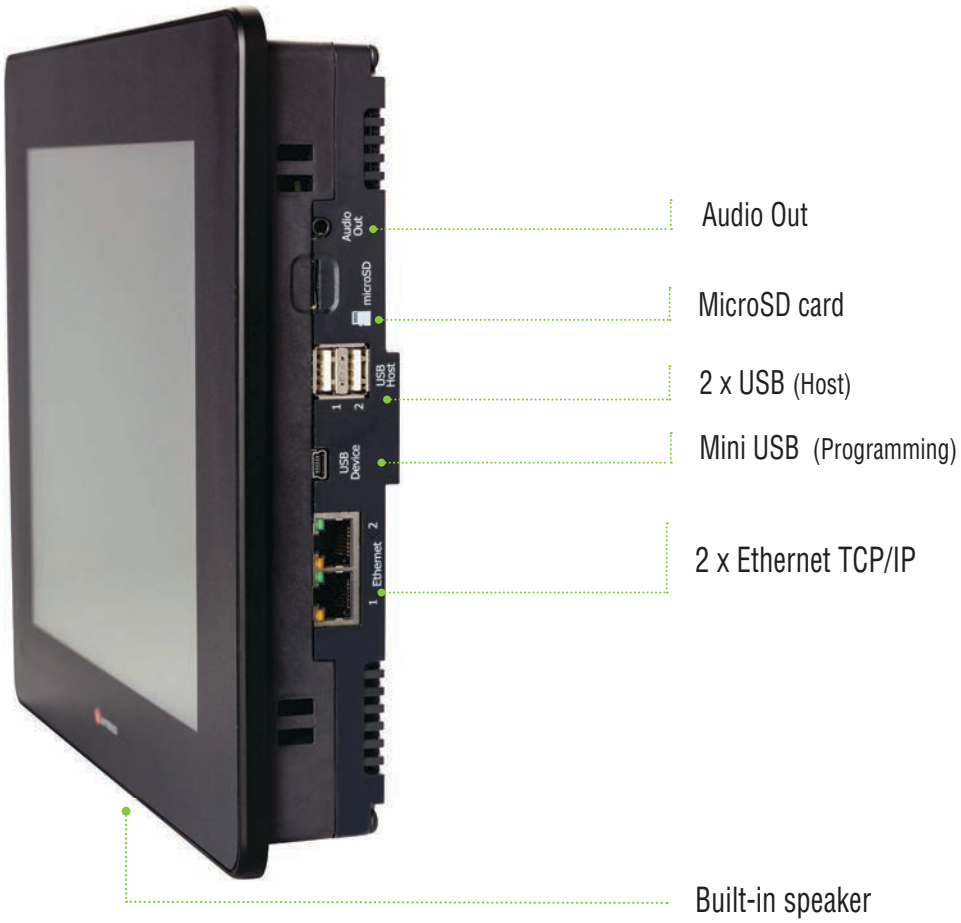
Powerful Award-winning Programmable Logic Controllers

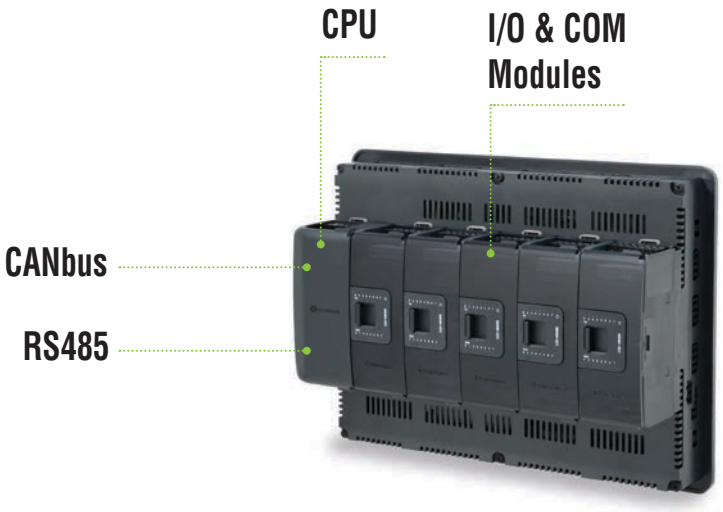
For high-end automation projects, available in two All-in-One series:
Modular & Built-in.

UniStream® Modular

Create a custom control solution, perfectly matched to your requirements

Uniquely designed to enable you to create a customized controller in three steps: select an HMI panel, snap in a CPU, and add any I/O or communication modules necessary for your specific application.





UniStream® Built-in

Space-saving PLC that delivers the functionality to control complex machines

PLC+HMI+I/O built into a single, superbly compact unit in a range of built-in I/O configurations.
Available in two versions: Built-in and Built-in Pro.

Mini USB (Programming)

Ethernet TCP/IP

USB (Host)

MicroSD card

Built-in I/Os

I/O Expansion Adaptor

COM Modules

UniLogic®-UniStream®

All-in-One Programming Software

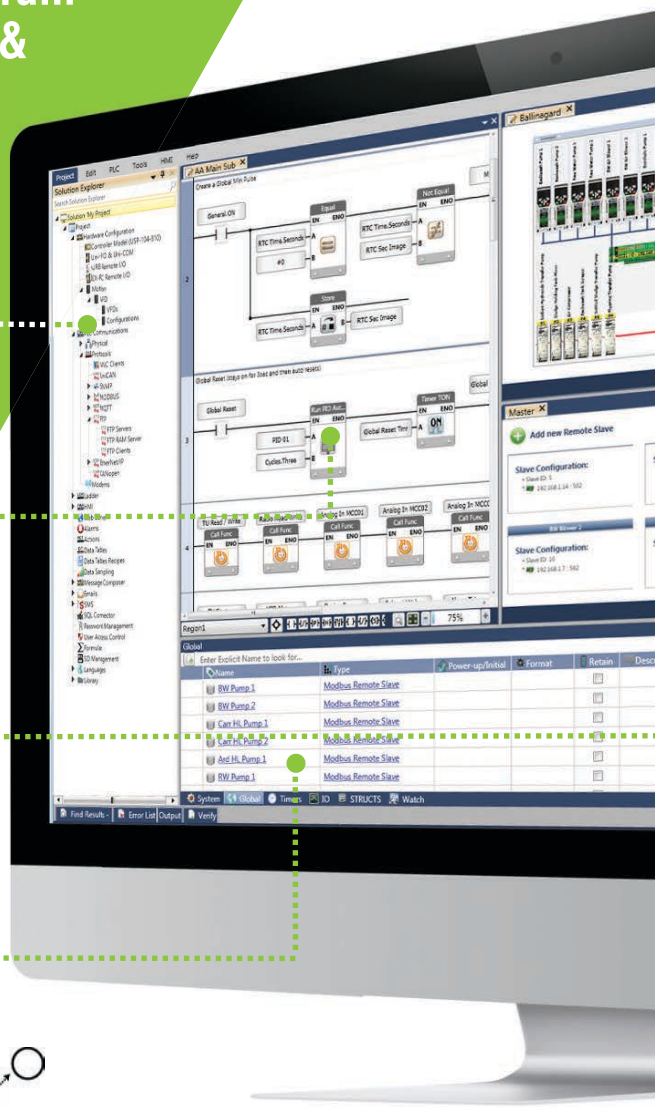
Ultimate All-in-One programming environment: configure hardware & communications, program Ladder, design HMI & web pages, configure & control VFDs and more.

New! Configure & Operate…
Unitronics VFDs using the same, efficient software

Build-it-Once…
Reuse Library: Functions, HMI & Webpages

Context-sensitive…
Toolbox for Ladder, HMI & Web Elements

Power from C…
Structs & C Functions



MQTT

Via MQTT, UniStream bridges between the production floor all the way up to the MES. Supports MQTT as a 'client' that can both publish and subscribe to messages.

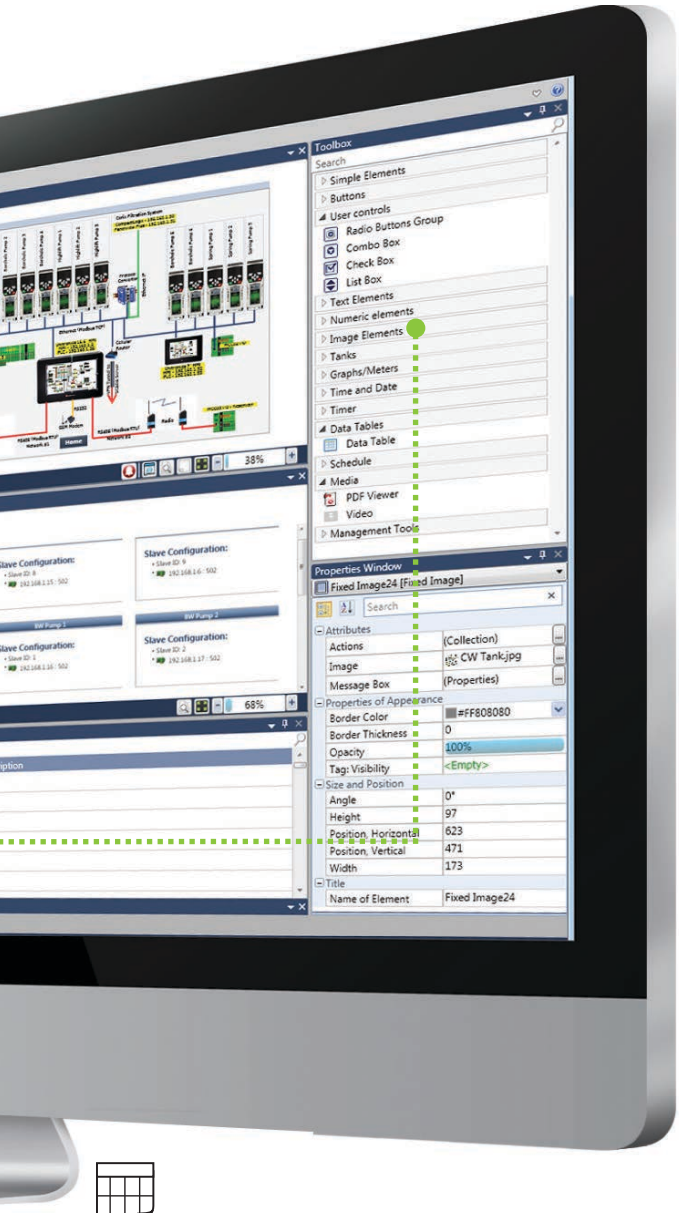
Structs - Tag Database on Steroids

You create Structs - groups of data tags of different types organized into a single, logical unit - and reuse them across programs, especially with UDFBs (User Defined Function Blocks). UniLogic's built-in Structs enable you to configure and control hardware and complex functions such as Communications and PID.

Speed Ladder Programming - plus "C" Power

Build your Ladder: drag & drop elements that snap into place, error-free. Use the built-in C Function editor to write C functions. UniLogic means you 'write-it-once': create code to use, reuse, and export across projects.
Create UDFBs (User Defined Function Blocks) - self-contained functions for tasks such as oven control, motor control, level control, etc.

UNILOGIC® Studio



Power Data Tools - Data Sampler, Data Tables, Recipes, SQL

Data Samplers record dynamic application data, such as output values, at fixed intervals into files and display it as Trend graphs on the HMI.

Data Tables organize and manipulate data via Ladder, create data logs, implement Recipes, import/export values from/to Excel, allow users to enter/edit data into Data Tables via HMI panel, and more.

NEW SQL Connector: Access SQL databases, run Queries, connect Data Tables to SQL.

Web Server: Web Pages – No HMTL Required

Design elegant web pages via a drag & drop interface, identical to the HMI editor.

A rich graphic library is at your disposal.

The Web toolbox offers user controls and widgets, enabling the end user to view and enter application data via any web browser.

Design Beautiful HMI Displays - Stream Video, Audio, PDF

UniLogic's extensive free graphics library & HMI widgets enable you to be a graphic artist. The easy HMI editor supports layers, image transparency, overlap, rotation--plus drag & drop widgets, Video & Audio players, Data Tables, Trend graphs & Gauges to display run-time values, and more.

Build-it-Once, then Reuse - the Ultimate Time Saver

Add your UDFBs, HMI screens, HMI Custom Controls, and Web Pages to the Library--then drag & drop them where needed; UniLogic takes care of the tags. Import your Library into any project, and share it with others.

Languages - from Italian to Chinese at the Touch of a Button

UniLogic supports any language that you can type - including Asian languages such as Chinese, Japanese, and Korean. Instantly switch HMI language via user actions or program events.

Built-in Alarms - Easily Boost Application Safety

Compliant with ISA 18.2 standard guidelines for Alarm Management systems in the process industries. Detect & analyze Alarms, and take action. Export Alarm Logs via FTP to send via email, or copy directly from the controller via Flash Drive. Alarms feature full multi-language support.

Communications - Configuration not Programming

Incredibly fast, easy to configure and implement, UniStream data communications run independently of Ladder.

A single PLC can contain multiple slave definitions—and multiple master definitions. Communicate with any device: plug-and-play protocols such as MODBUS, CANopen, SNMP, MQTT,and EtherNet/IP.

Use Message Composer to communicate with devices such as frequency converters and bar-code readers via any Ethernet, CANbus or serial 3rd -party protocol. Also supports CANLayer 2, FTP Client/Server, SMS, email, GSM/GPRS modem.

UniStream® Modular

Features:

3 steps to an All-in-One controller: select HMI panel, add the powerful CPU, and snap on any I/O and COM modules. Expands up to 2048 I/Os.

HMI

- Size: 7”, 10.4” or 15.6”
- High quality color touchscreen. UniStream 10.4” is also available with Multi-Touch screen
- Multi-language display
- Built-in Alarm Screens
- Media support: Video, Audio and PDF viewer
- Multi-level password protection – easy and fast

PLC

- I/O options include digital, analog, high speed, temperature, and weight measurement
- Expand locally: up to 2048 I/Os
- Expand remotely: via UniStream Ethernet-based I/O
- Auto-tune PID, up to 64 independent loops
- Recipes & data logging via data tables & sampling
- MicroSD card - log, backup, clone & more
- Function Blocks & Structs

Communication

Built-in ports:

- 1 CANbus
- 2 Ethernet TCP/IP
- 1 RS485
- 2 USB host
- 1 Mini USB for programming

Add-on ports:

- Up to 8 RS232 (Using UAC-02RS2)
- Up to 4 RS232 + 4 RS485 (Using UAC-02RSC)

Protocols:

- MQTT Client
- EtherNet/IP
- MODBUS: Serial & TCP/IP
- CANopen, CANlayer2, UniCAN
- SNMP
- BACnet, KNX and M-Bus via gateway
- Message Composer for 3rd party protocols

General Features:

- SQL Client
- Web Server
- FTP server & client
- E-mail & SMS
- Remote access via VNC
- 3G Modem support

UniStream® 7"

Available with Multi-Touch

UniStream® 10.4"

UniStream® 15.6"

	UniStream 7	UniStream 10.4	UniStream 15.6
Article Number	**USC-P-B10 • USP-070-B08/ USP-070-B10**	**USC-P-B10 • USP-104-B10/USP-104-M10**	**USC-P-B10 • USP-156-B10**
I/O Options			
Total supported I/Os	2048 (See I/O Expansion Modules- page 15)		
Onboard I/O modules	Fit up to 3 slim or 2 wide I/Os[1]	Fit up to 5 slim or 3 wide I/Os[1]	
I/O Expansion	Use Local Expansion Adapters to add up to 80 slim or 50 wide modules[1]		
Remote I/O via Ethernet	Use UniStream Ethernet-based Remote I/O adapters to add I/Os via Ethernet (See I/O Expansion Modules - page 16)		
Add-on COM modules	Supports up to 3 COM modules[1]	Supports up to 4 COM modules[1]	
Program			
Application Memory	8 MB		
HMI Panel			
Color Touchscreen	Resistive, Analog	Resistive, Analog / Multi-Touch	Resistive, Analog
Viewing Area Height x Width (mm)	USP-070-B08: 152.4 x 91.44 USP-070-B10: 154.08 x 85.92	211.2 x 158.4	344.23 x 193.53
Cut Out Height x Width (mm)	134.0 x 196.0	214.0 x 281.0	249.0 x 395.0
Resolution	800 x 480 (WVGA)	800 x 600 (SVGA)	1366 x 768
Keys	Virtual Keyboard		
Environment			
Protection	NEMA4X, IP66, IP65 when panel-mounted[2]		
Operating Temperature	-4°F to 131°F (-20°C to 55°C)		32°F to 122°F (0°C to 50°C)
Standard	UL, CE, EAC, UL Hazardous Locations, Class I, Division 2[4]		
General			
Battery	4 years typical at 77°F (25°C), battery back-up for memory and RTC		
Clock	Real-time clock functions (date and time)		
Power Supply	12/24VDC[3]		

UniStream Modular Expansions

Local Expansion Adapters

UAG-XK125	Short Range Kit, 125 cm
UAG-XKP125	Short Range + embedded Power Supply Kit, 125 cm
UAG-XK300	Short Range Kit, 300 cm
UAG-XKP300	Short Range Kit + embedded Power Supply, 300 cm
UAG-XKPLXXXX	Long Range + embedded Power Supply, lengths: 600, 1200, 1500, 2000, 3000cm

Uni-COM™ Communication Modules[1]

UAC-01RS2	1x RS232
UAC-02RS2	2x RS232
UAC-02RSC	1x RS232 port and 1x RS485 port

[1] Add-on Modules, I/O and COM: the total number of modules, both I/O and COM that you can snap onboard an HMI panel is limited by the size of the panel. I/O modules are "Slim" & "Wide". 1 "Wide" I/O module = 1.5 "Slim" or COM module.
[2] UniStream complies with IP66 and NEMA4X only if the speaker seal is installed. Refer to HMI panel installation guide.
[3] 12V applies to PLC power supply only, and not to the I/O.
[4] For a list of relevant models, contact Unitronics

UNISTREAM® Built-in

Features:

Powerful PLC in a superbly compact hardware profile: PLC+HMI+I/Os built into one single unit. Available in two versions: Built-in and Built-in Pro. Expands up to 2048 I/Os.

HMI

- Size: 5", 7"
- High quality color touchscreen
- Multi-language display
- Built-in Alarm Screens
- Media support: Video*, Audio* and PDF viewer
- Multi-level password protection –easy and fast

PLC

- I/O options include digital, analog, high speed, temperature, and weight measurement
- Expand locally: up to 2048 I/Os
- Expand remotely: via UniStream Ethernet-based I/O
- Auto-tune PID, up to 64 independent loops
- Recipes & data logging via data tables & sampling
- MicroSD card - log, backup, clone & more
- Function Blocks & Structs

UniStream® 5"

Communication

Built-in ports:

- 1 Ethernet TCP/IP
- 1 USB host
- 1 Mini USB for programming

Add-on ports:**

- 1 CANbus
- 1 RS485
- 1 RS232

Protocols:

- MQTT Client
- EtherNet/IP
- MODBUS TCP
- CANopen, CANlayer2, UniCAN
- SNMP
- BACnet, KNX and M-Bus via gateway
- Message Composer for 3rd party protocols

UniStream® 7"

General Features:

- SQL Client*
- Web Server*
- E-mail & SMS
- Remote access via VNC
- FTP server & client
- 3G Modem support

* Pro version only. Model numbers including B5 refer to Built-in, B10 to Built-in Pro.
** Up to 2 serial modules and one CANbus module.

	UniStream 5	UniStream 7
I/O Options		
Total supported I/Os	2048	
Built-In	According to model (See Built-in I/Os configurations- page 14)	
I/O Expansion	Add Local I/O via expansion port (See I/O Expansion Modules - page 15)[1]	
Remote I/O via Ethernet	Use UniStream Ethernet-based Remote I/O adapters to add I/Os via Ethernet (See I/O Expansion Modules - page 16)	
Add-on COM Modules	Add up to 3 COM modules[2]	
Program		
Application Memory	8 MB	
HMI Panel		
Color Touchscreen	Resistive, Analog	
Viewing Area Height x Width (mm)	108 x 64.8	
Cut Out Height x Width (mm)	93.2 x 148.2	
Resolution Height x Width (mm)	800 x 480 (WVGA)	
Keys	Virtual Keyboard	
Environment		
Protection	NEMA4X, IP66, IP65 when panel-mounted	
Operating Temperature	-4°F to 131°F (-20°C to 55°C)	
Standard	CE, UL, EAC[3]	
General		
Battery	4 years typical at 77°F (25°C), battery back-up for memory and RTC	
Clock	Real-time clock functions (date and time)	

UniStream Built-in Expansions

Local Expansion Adapters

UAG-CX-XKP125	UniStream CX IO Exp.Kit 1.25m
UAG-CX-XKP300	UniStream CX IO Exp.Kit 3m
UAG-CX-XKPLXXXX	UniStream CX IO Exp.Long Kit, lengths: 600, 1200, 1500, 2000, 3000

Uni-COM™ Communication Modules

UAC-CX-01RS2	Uni-COM: 1x RS232 port
UAC-CX-01RS4	Uni-COM: 1x RS485 port
UAC-CX-01CAN	Uni-COM: 1x CANbus port

[1] UniStream 5" I/O Expansion: the first unit plugged into the I/O expansion jack must be from the CX series I/O expansion - UAG-CX-XKP125 or UAG-CX-XKP300. The CX end unit may be followed by Uni-I/O modules or UAG-XKPLxxxx adapters.

[2] Up to 2 serial modules and one CANbus module.

[3] For a list of relevant models, contact Unitronics.

UniStream Built-in I/O Configurations

Article*	Summary	Inputs				Outputs				Operating Voltage
		Digital (Isolated)	HSC/Shaft-encoder[1]	Analog	Temperature inputs, RTD/TC	Transistor[2] (Isolated)	PWM[2]	Relay	Analog	
US5-B5-B1 **US5-B10-B1** **US7-B5-B1** **US7-B10-B1**	No built-in I/Os	-	-	-	-	-	-	-	-	12/24VDC
US5-B5-TR22 **US5-B10-TR22** **US7-B5-TR22** **US7-B10-TR22**	10 Digital Inputs, 2 Analog Inputs, 2 Transistor Outputs, npn, including 2 PWM Outputs. 8 Relay Outputs	10 Sink/ Source	-	2 0-10V, 0-20mA, 4-20mA 12-bit	-	2 Sink (npn)	2 30kHz	8	-	24VDC
US5-B5-T24 **US5-B10-T24** **US7-B5-T24** **US7-B10-T24**	10 Digital Inputs, 2 Analog Inputs, 12 Transistor Outputs, pnp, including 2 PWM Outputs	10 Sink/ Source	-	2 0-10V, 0-20mA, 4-20mA 12-bit	-	12 Source (pnp)	2 3kHz	-	-	24VDC
US5-B5-RA28 **US5-B10-RA28** **US7-B5-RA28** **US7-B10-RA28**	14 Digital Inputs, including 2 HSC, 2 Analog Inputs, 2 Temperature Inputs, 8 Relay Outputs, 2 Analog Outputs	14 Sink/ Source	2 90kHz 32-bit	2 (isolated) 0-10V, 0-20mA, 4-20mA 14-bit	2 (isolated) Thermocouple, PT100/NI100/ NI120/ PT1000/NI1000	-	-	8	2 0-10V 12-bit, ±10V, 11-bit+sign 0-20mA, 4-20mA 12-bit	24VDC
US5-B5-TA30 **US5-B10-TA30** **US7-B5-TA30** **US7-B10-TA30**	14 Digita Inputs, including 2 HSC, 2 Analog Inputs, 2 Temperature Inputs, 10 Transistor outputs, pnp, including 2 PWM Outputs, 2 Analog Outputs	14 Sink/ Source	2 90kHz 32-bit	2 (isolated) 0-10V, 0-20mA, 4-20mA 14-bit	2 (isolated) Thermocouple, PT100/NI100/ NI120/ PT1000/NI1000	10 Source (pnp)	2 3kHz	-	2 0-10V 12-bit, ±10V 11-bit+sign 0-20mA, 4-20mA 12-bit	24VDC
US5-B5-R38 **US5-B10-R38** **US7-B5-R38** **US7-B10-R38**	24 Digital Inputs, including 4 HSC, 2 Analog Inputs, 12 relay Outputs	24 Sink/ Source	4 90kHz 32-bit	2 0-10V, 0-20mA, 4-20mA 12-bit	-	-	-	12	-	24VDC
US5-B5-T42 **US5-B10-T42** **US7-B5-T42** **US7-B10-T42**	24 Digital Inputs, including 4 HSC, 2 Analog Inputs, 16 Transistor Outputs, pnp, including 2 PWM Outputs	24 Sink/ Source	4 90kHz 32-bit	2 0-10V, 0-20mA, 4-20mA 12-bit	-	16 Source (pnp)	2 3kHz	-	-	24VDC

*Models R38+T42, as well as all standard (B5) models will be soon UL certified.

[1] Note that the high-speed inputs are included in the total number of digital inputs.

[2] Note that the PWM outputs are included in the total number of transistor outputs.

Expand Locally via Uni-I/O™

UniStream Modular & Built-in - Expand up to 2048 I/O via Uni-I/O modules.

		Inputs				Outputs			
	Article Number	Digital (Isolated)	HSC/Shaft-encoder[4]	Analog	Temperature Measurement	Transistor[5] (Isolated)	PWM/ HSO[5]	Relay	Analog
Digital	UID-1600	**16** Sink/Source	—	—	—	—	—	—	—
	UID-0808T	**8** Sink/Source	—	—	—	**8** Source(pnp)	—	—	—
	UID-W1616T[3]	**16** Sink/Source	—	—	—	**16** Source(pnp)	—	—	—
	UID-0808THS[1]	**8** Sink/Source	**2** 250kHz 32-bit	—	—	**8** Source(pnp)	**2**[2] 250kHz **2** 3kHz	—	—
	UID-0016T	—	—	—	—	**16** Source(pnp)	—	—	—
	UID-0808R	**8** Sink/Source	—	—	—	—	—	**8**	—
	UID-W1616R[3]	**16** Sink/Source	—	—	—	—	—	**16**	—
	UID-0016R	—	—	—	—	—	—	**16**	—
Analog and Temperature	UIA-0006	—	—	—	—	—	—	—	**6** (Isolated) 0-10V 14-bit, ±10V 13-bit+sign, 0-20mA, 4-20mA 13-bit
	UIA-0402N	—	—	**4** 0-10V, 0-20mA, 4-20mA 13-bit	—	—	—	—	**2** 0-10V 14-bit, ±10V 13-bit+sign, 0-20mA, 4-20mA 13-bit
	UIA-0800N	—	—	**8** 0-10V, 0-20mA, 4-20mA 13-bit	—	—	—	—	—
	NEW! UIA-0800NH	—	—	**8** 0-20mA, 4-20mA With HART communication	—	—	—	—	—
	UIS-04PTN	—	—	—	**4** PT100/NI100/NI120	—	—	—	—
	UIS-04PTKN	—	—	—	**4** PT1000/NI1000/NI1200	—	—	—	—
	UIS-08TC	—	—	—	**8** (Isolated) Thermocouple	—	—	—	—
Digital/Analog	UIS-WCB1[1,3]	**10** Sink/Source	**2** 10kHz 32bit	**2** (Isolated) 0-10V, 0-20mA, 4-20mA 14-bit	**2** (Isolated) Thermocouple, PT100/NI100/NI120	**2**[6] Sink (npn)	**2** 250kHz	**8**	**2** 0-10V 14-bit, ±10V 13-bit+sign, 0-20mA, 4-20mA 13-bit
	UIS-WCB2[1,3]	**10** Sink/Source	**2** 10kHz 32bit	**2** (Isolated) 0-10V, 0-20mA, 4-20mA 14-bit	**2** (Isolated) Thermocouple, PT100/NI100/NI120	**8** Source (pnp) **2**[6] Sink(npn)	**2** 250kHz (Sink outputs only)	—	**2** 0-10V 14-bit, ±10V 13-bit+sign, 0-20mA, 4-20mA 13-bit

[1] This module utilizes two high speed blocks that can each be assigned either to the inputs or to the outputs.
[2] 2 outputs are high-speed, up to 250KHz: function as normal or high-speed PWM (same freq. and different duty-cycles). 2 outputs are normal speed: function as normal-speed PWM outputs (same freq. and same duty cycle).
[3] Width: 1 'wide' I/O module = 1.5 'slim' I/O modules
[4] Note that the high-speed inputs are included in the total number of digital inputs.
[5] Note that the high-speed outputs are included in the total number of digital outputs.
[6] Not isolated

DIN Rail Power Supplies

UAP-24V24W	24W 24V 1A
UAP-24V60W	60W 24V 2.5A
UAP-24V96W	96W 24V 4A

Modems

GSM-KIT-17J-3G	Cinterion GPRS modem, EHS6T, 3G

Remote I/O

- Ethernet based
- Up to 63 I/O modules per adapter
- Slim modules - only 12mm
- 16-bit Analog Resolution
- Operating temperature: -40°F to 158°F (-40°C to 70°C)

Remote I/O Adapter

Article Number	Description
URB-TCP	UniStream Remote IO Ethernet Adapter

Input Modules

Article	Description	Digital	HSC/Shaft encoder	Analog	Temperture Mesurements
URD-0800	8 Digital inputs (sink or source), 10RTB	8	-	-	-
URA-0400O	4 Analog Current Inputs 12bit, 10RTB	-	-	4	-
URA-0800O	8 Analog Current Inputs 12bit, 10RTB	-	-	8	-
URA-0400P	4 Analog Voltage Inputs 12bit, 10RTB	-	-	4	-
URA-0800P	8 Analog Voltage Inputs 12bit, 10RTB	-	-	8	-
URA-0400T	4 Analog Current Inputs 16bit, 10RTB	-	-	4	-
URA-0400U	4 Analog Voltage Inputs 16bit, 10RTB	-	-	4	-
URS-04TC (Coming soon)	4 Thermocouple, 10RTB	-	-	-	4
URS-04RT (Coming soon)	4 RTD, 10RTB	-	-	-	4
URD-0400C (Coming soon)	4 Digital inputs, 240VAC, 10RTB	4	-	-	-
URD-0400B (Coming soon)	4 Digital inputs, 120VAC, 10RTB	4	-	-	-
URD-0200D (Coming soon)	2 Shaft Encoder, 10RTB	-	2	-	-
URD-0200E (Coming soon)	2 High Speed Counter, 10RTB	-	2	-	-

Output Modules

Article	Description	Outputs		
		Transistor	Relay	Analog
URD-0004RH	4 Relay Outputs, 10RTB	-	-	-
URD-0008NH	8 Digital Outputs (Sink), 10RTB	8 (Sink)	-	-
URD-0008CH	8 Digital Outputs (Source), 10RTB	8 (Source)	-	-
URA-0004W	4 Analog Current Outputs 12bit, 10RTB	-	-	4
URA-0008W	8 Analog Current Outputs 12bit, 10RTB	-	-	8
URA-0004X	4 Analog Voltage Outputs 12bit, 10RTB	-	-	4
URA-0008X	8 Analog Voltage Outputs 12bit, 10RTB	-	-	8
URA-0004Y	4 Analog Current Outputs 16bit, 10RTB	-	-	4
URA-0004Z	4 Analog Voltage Outputs 16bit, 10RTB	-	-	4
URD-0004SN (Coming soon)	4 Solid State Relay, 24VDC/VAC, 2A, 10RTB	-	4	-
URD-0004SM (Coming soon)	4 Solid State Relay, 110VDC/VAC, 1A, 10RTB	-	4	-
URD-0004SK (Coming soon)	4 Solid State Relay, 240VDC/VAC, 0.5A, 10RTB	-	4	-

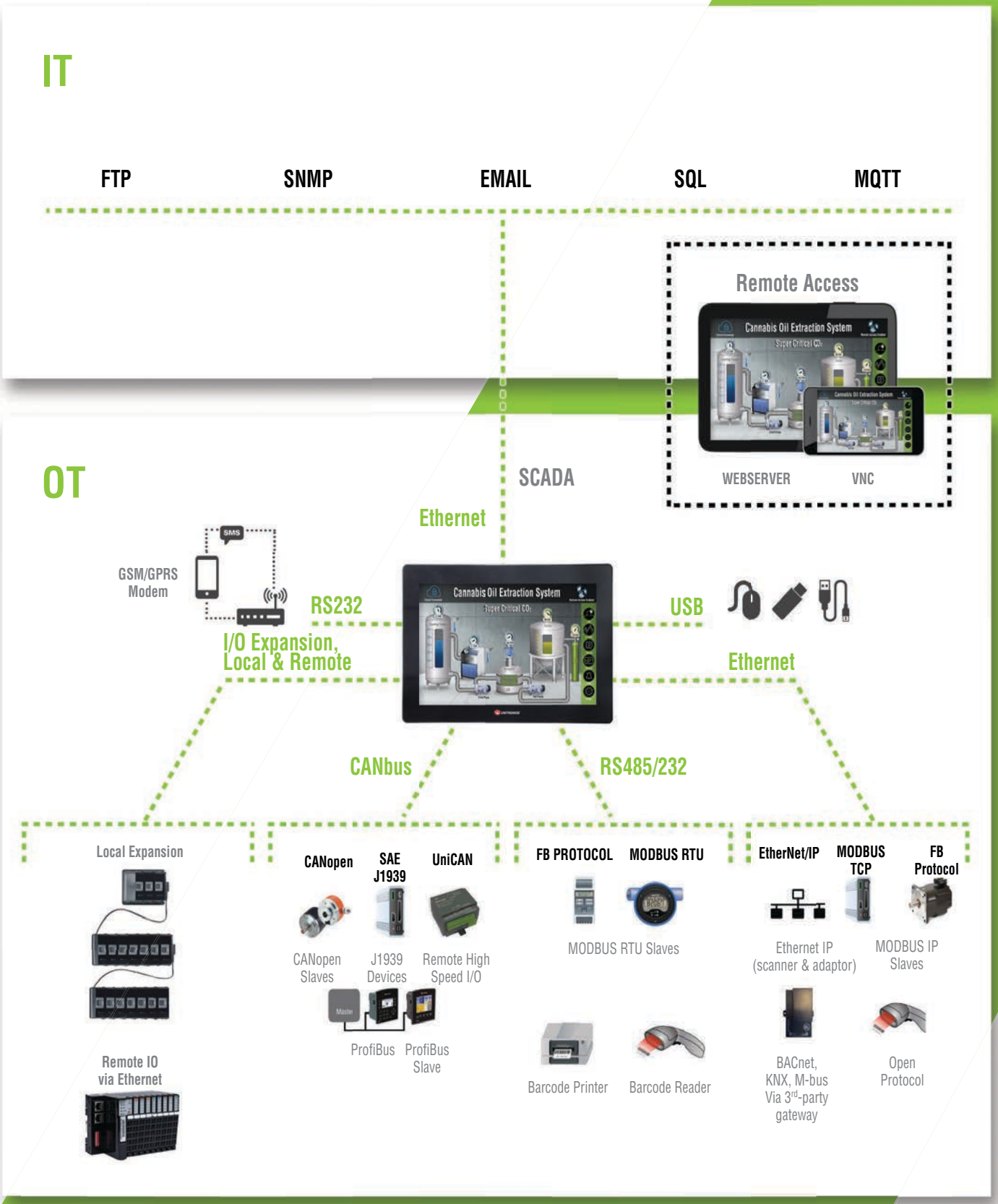
Power Module

Article Number	Description
URP-PS24V[1]	Input 24VDC, Output system Power 5VDC/1A

[1] To be used when the required system current exceeds 1.5A

From OT to IT

Bridge the Gap with UNISTREAM® series



VisiLogic™ - Vision™ and Samba™ All-in-One programming software

A single, intuitive environment for all your application needs

Hardware Configuration
Intuitive set up: controller, I/Os, and COM channels

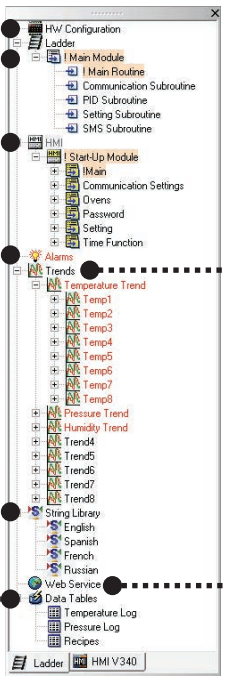
Ladder Programming
Rapidly drag & drop elements and Function Blocks

HMI Application
Create beautiful HMI displays – includes rich image library

Alarms: Built-in Screens
Effectively alert staff via Alarm screens

Languages - String Library
Instantly switch HMI language via screen touch

Data Tables
Create logs, import/export data, implement recipes

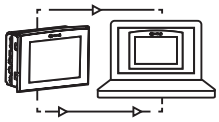
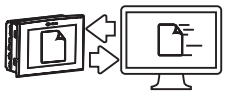
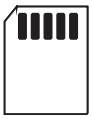


Trend Graphs
Display dynamic values in real-time

Web Server
Display and edit application values via browser

Software features vary according to controller model

Smart Utilities – Remote Access, Efficient Data Management, and more

Utility Name	Function	Key Features	Targeted Users
Remote Access 	View and control a PLC directly from PC, via local or remote connection	• View an HMI panel: use the PC keyboard + mouse to run the HMI application • Operand and Data Table values: view values during runtime, import and export values to/ from Excel/.csv files	• Operators requiring Remote Access • System integrators: remote debugging, troubleshooting, fault-finding
Remote Operator 	Simultaneously view and operate the HMI panels of multiple PLCs in multiple locations	• Easily place HMI panels side-by-side to monitor distributed systems or applications in several locations • Run the HMI applications via PC keyboard + mouse	• Control room operators • Installation managers
DataXport 	Create Data Logs from Data Tables and operand values in PLCs	• Harvest data from multiple PLCs on demand or according to time/date • Export the data to ± Excel/.csv files • Automatically email files	• Data analysts • Plant managers • Process engineers
UniDownload Designer 	Create compressed VisiLogic / U90Ladder applications(.udc files) for secure installation in local or remote PLCs	• Prevent end-users from uploading and opening the application • Include an OS to be installed at download Set a download channel, restrict end-user actions after installation and more	OEMs / System Integrators can: • Protect source code • Enable customers to install an application without using VisiLogic or U90Ladder
Download Manager & UniDownloader 	Securely install .udc applications in local or remote PLCs	• Download Manager: installs the same application in multiple PLCs • UniDownloader: installs an application in a single PLC	• OEMs / System Integrators in installations with high security requirements
SD Card Suite 	Remotely access and manage SD cards and their data	• Browse a remote PLC's SD card • Read/write data, including Data Table files • View SD card contents - Trends, logs, alarm history, data tables - export to Excel	• Data analysts • Plant managers • Process engineers
UniVision Licensing 	Safeguard your PLC application security	• Embeds unique licenses in the PLC, which enables application to run only on a licensed PLC • Option to activate or deactivate different sections of your application • Prevents theft of applications	• System integrators • OEMs
UniOPC Server 	Exchange data between Unitronics PLCs and OPC-supported software	• Create channel to connect PLCs to SCADA systems, such as plant control rooms • Compliant with the OPC foundation standards	Control room operators
UniDDE 	Exchange data with Windows based applications	Enables data exchange between Unitronics PLCs and software that supports Microsoft's Dynamic Data Exchange protocols, like Excel	Control rooms operators
Programming tools for developers 	Easily implement communication between PLC & PC applications	Using ActiveX & .NET communication drivers	Developers

VISION 1210™/1040™

Features:

Advanced PLC with a built-in 12.1"/10.4" high-resolution color touch screen. Snap in I/Os to expand up to 1000 I/Os.

HMI

- Size: 12.1" and 10.4"
- High quality color touchscreen
- Multi-language display
- Built-in Alarm Screens

PLC

- I/O options include digital, analog, high speed, temperature, and weight measurement
- Expand up to 1000 I/Os
- Auto-tune PID, up to 24 independent loops
- Recipe programs and data logging via data tables
- MicroSD card - log, backup, clone & more
- Function Blocks

Communication

Built-in ports:

- 1 Mini USB for programming
- 1 CANbus
- 2 Isolated RS485/RS232

Add-on ports:

- 1 Serial/Ethernet

Protocols:

- MODBUS TCP
- SNMP V1
- CANopen, CANlayer2, UniCAN
- BACnet, KNX and M-Bus via gateway
- FB Protocol: for any 3rd party protocol

General Features:

- Web server
- E-mail & SMS
- Remote access utilities
- 3G Modem support

V1210

V1040

> "I've not yet encountered a job that a Unitronics PLC was unable to cover."
>
> **Timothy Moulder,**
> Engineer at Black & Decker

Snap-in I/O

Plugs directly into the back of your PLC

	Vision 1040	Vision 1210
Article Number	V1040-T20B	V1210-T20BJ
I/O Options		
Total supported I/Os	1000	
I/O Expansion	Snap-in I/O Modules plug directly into the back of the Vision unit (See Snap-in I/O Modules- page 37). Local or Remote I/Os may be added via expansion port or via CANbus (See I/O Expansion Modules- page 36).	
Local I/O Expansion	Use Local Expansion Adapters to add up to 8 modules	
Remote I/O Expansion	Use EX-RC1 adapters to further extend the number of I/Os[1]	
Program		
Application Memory	Application Logic: 2MB • Images: 32MB • Fonts: 1MB	
Scan Time	9µsec per 1K of typical application	
Memory Operands	8192 coils, 4096 registers, 512 long integers (32 bit), 256 double words (32 bit unsigned), 64 floats, 384 timers (32_bit), 32_counters Additional non-retainable operands: 1024 X-bits, 512 X-integers, 256 X-long integers, 64 X-double words	
HMI Panel		
Color Touchscreen	Resistive, Analog	
Cut Out Height x Width (mm)	230 x 274	228.5 x 297
Resolution	800 x 600 (SVGA)	
Keys	9 programmable function keys	Virtual Keyboard
Environment		
Protection	NEMA4X / IP65 when panel-mounted	NEMA4X / IP66, IP65 when panel-mounted
Operating Temperature	32° to 122°F (0 to 50°C)	
Standards	UL, CE, EAC, UL Hazardous Locations, Class I, Division 2[2]	
General		
Battery	7 years typical at 77°F (25°C), battery back-up for all memory sections and RTC	
Clock	Real-time clock functions (date and time)	
Power Supply	12/24VDC[3]	

[1] EX-RC1: via CANbus, integrate standard Unitronics' I/O modules at distances of up to 1000m.
[2] For a list of relevant models, contact Unitronics.
[3] 12V applies to PLC power supply only, and not to the I/O.

VISION 700™

Features:

Advanced PLC with a built-in
7" high-resolution color touch screen.
Snap in I/Os to expand up to 1000 I/Os.

HMI

- Size: 7"
- High quality color touchscreen
- Multi-language display
- Built-in Alarm Screens

PLC

- I/O options include digital, analog, high speed, temperature, and weight measurement
- Expand up to 1000 I/Os
- Auto-tune PID, up to 24 independent loops
- Recipe programs and data logging via data tables
- MicroSD card - log, backup, clone & more
- Function Blocks

Communication

Built-in ports:

- 1 Ethernet TCP/IP
- 1 Mini USB for programming
- 1 RS485/RS232

Add-on ports:

- 1 Serial/Profibus
- 1 CANbus

Protocols:

- MODBUS TCP
- SNMP V1
- CANopen, CANlayer2, UniCAN
- BACnet, KNX and M-Bus via gateway
- FB Protocol: for any 3rd party protocol

General Features:

- Web server
- E-mail & SMS
- 3G Modem support
- Remote access utilities

V700

> “Reliability, ease of use, connectivity and competitive prices are Unitronics’ main strengths.”

Mr. Andrea Della Bosca,
EV srl

I/O Options	
Total supported I/Os	1000
I/O Expansion	Snap-in I/O Modules plug directly into the back of the Vision unit (See Snap-in I/O Modules- page 37). Local or Remote I/Os may be added via expansion port or via CANbus (See I/O Expansion Modules- page 36).
Local I/O Expansion	Use Local Expansion Adapters to add up to 8 modules
Remote I/O Expansion	Use EX-RC1 adapters to further extend the number of I/Os[1]
Program	
Application Memory	Application Logic: 2MB • Images: 40MB • Fonts: 1MB
Scan Time	9µsec per 1K of typical application
Memory Operands	8192 coils, 4096 registers, 512 long integers (32-bit), 256 double words (32-bit unsigned), 64 floats, 384 timers (32-bit), 32 counters. Additional non-retainable operands: 1024 X-bits, 512 X-integers, 256 X-long integers, 64 X-double words
HMI Panel	
Color Touchscreen	Resistive, Analog
Cut Out Height x Width (mm)	125 x 193
Resolution	800 x 400 (SVGA)
Keys	Virtual Keyboard
Environment	
Protection	NEMA4X, IP66 and IP65 when panel-mounted
Operating Temperature	32° to 122°F (0 to 50°C)
Standards	UL, CE, EAC, UL Hazardous Locations, Class I, Division 2[2]
General	
Battery	7 years typical at 77°F (25°C), battery back-up for all memory sections and RTC
Clock	Real-time clock functions (date and time)
Power Supply	12/24VDC[3]

[1] EX-RC1: via CANbus, integrate standard Unitronics' I/O modules at distances of up to 1000m.
[2] For a list of relevant models, contact Unitronics.
[3] 12V applies to PLC power supply only, and not to the I/O.

VISION 570™ /560™

Features:

Advanced PLC with a built-in
5.7" high-resolution color touch screen.
Snap in I/Os to expand up to 1000 I/Os.

HMI

- Size: 5.7"
- High quality color touchscreen
- Multi-language display
- Built-in Alarm Screens

PLC

- I/O options include digital, analog , high speed, temperature, and weight measurement
- Expand up to 1000 I/Os
- Auto-tune PID, up to 24 independent loops
- Recipe programs and data logging via data tables
- MicroSD/ SD card – log, backup, clone & more
- Function Blocks

V570

Communication

Built-in ports:

- 1 Mini USB for programming in V570
- 1 CANbus
- 2 Isolated RS485/ RS232

Add-on ports:

- 1 Serial/Ethernet

Protocols:

- MODBUS TCP
- SNMP V1
- CANopen, CANlayer2, UniCAN
- BACnet, KNX and M-Bus via gateway
- FB Protocol: for any 3rd party protocol

General Features:

- Web server
- E-mail & SMS
- 3G Modem support
- Remote access utilities

V560

> “For a first time user, I had a great experience. I look forward to incorporating this brand of product on future jobs.”

Jeremy Charles Keene,
Controls Manager at General Broach Company

	Vision 570	Vision 560
Article Number	V570-57-T20B-J	V560-T25B
I/O Options		
Total supported I/Os	1000	
I/O Expansion	Snap-in I/O Modules plug directly into the back of the Vision unit (See Snap-in I/O Modules- page 37). Local or Remote I/Os may be added via expansion port or via CANbus (See I/O Expansion Modules- page 36).	
Local I/O Expansion	Use Local Expansion Adapters to add up to 8 modules	
Remote I/O Expansion	Use EX-RC1 adapters to further extend the number of I/Os[1]	
Program		
Application Memory	Application Logic: 2MB • Images: 16MB • Fonts: 1MB	
Scan Time	9µsec per 1K of typical application	
Memory Operands	8192 coils, 4096 registers, 512 long integers (32-bit), 256 double words (32-bit unsigned), 64 floats, 384 timers (32-bit), 32 counters. Additional non-retainable operands: 1024 X-bits, 512 X-integers, 256 X-long integers, 64 X-double words	
HMI Panel		
Color Touchscreen	Resistive, Analog	
Cut Out Height x Width (mm)	124.5 x 182	126.0 x 209
Resolution	320 x 240 (QVGA)	
Keys	Virtual Keyboard	24 programmable keys Labeling options – function keys or customized
Environment		
Protection	NEMA4X, IP66, IP65 when panel mounted	NEMA4X, IP65 when panel mounted
Operating Temperature	32° to 122°F (0 to 50°C)	
Standards	UL, CE, EAC, UL Hazardous Locations, Class I, Division 2[2]	UL, CE, EAC
General		
Battery	7 years typical at 77°F (25°C), battery back-up for all memory sections and RTC	
Clock	Real-time clock functions (date and time)	
Power Supply	12/24VDC[3]	

[1] EX-RC1: via CANbus, integrate standard Unitronics' I/O modules at distances of up to 1000m.
[2] For a list of relevant models, contact Unitronics.
[3] 12V applies to PLC power supply only, and not to the I/O.

VISION 430™

Features:

Advanced PLC with a built-in 4.3" wide-aspect color touch screen. Includes built-in I/O configuration, expand up to 512 I/Os.

HMI

- Size: 4.3"
- High quality color touchscreen
- Multi-language display
- Built-in Alarm Screens

PLC

- I/O options include digital, analog, high speed, temperature, and weight measurement
- Expand up to 512 I/Os
- Auto-tune PID, up to 24 independent loops
- Recipe programs and data logging via data tables
- Micro SD card - log, backup, clone & more
- Function Blocks

Communication

Built-in ports:

- 1 Mini USB for programming
- 1 RS485/RS232

Add-on ports:

- 1 Serial/Ethernet/Profibus
- 1 CANbus

Protocols:

- MODBUS TCP
- SNMP V1
- CANopen, CANlayer2, UniCAN
- BACnet, KNX and M-Bus via gateway
- FB Protocol: for any 3rd party protocol

General Features:

- Web server
- E-mail & SMS
- 3G Modem support
- Remote access utilities

V430

> "The huge advantage of this PLC was that - with everything built-in the communications and use of tags in the HMI was so simple and intuitive."

Ashley Parr,
HPS

I/O Options	
Total supported I/Os	512
Built-in	According to model (See Built-in I/Os table below)
I/O Expansion	Add Local I/O via expansion port • Add Remote I/Os via CANbus (See I/O Expansion Modules- page 36)
Local I/O Expansion	Use Local Expansion Adapters to add up to 8 modules
Remote I/O Expansion	Use EX-RC1 adapters to further extend the number of I/Os[1]
Program	
Application Memory	Application Logic: 1MB • Images: 12MB • Fonts: 320KB
Scan Time	15µ sec per 1K of typical application
Memory Operands	8192 coils, 4096 registers, 512 long integers (32-bit), 256 double words (32-bit unsigned), 64 floats, 384 timers (32-bit), 32 counters Additional non-retainable operands: 1024 X-bits, 512 X-integers, 256 X-long integers, 64 X-double words
HMI Panel	
Color Touchscreen	Resistive, Analog
Cut Out Height x Width (mm)	91.5 x 122.5
Resolution	480 x 272
Keys	5 programmable
Environment	
Protection	NEMA4X, IP66, IP65 when panel mounted
Operating Temperature	32° to 122°F (0 to 50°C)
Standards	UL, CE, EAC, UL Hazardous Locations, Class I, Division 2[2]
General	
Battery	7 years typical at 77°F (25°C), battery back-up for all memory sections and RTC
Clock	Real-time clock functions (date and time)

Vision430™ models - Built-in I/O configurations

[1] EX-RC1: via CANbus, integrate standard Unitronics' I/O modules at distances of up to 1000m.
[2] For a list of relevant models, contact Unitronics.

		Inputs [1]				Outputs				Operating Voltage
Article	**Summary**	**Digital[2]**	**HSC/Shaft-encoder[2]**	**Analog**	**Temperature Measurement**	**Transistor[3]**	**PWM/HSO[3]**	**Relay**	**Analog**	
V430-J-B1	No onboard I/Os	—	—	—	—	—	—	—	—	12/24VDC
V430-J-RH2	**10** Digital, **2** D/A Inputs[1] **6** Relay Outputs	**12**	**3** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	—	—	**6**	—	24VDC
V430-J-R34	**20** Digital, 2 D/A Inputs[1] **12** Relay Outputs	**22**	**3** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	—	—	**12**	—	24VDC
V430-J-TR34	**20** Digital, 2 D/A Inputs[1] **8** Relay, 4 High-speed Transistor Outputs	**22**	**3** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	**4** npn	**4** (3 PTO) 200 kHz max	**8**	—	24VDC
V430-J-RH6	**6** Digital, **2** D/A[1] **4** Analog Inputs **6** Relay Outputs	**8**	**1** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA and **4** 0-20mA, 4-20mA 10-bit	—	—	—	**6**	—	24VDC
V430-J-RA22	**8** Digital, **2** D/A, **2** TC/PT100/ Digital Inputs[1] **8** Relay, **2** Analog Outputs	**12**	**1** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	—	—	**8**	**2** 0-10V, 4 -20mA 12-bit	24VDC
V430-J-TRA22	**8** Digital, **2** D/A, **2** TC/PT100/ Digital Inputs[1] **4** Relay, **2** Analog, **4** High-Speed Transistor Outputs	**12**	**1** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	**4** npn	**4** (2 PTO) 200 kHz max	**4**	**2** 0-10V, 4 -20mA 12-bit	24VDC
V430-J-T2	**10** Digital, **2** D/A Inputs[1] **12** Transistor Outputs	**12**	**3** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	**12** pnp	**7** 0.5kHz	—	—	24VDC
V430-J-T38	**20** Digital, **2** D/A Inputs [1] **16** Transistor Outputs	**22**	**2** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	**16** pnp	**7** 0.5kHz	—	—	24VDC
V430-J-TA24	**8** Digital, **2** D/A, **2** TC/PT100/ Digital Inputs [1] **10** Transistor, **2** Analog Outputs	**12**	**1** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	**10** pnp	**5** 0.5kHz	—	**2** 0-10V, 4 -20mA 12-bit	24VDC

[1] In some models certain inputs are adaptable via wiring and software settings, and can function as digital,high-speed, analog, and in certain models as TC or PT100.
Adapting requires input pins. This reduces the number of digital inputs. Pin requirements:
- Each high-speed requires 1 or 2 pins according to high-speed mode.
- Each analog input requires 1 pin.
- Each TC requires 2 pins per TC input
- The first PT input requires 3 pins and two additional pins for each additional PT input.

Example: V430-J-RA22 offers 12 digital inputs. Implementing 2 TC inputs requires 4 pins, leaving 8 pins free. Implementing 2 PT inputs uses 5 input pins.

[2] The total number of digital inputs listed includes high-speed and adaptable inputs.
[3] The total number of digital outputs listed includes high-speed outputs.

VISION 350™

Features:

Palm-sized All-in-One: advanced PLC with a 3.5" color touchscreen. Includes built-in I/O configuration, expands up to 512 I/Os.

HMI

- Size: 3.5"
- High quality color touchscreen
- Multi-language display
- Built-in Alarm Screens

PLC

- I/O options include digital, analog, high speed, temperature, and weight measurement
- Expand up to 512 I/Os
- Auto-tune PID, up to 24 independent loops
- Recipe programs and data logging via data tables
- Micro SD card - log, backup, clone & more
- Function Blocks

Communication

Built-in ports:

- 1 Mini USB for programming
- 1 RS485/RS232

Add-on ports:

- 1 Serial/Ethernet/Profibus
- 1 CANbus

Protocols:

- MODBUS TCP
- SNMP V1
- CANopen, UniCAN, CANlayer2
- BACnet, KNX and M-Bus via gateway
- FB Protocol: for any 3rd party protocol

General Features:

- Web server
- E-mail & SMS
- 3G Modem support
- Remote access utilities

V350

60°C
-30°C

Extended temperature unit available:
Operational temperature range between -22°F to 140°F (-30°C to 60°C), available for panel Article: V350-JS-TA24.
Extended temperature available for Ethernet (Article: V100-S-ET2) and CANbus (Article: V100-S-CAN).

I/O Options	
Total supported I/Os	512
Built-in	According to model (See Built-in I/Os table below)
I/O Expansion	Add Local I/O via expansion port • Add Remote I/Os via CANbus. (See I/O Expansion Modules- page 36)
Local I/O Expansion	Use Local Expansion Adapters to add up to 8 modules
Remote I/O Expansion	Use EX-RC1 adapters to further extend the number of I/Os[1]
Program	
Application Memory	Application Logic: 1MB • Images: 8MB • Fonts: 320KB
Scan Time	15µ sec per 1K of typical application
Memory Operands	8192 coils, 4096 registers, 512 long integers (32-bit), 256 double words (32-bit unsigned), 64 floats, 384 timers (32-bit), 32 counters Additional non-retainable operands: 1024 X-bits, 512 X-integers, 256 X-long integers, 64 X-double words
HMI Panel	
Color Touchscreen	Resistive, Analog
Cut Out Height x Width (mm)	92 x 92
Resolution	320 x 240 (QVGA)
Keys	5 programmable keys. Labeling options - function keys, arrows, or customized
Environment	
Protection	NEMA4X, IP66, IP65 when panel mounted
Operating Temperature	32 to 122°F (0°C to 50°C), For V350-JS-TA24: -22°F to 140°F (-30°C to 60°C)[2]
Standards	UL, CE, EAC, UL Hazardous Locations, Class I, Division 2[3]
General	
Battery	7 years typical at 77°F (25°C), battery back-up for all memory sections and RTC
Clock	Real-time clock functions (date and time)

Vision350™ models - Built-in I/O configurations

[1] EX-RC1: via CANbus, integrate standard Unitronics' I/O modules at distances of up to 1000m.
[2] Extended temperature cards: CANBus p/n: V100-S-CAN, Ethernet p/n V100-S-ET2.
[3] For a list of relevant models, contact Unitronics.

		Inputs [1]				Outputs				Operating Voltage
Article [5]	**Summary**	**Digital [2]**	**HSC/Shaft-encoder [2]**	**Analog**	**Temperature Measurement**	**Transistor [3]**	**PWM/HSO [3]**	**Relay**	**Analog**	
V350-J-B1	No onboard I/Os	—	—	—	—	—	—	—	—	12/24VDC
V350-J-TR20	**10** Digital, **2** D/A Inputs[1] **6** Relay Outputs **2** High-speed Transistor Outputs	**12**	**3** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	**2** npn	**2** (2 PTO) 200 kHz max	**6**	—	24VDC
V350-J-R34	**20** Digital, **2** D/A Inputs[1] **12** Relay Outputs	**22**	**3** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	—	—	**12**	—	24VDC
V350-J-TR34	**20** Digital, **2** D/A Inputs[1] **8** Relay, **4** High-speed Transistor Outputs	**22**	**3** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	**4** npn	**4** (3 PTO) 200 kHz max	**8**	—	24VDC
V350-J-TR6	**6** Digital, **2** D/A[1] **4** Analog Inputs **6** Relay Outputs **2** High-speed Transistor Outputs	**8**	**1** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA and **4** 0-20mA, 4-20mA 10-bit	—	**2** npn	**2** (2 PTO) 200 kHz max	**6**	—	24VDC
V350-J-RA22	**8** Digital, **2** D/A, **2** TC/PT100/ Digital Inputs[1] **8** Relay, **2** Analog Outputs	**12**	**1** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	—	—	**8**	**2** 0-10V, 4 -20mA 12-bit	24VDC
V350-J-TRA22	**8** Digital, **2** D/A, **2** TC/PT100/ Digital Inputs[1] **4** Relay, **2** Analog, **4** High-Speed Transistor Outputs	**12**	**1** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	**4** npn	**4** (2 PTO) 200 kHz max	**4**	**2** 0-10V, 4 -20mA 12-bit	24VDC
V350-J-T2	**10** Digital, **2** D/A Inputs [1] **12** Transistor Outputs	**12**	**3** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	**12** pnp	**7** 0.5kHz	—	—	24VDC
V350-J-T38	**20** Digital, **2** D/A Inputs [1] **16** Transistor Outputs	**22**	**2** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	**16** pnp	**7** 0.5kHz	—	—	24VDC
V350-J-TA24 **V350-JS-TA24** [4]	**8** Digital, **2** D/A, **2** TC/PT100/ Digital Inputs[1] **10** Transistor, **2** Analog Outputs	**12**	**1** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	**10** pnp	**5** 0.5kHz	—	**2** 0-10V, 4 -20mA 12-bit	24VDC

[1] In some models certain inputs are adaptable via wiring and software settings, and can function as digital, high-speed, analog, and in certain models as TC or PT100. Adapting requires input pins. This reduces the number of digital inputs. Pin requirements:
- Each high-speed requires 1 or 2 pins according to high-speed mode.
- Each analog input requires 1 pin.
- Each TC requires 2 pins per TC input
- The first PT input requires 3 pins, and two additional pins for each additional PT input.

Example: V350-35-RA22 offers 12 digital inputs. Implementing 2 TC inputs requires 4 pins, leaving 8 pins free. Implementing 2 PT inputs uses 5 input pins.

[2] The total number of digital inputs listed includes high-speed and adaptable inputs.

[3] The total number of digital outputs listed includes high-speed outputs.
[4] Extended temperature unit
[5] To order a classic V350 with a Bezel panel, switch the "J" in the model number to "33", ex. V350, V350-33- TR20

VISION 130™
Features:

Palm-size, powerful PLC with built-in black & white LCD 2.4", keypad and I/Os, expands up to 256 I/Os.

HMI

- Size: 2.4"
- Monochrome
- Multi-language display
- Built-in Alarm Screens

PLC

- I/O options include digital, analog , high speed, temperature, and weight measurement
- Expand up to 256 I/Os
- Auto-tune PID, up to 24 independent loops
- Recipe programs and data logging via data tables
- Micro SD card - log, backup, clone & more
- Function Blocks

Communication

Built-in ports:

- 1 RS485/RS232

Add-on ports:

- 1 Serial/Ethernet/Profibus
- 1 CANbus

Protocols:

- MODBUS TCP
- SNMP V1
- CANopen, UniCAN, CANlayer2
- BACnet, KNX and M-Bus via gateway
- FB Protocol: for any 3rd party protocol

General Features:

- Web server
- E-mail & SMS
- 3G Modem support
- Remote access utilities

V130

> "The perfect solution for our need, the Vision130™ is easy to program, user-friendly and backed up with responsive tech support."

Michael Lamore,
President of Barrier1

I/O Options	
Total supported I/Os	256
Built-in	According to model (See Built-in I/Os table below)
I/O Expansion	Add Local I/O via expansion port • Add Remote I/Os via CANbus. (See I/O Expansion Modules- page 36)
Local I/O Expansion	Use Local Expansion Adapters to add up to 8 modules
Remote I/O Expansion	Use EX-RC1 adapters to further extend the number of I/Os[1]
Program	
Application Memory	Application Logic: 488KB • Images: 128KB • Fonts: 128KB
Scan Time	20µ sec per 1K of typical application
Memory Operands	4096 coils, 2048 registers, 256 long integers (32-bit), 64 double words (32-bit unsigned), 24 floats, 192 timers (32-bit), 24 counters Additional non-retainable operands: 1024 X-bits, 512 X-integers, 256 X-long integers, 64 X-double words
HMI Panel	
Touch screen	-
Cut Out Height x Width (mm)	92 x 92
Resolution	128 x 64
Keys	20, including 10 user labeled keys (slide kit sold separately)
Environment	
Protection	NEMA4X, IP66, IP65 when panel mounted
Operating Temperature	32° to 122°F (0 to 50°C)
Standards	UL, CE, EAC, UL Hazardous Locations, Class I, Division 2[2]
General	
Battery	7 years typical at 77°F (25°C), battery back-up for all memory sections and RTC
Clock	Real-time clock functions (date and time)

Vision130™ models - Built-in I/O configurations

[1] EX-RC1: via CANbus, integrate standard Unitronics' I/O modules at distances of up to 1000m.

[2] For a list of relevant models, contact Unitronics.

		Inputs [1]				Outputs				Operating Voltage
Article [4]	**Summary**	**Digital[2]**	**HSC/Shaft-encoder[2]**	**Analog**	**Temperature Measurement**	**Transistor[3]**	**PWM/HSO[3]**	**Relay**	**Analog**	
V130-J-B1	No onboard I/Os	—	—	—	—	—	—	—	—	12/24VDC
V130-J-TR20	**10** Digital, **2** D/A Inputs[1] 6 Relay Outputs **2** High-speed Transistor Outputs	**12**	**3** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	**2** npn	**2** (2 PTO) 200 kHz max	**6**	—	24VDC
V130-J-R34	**20** Digital, **2** D/A Inputs[1] 12 Relay Outputs	**22**	**3** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	—	—	**12**	—	24VDC
V130-J-TR34	**20** Digital, **2** D/A Inputs[1] **8** Relay, **4** High-speed Transistor Outputs	**22**	**3** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	**4** npn	**4** (3 PTO) 200 kHz max	**8**	—	24VDC
V130-J-TR6	**6** Digital, **2** D/A[1] 4 Analog Inputs **6** Relay Outputs **2** High-speed Transistor Outputs	**8**	**1** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA and **4** 0-20mA, 4-20mA 10-bit	—	**2** npn	**2** (2 PTO) 200 kHz max	**6**	—	24VDC
V130-J-RA22	**8** Digital, **2** D/A, **2** TC/PT100/ Digital Inputs[1] **8** Relay, **2** Analog Outputs	**12**	**1** 30kHz, 32-bit	2 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	—	—	**8**	**2** 0-10V, 4 -20mA 12-bit	24VDC
V130-J-TRA22	**8** Digital, **2** D/A, 2 PT100/ TC/ Digital Inputs[1] **4** Relay, **2** Analog, **4** High-Speed Transistor Outputs	**12**	**1** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	**4** npn	**4** (2 PTO) 200 kHz max	**4**	**2** 0-10V, 4 -20mA 12-bit	24VDC
V130-J-T2	**10** Digital, **2** D/A Inputs[1] **12** Transistor Outputs	**12**	**3** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	**12** pnp	**7** 0.5kHz	—	—	24VDC
V130-J-T38	**20** Digital, **2** D/A Inputs [1] 16 Transistor Outputs	**22**	**2** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	**16** pnp	**7** 0.5kHz	—	—	24VDC
V130-J-TA24	**8** Digital, **2** D/A, **2** TC/PT100/ Digital Inputs [1] **10** Transistor, **2** Analog Outputs	**12**	**1** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	**10** pnp	**5** 0.5kHz	—	**2** 0-10V, 4 -20mA 12-bit	24VDC

[1] In some models certain inputs are adaptable via wiring and software settings, and can function as digital, high-speed, analog, and in certain models as TC or PT100. Adapting requires input pins. This reduces the number of digital inputs. Pin requirements:

- Each high-speed requires 1 or 2 pins according to high-speed mode.
- Each analog input requires 1 pin.
- Each TC requires 2 pins per TC input
- The first PT input requires 3 pins, and two additional pins for each additional PT input.

Example: V130-33-RA22 offers 12 digital inputs. Implementing 2 TC inputs requires 4 pins, leaving 8 pins free. Implementing 2 PT inputs uses 5 input pins.

[2] The total number of digital inputs listed includes high-speed and adaptable inputs.

[3] The total number of digital outputs listed includes high-speed outputs.

[4] To order a classic V130 with a Bezel panel, switch the "J" in the model number to "35" ex. V130, V130-33-TR20.

SAMBA™

Features:

Full-function PLC with built-in, high-resolution full-color touch screen and built-in I/O configuration. Great look, incredible price.

HMI

- Size: 3.5", 4.3", 7"
- High quality color touchscreen
- Multi-language display
- Built-in Alarm Screens

PLC

- I/O options include digital, analog, and high speed
- Auto-tune PID, up to 2 independent loops
- Recipe programs and data logging via data tables
- Function Blocks

Communication

Built-in ports:

- 1 Mini USB for programming for 4.3" & 7"models, 1 RS232 for 3.5" model

Add-on ports:

- 1 Serial/Ethernet
- 1 CANbus

Protocols:

- MODBUS TCP
- SNMP V1
- CANopen, UniCAN, CANlayer2
- BACnet, KNX and M-Bus via gateway
- FB Protocol: for any 3rd party protocol

General Features:

- E-mail & SMS
- 3G Modem support
- Remote access utilities

SAMBA 3.5"

SAMBA 4.3"

SAMBA 7"

	SAMBA		
Article Number	SAMBA 3.5	SAMBA 4.3	SAMBA 7
I/O Options			
Total supported I/Os	22		
Built-in	According to model (See Built-in I/Os table below)		
I/O Expansion	-		
Remote I/O Expansion	Use EX-RC1 adapters to further extend the number of I/Os[1]		
COM Modules	Fit up to 1 CANbus, 1 RS232/RS485[3] or 1 Ethernet		
Program			
Application Memory	Application Logic: 80KB • Images: 1.5 MB • Fonts: 320 KB	Application Logic: 192KB • Images: 3 MB • Fonts: 320 KB	Application Logic: 192KB • Images: 8 MB • Fonts: 512 KB
Scan Time	15µS per 1K of typical application		
Memory Operands	512 coils, 256 registers, 32 long integers (32-bit), 32 double words (32-bit unsigned), 24 floats, 32 timers (32-bit), 16 counters. Additional non-retainable operands: 64 X-bits, 32 X-integers, 16 X-long integers, 16 X-double words (32-bits unsigned)		
HMI Panel			
Color Touchscreen	Resistive, Analog		
Cut Out Height x Width (mm)	92 X 92	122.5 X 91.5	193 X 125
Resolution	320 X 240 (QVGA)	480 X 272	800 x 480 (WVGA)
Keys	Displays virtual keyboard when the application requires data entry		
Environment			
Protection	NEMA4X/IP66/IP65 when panel mounted		
Operating Temperature	32° to 122°F (0 to 50°C)		
Standards	UL, CE, EAC, UL Hazardous Locations, Class I, Division 2[2]		
General			
Battery	7 years typical at 77°F (25°C), battery back-up for RTC and system data, including variable data		
Clock	Real-time clock functions (date and time)		

Samba™ models - Built-in I/O configurations

[1] EX-RC1: via CANbus, integrate standard Unitronics' I/O modules at distances of up to 1000m. Refer to website for more information.
[2] For a list of relevant models, contact Unitronics.

		Inputs[1]				Outputs				Operating Voltage
Article	**Summary**	**Digital[2]**	**HSC/Shaft-encoder[2]**	**Analog**	**Temperature Measurement**	**Transistor[3]**	**PWM/HSO[3]**	**Relay**	**Analog**	
SM35-J-R20 SM43-J-R20 SM70-J-R20	**10** Digital, **2** D/A Inputs[4], **8** Relay Outputs	**12**	**1** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	—	—	**8**	—	24VDC
SM35-J-T20 SM43-J-T20 SM70-J-T20	**10** Digital, **2** D/A Inputs, **8** Transistor Outputs	**12**	**3** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	**8** pnp	**7** 0.5kHz	—	—	24VDC
SM35-J-RA22 SM43-J-RA22 SM70-J-RA22	**12** Digital, **1** HSC/Shaft-encoder, **2** AI , **2** PT100/TC, **8** Relay, **2** AO	**12**	**1** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 12/14-bit	**2** PT100/TC	—	—	**8**	2 0-10V, 4-20mA, 12-bit	24VDC
SM35-J-TA22 SM43-J-TA22 SM70-J-TA22	**12** Digital, **1** HSC/Shaft-encoder, **2** AI, **2** PT100/TC, **8** Transistor, **2** AO	**12**	**1** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 12/14-bit	**2** PT100/TC	**8** pnp	**5** 0.5kHz	—	0-10V, 4-20mA, 12-bit[2]	24VDC

[1] In some models certain inputs are adaptable via wiring and software settings, and can function as digital or analog.
Adapting requires input pins. This reduces the number of digital inputs.
Pin requirements: Each analog input requires 1 pin.
Example: SM35-J-R20 offers 12 digital inputs. Implementing 2 analog inputs requires 2 pins, leaving 10 pins free.

[2] The total number of digital inputs listed includes high-speed and adaptable inputs.
[3] The total number of digital outputs listed includes high-speed outputs.
[4] When selecting NPN for the digital inputs, the 2 Analog inputs cannot be used.

I/O Expansion Modules & Accessories- Vision Series

Expand your system with local or remote I/O expansion modules.

		Inputs					Outputs				Operating Voltage
	Expansion Modules Article	Digital[5]	HSC[5]	Analog	Temperature Measurement	Weight Measurement	Transistor[6]	PWM/HSO[6]	Relay	Analog	
Digital	IO-DI8-TO8	**8** pnp/npn	**1** 5kHz 16-bit	—	—	—	**8** pnp	—	—	—	24VDC [9]
	IO-DI8-RO4	**8** pnp/npn	**1** 5kHz 16-bit	—	—	—	—	—	**4**	—	24VDC [9]
	IO-DI8-RO8	**8** pnp/npn	**1** 5kHz 16-bit	—	—	—	—	—	**8**	—	24VDC [9]
	EX90-DI8-RO8[3]	**8** pnp	**1** 5kHz 16-bit	—	—	—	—	—	**8**	—	24VDC
	IO-DI16	**16** pnp/npn	**1** 5kHz 16-bit	—	—	—	—	—	—	—	24VDC [9]
	IO-TO16	—	—	—	—	—	**16** pnp	—	—	—	24VDC
	IO-RO8	—	—	—	—	—	—	—	**8**	—	24VDC [9]
	IO-RO16	—	—	—	—	—	—	—	**16**	—	24VDC [9]
	IO-DI8ACH	**8** AC	—	—	—	—	—	—	—	—	110/220 VAC
Analog, Temperature and Weight/Strain Measure-ments	IO-AI4-AO2	—	—	**4** 0-10V, 0-20mA, 4-20mA 12-bit	—	—	—	—	—	**2** ±10V 12-bit+sign, 0-20mA, 4-20mA 12-bit	24VDC
	IO-PT400	—	—	—	**4** PT100/NI100/NI120	—	—	—	—	—	Not relevant
	IO-PT4K	—	—	—	**4** PT1000/NI1000	—	—	—	—	—	Not relevant
	IO-AO6X	—	—	—	—	—	—	—	—	**6** (Isolated) 0-10V, 0-20mA, 4-20mA 12-bit	24VDC
	IO-LC1	**1** pnp	—	—	—	**1** Loadcell / Strain gauge	**2** pnp	—	—	—	24VDC
	IO-LC3	**1** pnp	—	—	—	**3** Loadcell / Strain gauge	**2** pnp	—	—	—	24VDC
	IO-ATC8	—	—	**8** Thermocouple, 0-10V, 0-20mA, 4-20mA 14-bit		—	—	—	—	—	Not relevant
	IO-AI8	—	—	**8** 0-10V, 0-20mA, 4-20mA 14-bit	—	—	—	—	—	—	Not relevant
XL Digital/ Analog	IO-D16A3-RO16	**16** pnp/npn	**2** 30kHz 16/32-bit[8]	**3** 0-20mA, 4-20mA 10-bit	—	—	—	—	**16**	—	24VDC
	IO-D16A3-TO16	**16** pnp/npn	**1** 30kHz 16/32-bit[8]	**3** 0-20mA, 4-20mA 10-bit	—	—	**15** pnp, **1** pnp/npn	**1** pnp 0.5kHz npn 50kHz	None	—	24VDC
	EX-D16A3-RO8[7]	**16** pnp/npn	**2** 30kHz 16/32-bit[8]	**3** 0-20mA, 4-20mA 10-bit	—	—	None	None	**8**	—	24VDC
	EX-D16A3-TO16[7]	**16** pnp/npn	**1** 30kHz 16/32-bit[8]	**3** 0-20mA, 4-20mA 10-bit	—	—	**15** pnp **1** pnp/npn	**1** pnp 0.5kHz npn 50kHz	None	—	24VDC
High-speed Remote I/O Module	EXF-RC15 [2,4,10]	**9** pnp/npn	**3** 200kHz 32-bit	—	—	—	**4** npn	**4** (up to 3 PTO)	**2**	—	24VDC

I/O Expansion Module Adapters

	Article	Description
I/O Expansion Module Adapters	EX-A2X[1]	Local I/O module adapter, Galvanic isolation. Up to **8** modules may be connected to a single PLC[1] Supports both 12/24 VDC
	EX-RC1[1,4]	Remote I/O module adapter, via CANbus. Multiple adapters may be connected to a single PLC, with up to **8** modules to each adapter[1]. Supports both 12/24 VDC.

[1] Number of supported I/Os & I/O modules varies according to module.

[2] The EXF-RC15 functions as a node in a Vision UniCAN network and connects to the Vision controller via CANbus and programmed in VisiLogic. The EXF-RC15 cannot be extended as regular I/O unit. High-speed inputs are configurable as either high-speed counter (HSC) or shaft-encoder.

[3] The EX90 is housed in an open casing. Only one EX90 can be connected per PLC, as a single expansion module; Expansion adapter not required.

[4] Supported by Samba, Vision and UniStream series.

[5] The total number of digital inputs listed includes high-speed inputs. Example: the IO-D16A3-TO16 offers a total of 16 pnp/npn inputs. You can configure I4 as a HSC and I5 as a Counter reset; this reduces the available number of digital inputs to 14.

[6] The total number of digital outputs listed includes high-speed outputs. Example: the IO-D16A3-TO16 offers a total of 16 transistor outputs. You can configure 1 to High-speed output, reducing the number of available digital outputs to 15.

[7] Functions as local adapter. Can support up to 7 I/O modules.

[8] 16-bit or 32-bit, depending on the PLC.

[9] Also available as 12VDC – contact us for part number.

[10] One HSC may be configured as a shaft encoder.

Snap-in I/O Modules

Compatible with Vision models:
V560, V570, V700, V1040 and V1210.

	Inputs				Outputs				Operating Voltage
Snap-in I/O Article	Digital (isolated)[1]	HSC/Shaft-encoder[1]	Analog	Temperature Measurement	Transistor (isolated)[2]	PWM/HSO[2]	Relay	Analog	
V200-18-E1B	**16** pnp/npn	**2** 10kHz 32-bit	**3** 0-10 V, 0-20mA, 4-20mA 10-bit	—	**4** pnp/npn	**2** pnp 0.5kHz npn 50kHz	**10**	—	24VDC
V200-18-E2B	**16** pnp/npn	**2** 10kHz 32-bit	**2** 0-10 V, 0-20mA, 4-20mA 10-bit	—	**4** pnp/npn	**2** pnp 0.5kHz npn 50kHz	**10**	**2** 0-10 V,0-20mA,4-20mA 12-bit	24VDC
V200-18-E3XB	**18** pnp/npn	**2** 10kHz 32-bit	**4** (Isolated) Thermocouple, PT100, 0-10V, 0-20mA, 4-20mA 14-bit		**2** pnp/npn	**2** pnp 0.5kHz npn 50kHz	**15**	**4** (Isolated) 0-10 V, 4-20mA 12-bit	24VDC
V200-18-E4XB	**18** pnp/npn	**2** 10kHz 32-bit	**4** (Isolated) Thermocouple, PT100, 0-10V, 0-20mA, 4-20mA 14-bit		**15** pnp **2** npn/pnp	**2** pnp 0.5kHz npn 50kHz	—	**4** (Isolated) 0-10 V, 4-20mA 12-bit	24VDC
V200-18-E5B	**18** pnp/npn	**2** 10kHz 32-bit	**3** 0-10 V,0-20mA, 4-20mA 10-bit	—	**15** pnp **2** npn/pnp	**2** pnp 0.5kHz npn 50kHz	—	—	24VDC
V200-18-E6B	**18** pnp/npn	**2** 10kHz 32-bit	**2** Thermocouple, PT100, 0-10V, 0-20mA, 4-20mA 14-bit **3** 0-10V, 0-20mA, 4-20mA 10-bit		**2** pnp/npn	**2** pnp 0.5kHz npn 50kHz	**15**	**2** (Isolated) 0-10 V, 4-20mA 12-bit	24VDC
V200-18-E46B	**18** pnp/npn	**2** 10kHz 32-bit	**6** 0-10 V,0-20mA,4-20mA 14-bit **3** 0-10 V,0-20mA,4-20mA 10-bit	—	**2** pnp/npn	**2** pnp 0.5kHz npn 100kHz	**15**	**2** (Isolated) 0-10 V, 4-20mA 12-bit	24VDC
V200-18-E62B[3]	**30** pnp/npn	**2** 10kHz 32-bit	**2** 0-10 V,0-20mA,4-20mA 10-bit	—	**28** pnp **2** npn/pnp	**2** pnp 0.5kHz npn 100kHz	—	—	24VDC

[1] The total number of digital inputs listed includes high-speed inputs.
[2] The total number of digital outputs listed includes high-speed outputs.
[3] Not yet UL certified

Vision & Samba COM Modules

Enhance Vision's communication capabilities

Model	Ethernet	RS232/RS485	Isolated RS232/RS485	CANbus	Profibus
SAMBA	V100-17-ET2	V100-17-RS4	V100-17-RS4X	V100-17-CAN	—
V130, V350, V430[1]	V100-17-ET2, V100-S-ET2[5]	V100-17-RS4	V100-17-RS4X	V100-17-CAN, V100-S-CAN[5]	V100-17-PB1
V560, V570, V1040, V1210[2]	V200-19-ET2	V200-19-RS4	V200-19-RS4-X	Built-in	—
V700[4]	Built-in	V100-17-RS4	V100-17-RS4X	V100-17-CAN	V100-17-PB1

[1] V130/V350/V430: Two ports may be added: 1 for Serial/Ethernet/Profibus and 1 for CANbus.
[2] V560/V570/V1040/V1210: 1 port may be added: Serial/Ethernet.
[3] Extended temperature cards, operational temperature : -22ºF to 140ºF (-30ºC to 60ºC) - for V350-JS-TA24 only.
[4] V700 is supplied with an Built-in Ethernet port. One port may be added: serial/Profibus, and CANbus.
[5] Not yet UL certified

DIN-rail Power Supplies

UAP-24V24W	UAP-24V60W	UAP-24V96W
24W 24V 1A	60W 24V 2.5A	96W 24V 4A

GSM

GSM-KIT-17J-3G
KIT, MODEM GPRS, CINTERION, EHS6T

Moving your Control Forward – Variable Frequency Drives

Use our VFDs as a stand-alone product or integrated with our PLC+HMI controllers.

VFD: Easy to Program. Simple to Use

- EMC built-in filters
- Variety of mounting options
- Temperature - extended operating range
- Modbus RTU fieldbus
- UL, TUV-SUD safety and CE certified
- Braking units - built-in
- Sensorless Vector and Torque control
- Heavy-duty overload capacity
- STO (Safe Torque Off)

Use as an All-in-One package

Program the VFD using the same programming software as our controllers: UniStream®, Vision™ and Samba™

VFD Specifications

		UMI-B1 EU	UMI-B1 UL	UMI-B5 UL
Power	Input Voltage	200-240VAC, Single Phase 380-440VAC, Three Phase	200-240VAC, Single Phase 200-240VAC, Three Phase 380-480VAC, Three Phase	200-240VAC, Three Phase 380-480VAC, Three Phase
	Input Frequency	50/60Hz		
	Supported Motors	Asynchronous Induction Motors, Three Phase Input		Asynchronous Induction Motors, Three Phase Input Permanent Magnet Synchronous Motors, Three Phase Input
	Output Frequency	0-400Hz		
	Overload Capacity	150%, 60 seconds		
		180%, 10 seconds		
		200%, 1 second		
Control	Control Method	SVPWM (Space Vector PWM) SVC (Sensorless Vector Control)		
	Control Setting	MODBUS, Analog, Digital, PID, Pulse		
	Communication	MODBUS RTU RS-485		
Input	Analog Inputs	**Total 2: 1** input 0-10V, 0-20mA, **1** input 0-10V		**Total 3: 2** inputs 0-10V, 0-20mA, **1** input 0-10V
	Digital Inputs	**Total 5: 4** inputs 1kHz, **1** input 50kHz		**Total 9: 8** inputs 1kHz, **1** input 50kHz
Output	Analog Outputs	**Up to 2: 1** output 0-10V, 0-20mA ≤2.2kW/3HP, (**2nd** output available from >2.2kW/3HP)	**2** outputs 0-10V, 0-20mA	
	Digital Outputs	**1** output sink/source		**Total 2: 1** output sink/source, **1** output 50kHz
	Relay Outputs	**Up to 2: 1** Programmable Multi-functional output. **2nd** output available from >2.2kW/3HP	**Total 2** Programmable Multi-functional outputs	
Features	Dynamic Braking Unit	Built-in (≤37kW/50HP)		Built-in (≤30kW/40HP)
		Optional (>37kW/50HP)		Optional (>30kW/40HP)
	EMC Filters	Built-In C3 (≥4kW/5HP), Comply with IEC/EN 61800-3		Built-In C3, Comply with IEC/EN 61800-3
		Optional C3 (<4kW/5HP), Comply with IEC/EN 61800-3		
		Optional C2, Comply with IEC/EN 61800-3		
General	Operating Temperature	(-10)°C/14°F – 50°C/122°F (de-rated by 1% for every 1°C/2°F above 40°C/104°F)		
	Altitude	2000m/6600 ft (de-rated by 1% for every additional 100m/330ft above 1000m/3300ft)		
	Enclosure Rating	IP20		
	Mounting Options	Wall and Rail (≤2.2kW/3HP)		Wall, Flange
		Wall and Flange (>2.2kW/3HP)		
	Cooling	Air-cooling		
	Safe Torque Off	Yes	Not Available	
	Compliance	CE, TÜV-SÜD Safety Mark	CE, UL and cUL	

VFD Models

UMI-B1 Series - STO

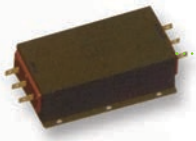
Article Number	Input Voltage	Rated Output Power		Rated Input Current (A)	Rated Output Current (A)	Dimensions (W x H x D mm)			Safety Class
		kW	HP						
UMI-0004BE-B1	Single phase 200-240V	0.4	0.5	6.5	2.5	80	160	124	Class SIL2 PLd CAT.3
UMI-0007BE-B1		0.75	1	9.3	4.2	80	160	124	
UMI-0015BE-B1		1.5	2	15.7	7.5	80	185	141	
UMI-0022BE-B1		2.2	3	24	10	80	185	141	
UMI-0007EE-B1	Three phase 380-440V	0.75	1	3.4	2.5	80	185	141	Class SIL2 PLd CAT.3
UMI-0015EE-B1		1.5	2	5	4.2	80	185	141	
UMI-0022EE-B1		2.2	3	5.8	5.5	80	185	141	
UMI-0040EE-B1		4	5	13.5	9.5	146	256	167	Class SIL3 PLe CAT.3
UMI-0055EE-B1		5.5	7.5	19.5	14	146	256	167	
UMI-0075EE-B1		7.5	10	25	18.5	170	320	197	
UMI-0110EE-B1		11	15	32	25	170	320	197	
UMI-0150EE-B1		15	20	40	32	170	320	197	
UMI-0185EE-B1		18.5	25	47	38	200	341	185	
UMI-0220EE-B1		22	30	51	45	200	341	185	
UMI-0300EE-B1		30	40	70	60	250	400	202	
UMI-0370EE-B1		37	50	80	75	250	400	202	
UMI-0450EE-B1		45	60	98	92	282	560	238	
UMI-0550EE-B1		55	75	128	115	282	560	238	
UMI-0750EE-B1		75	100	139	150	282	560	238	
UMI-0900EE-B1		90	120	168	180	338	554	330	
UMI-1100EE-B1		110	150	201	215	338	554	330	

Optional Parts

External Keypads

Flange Mounting Plates

Braking Resistors



C3 Input Filters
C2 Filters

Product Designation Key

UMI -	0022	E	U	- B1
①	②	③	④	⑤

No.	Key	Description
①	Product Line	Unitronics Motion Inverters
②	Power Range	0004:400W/0.5HP 0022:2.2kW/3HP
③	Power Rating	B: 1PH 200V–240V C: 3PH 200V–240V E: 3PH 380V–440V/480V
④	Certification	U – UL Certified E – TÜV-SÜD Certified
⑤	Product series	B1 / B5

UMI-B1 Series - UL

Article Number	Input Voltage	Rated Output Power		Rated Input Current (A)	Rated Output Current (A)	Dimensions (W x H x D mm)		
		kW	HP					
UMI-0004BU-B1	Single phase 200-240V	0.4	0.5	6.5	2.5	80	160	124
UMI-0007BU-B1		0.75	1	9.3	4.2	80	160	124
UMI-0015BU-B1		1.5	2	15.7	7.5	80	185	141
UMI-0022BU-B1		2.2	3	20	10	80	185	141
UMI-0004CU-B1	Three phase 200-240V	0.4	0.5	3.7	2.5	80	185	141
UMI-0007CU-B1		0.75	1	5	4.2	80	185	141
UMI-0007EU-B1	Three phase 380-480V	0.75	1	3.4	2.5	80	185	141
UMI-0015EU-B1		1.5	2	5	4.2	80	185	141
UMI-0022EU-B1		2.2	3	5.8	5.5	80	185	141

UMI-B5 Series - UL

Article Number	Input Voltage	Rated Output Power		Rated Input Current (A)	Rated Output Current (A)	Dimensions (W x H x D mm)		
		kW	HP					
UMI-0007CU-B5	Three phase 200-240V	0.75	1	5	4.5	126	193	175
UMI-0015CU-B5		1.5	2	7.7	7	146	263	181
UMI-0022CU-B5		2.2	3	11	10	146	263	181
UMI-0040CU-B5		4	5	17	16	170	332	216
UMI-0055CU-B5		5.5	7.5	21	20	170	332	216
UMI-0075CU-B5		7.5	10	31	30	230	342	216
UMI-0110CU-B5		11	15	43	42	255	407	245
UMI-0150CU-B5		15	20	56	55	255	407	245
UMI-0185CU-B5		18.5	25	71	70	270	555	325
UMI-0220CU-B5		22	30	81	80	270	555	325
UMI-0300CU-B5		30	40	112	110	270	555	325
UMI-0370CU-B5		37	50	132	130	325	680	365
UMI-0450CU-B5		45	60	163	160	325	680	365
UMI-0550CU-B5		55	75	200	200	325	680	365
UMI-0015EU-B5	Three phase 380-480V	1.5	2	5	3.7	126	193	175
UMI-0022EU-B5		2.2	3	5.8	5	126	193	175
UMI-0040EU-B5		4	5	13.5	9.5	146	263	181
UMI-0055EU-B5		5.5	7.5	19.5	14	146	263	181
UMI-0075EU-B5		7.5	10	25	18.5	170	332	216
UMI-0110EU-B5		11	15	32	25	170	332	216
UMI-0150EU-B5		15	20	40	32	230	342	216
UMI-0185EU-B5		18.5	25	47	38	230	342	216
UMI-0220EU-B5		22	30	56	45	255	407	245
UMI-0300EU-B5		30	40	70	60	255	407	245
UMI-0370EU-B5		37	50	80	75	270	555	325
UMI-0450EU-B5		45	60	94	92	270	555	325
UMI-0550EU-B5		55	75	128	115	270	555	325
UMI-0750EU-B5		75	100	160	150	325	680	365
UMI-0900EU-B5		90	120	190	180	325	680	365
UMI-1100EU-B5		110	150	225	215	325	680	365

BEST-IN-CLASS AUTOMATION FOR CANNABIS PRODUCTION

Maximize your results in any cannabis operation, with significant time, labor and cost savings. Using Unitronics' advanced automation and control solutions will improve your product quality and consistency while keeping up with market demand.

COMPLETE SOLUTION FOR CONTROL AND AUTOMATION

Simple to set up, painless to program Unitronics' full offering for cannabis provides everything you need to control and automate your processes.

- **Extensive range of PLCs & HMI panels –** A complete line of All-in-One Programmable Logic Controllers and HMI panels for everything from complex machines to simple control solution.
- **Full line of VFDs –** A wide choice of easy-to-program, simple-to-use Variable Frequency Drives, for varied power control needs.
- **Powerful, all-in-one software –** A single, intuitive programming environment and utilities suite, built-in.

IMPROVING PRODUCTIVITY WITH ADVANCED AUTOMATION SOLUTIONS

Unitronics specializes in control and automation solutions for cannabis production, focusing on cultivation, extraction, filling and packaging operations. Our wide portfolio of multi-function controllers and variable frequency drives are optimal for cannabis processes and environments.

Automation made easy

Unitronics solution eliminates the complicated operations traditionally associated with automation and enables you to integrate all systems and management in one single controller. With our easy-to-use software, you can control and operate all your plant processes from a single source.

24/7 CONNECTIVITY WITH YOUR GROW OPERATION

- ✓ **Remote Access:**
  Monitor your operation via web browser from your PC, tablet, or mobile phone
- ✓ **Alarms & Alerts - Built-in:**
  Catch problems early! Unitronics' built-in Alarms alert you via email or SMS text message, according to your pre-defined rules
- ✓ **Cloud Connectivity:**
  Leverage your operation via Industry 4.0 or IOT technologies such as MQTT, SQL and more

HIGH-IMPACT BENEFITS FOR CANNABIS PRODUCERS

Leading in reliability, performance and ease of use, our products enable you to quickly reap the benefits of advanced control and automation in your facility.

Customized to your needs

Easily customized to your specific climate control needs and to your unique recipe and processes, for optimized yields and quality, high throughput and maximized productivity.

Lower costs

- **Reduce energy consumption –** by controlling fans, lights, temperature, humidity, etc.
- **Reduce water and nutrients** usage **–** through control of recirculation systems
- **Save on labor –** automate manual processes and – automate manual processes and

Improved results

- **Eliminate inconsistencies** in cultivation and extraction
- **Increase reliability** in dosing and metering
- **Improve product** freshness and shelf-life
- **Increase** filling and packaging **accuracy**

Confident path to automation

Unitronics offers **unmatched support,** included at **no additional cost.**
Our experts are available to guide and assist through every stage, from determining your automation needs and identifying the right solution for your facility, to supporting the implementation and ongoing maintenance of your control systems.

Control from anywhere & any time

With Unitronics solutions, you can **monitor and control** your operation and processes from anywhere, via any mobile device or computer. Access all your critical data points, and have a real-time visibility into your operation, without being on site.

ADVANTAGES FOR GREENHOUSE BUILDERS, INTEGRATORS & OEMS

- **Leverage 30 years of award - winning innovation** in automation and control
- **A single programming environment –** Powerful, intuitive, all-in-one programming software and utilities suite for all hardware and communication configuration, Ladder, HMI applications, VFD control and more
- **Outstanding support –** Personalized expert support, end-to-end, without fees or tiers
- **High reliability –** Reducing and simplifying maintenance
- **Remote control –** Control and monitor from anywhere and anytime

Fast. Easy. Cost-effective

Unitronics' integrated solution for control & automation offers the best of two worlds: broad choice and flexibility in choosing solution components together with the simplicity and time-savings of an all-inclusive, single-vendor solution.

"Working with the Unitronics combined PLC and HMI make other systems feel old fashioned and obsolete. The support from Unitronics, from our local supplier, to email support, to help ideas on the forum, has been absolutely fantastic."

Justin Butler, Energy Plant Solutions

"After programming several other brands of PLCs, Unitronics' software is by far the most intuitive and easily understood while providing significant functionality and quality."

Dan Murphy, Owner of Marathon Bottling and Automation

"Using the Unitronics products, I am able to provide technologically advanced products and services that provide competitive advantages to my clients in terms of quality, efficiency, performance, safety, cost savings, and improved asset utilization of the plan floor."

Jeferson Franco, an Engineer at AI7 Automation Ltda.

- Complete range of PLC + HMI
- Full range of VFDs
- All-in-One programming software
- Added value for Industry 4.0, IIoT, and OT to IT
- Outstanding Support

To Find Your Local Distributor, Visit Our Website:
www.unitronics-cannabis.com

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