



PLC
+HMI
ALL IN ONE™

Powerful Software
Outstanding Support
Complete Range of PLCs

UNISTRAM®
VISION™
SAMBA™
JAZZ®



Powerful Software

Single, intuitive, feature-rich programming environment & utilities suite

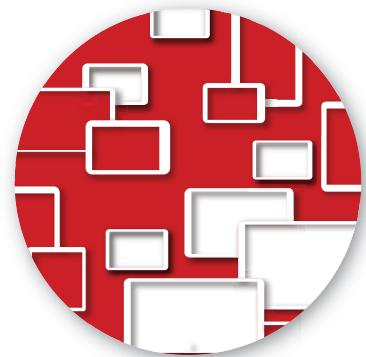
Unitronics provides a powerful solution; our software is more than a match for any requirement. Hardware configuration, HMI design and communications are all programmed in a single, intuitive software environment, which includes a extensive utilities suite with DataExport, Remote Access and more. This all-in-one approach reduces the time and effort needed to program a unit. Not only is our software user-friendly, all of Unitronics software and utilities are provided at no extra cost.



Outstanding Support

Expert support without fees or tiers

"The support, both via telephone, email and the Unitronics forum, is among the best in the industry" says Jose Padro, President of Alpha Systems, Inc. Unitronics offers best-of-breed technical support to every user without added fees, tiers, or hoops to jump through. Every question we receive is answered by an experienced member of our support team. The same team of experts is available at every step of the project for continuous coverage.



Complete Range of PLCs

A range of product lines to match your exact requirements

With 25 years of experience in automation, Unitronics has established several PLC lines with options to meet a diverse range of requirements. Our R&D strategy is to stay close to the market; we listen to our customer's current needs and future plans and develop new solutions accordingly. This strategy enables us to offer simple, tried-and-true solutions alongside cutting edge innovations.

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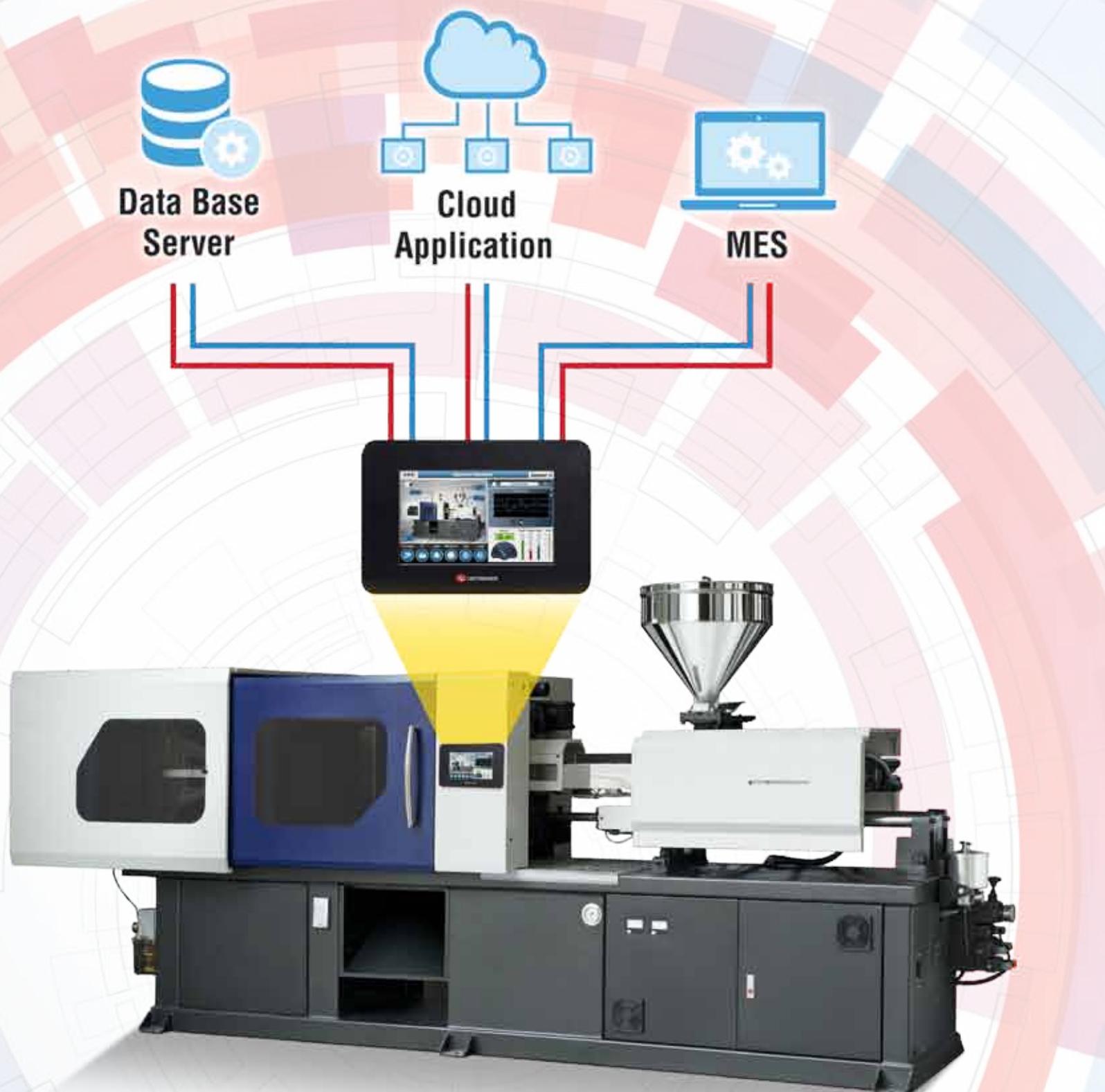


This catalog provides a general overview of Unitronics products. Before you place an order, please check the complete technical specifications for each product, located in the Unitronics website.

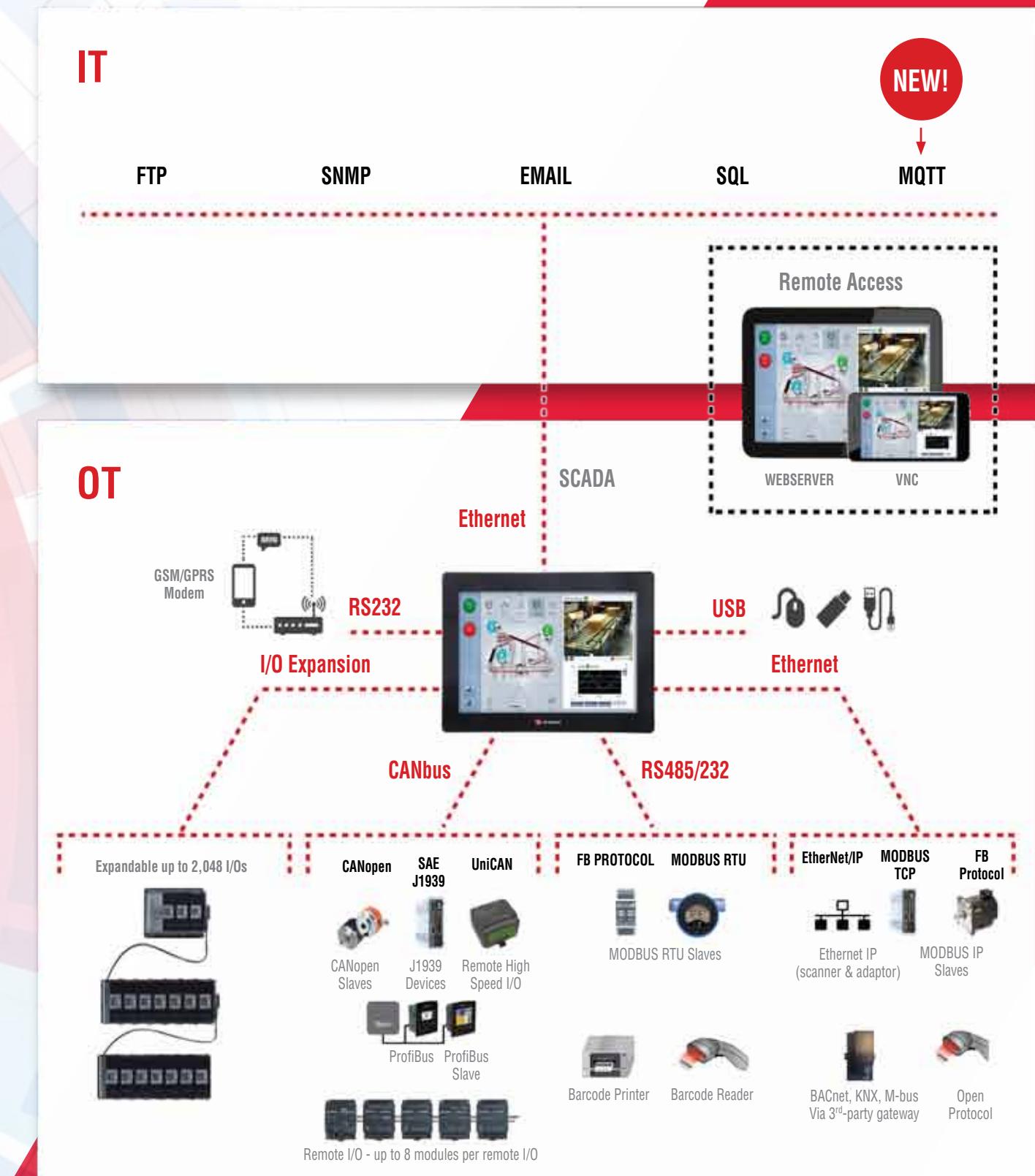
About Unitronics

PLC
+
HMI
ALL IN ONE™

Enter the world of Industry 4.0 with Unitronics



Bridge the gap between OT and IT with
UNISTREAM® PLC+HMI



UNISTREAM®

Powerful Award-winning Programmable Logic Controllers

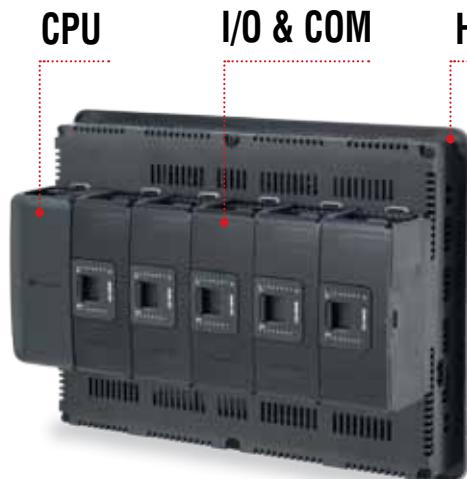
For high-end automation projects, available in two All-in-One series:

Modular & Built-in.

UniStream® Modular

Create custom control solution, perfectly matched to your requirements

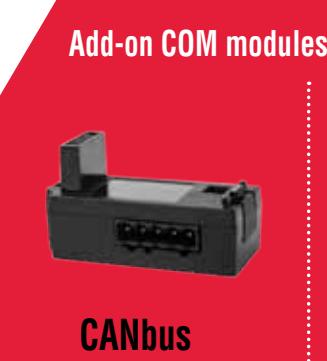
Its unique design enables you to create a custom control solution in three steps: select an HMI panel, snap in a CPU, and add any I/O or communication modules necessary for your specific application.



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 configuration. Available in two versions: 5" and 5" Pro.



UniLogic®-UniStream®

All-in-One Programming Software

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

Build-it-Once ...

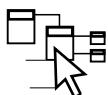
Reuse Library: Functions,
HMI & Webpages

Context-sensitive ...

Toolbox for Ladder, HMI
& Web Elements

Power from C ...

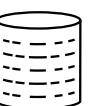
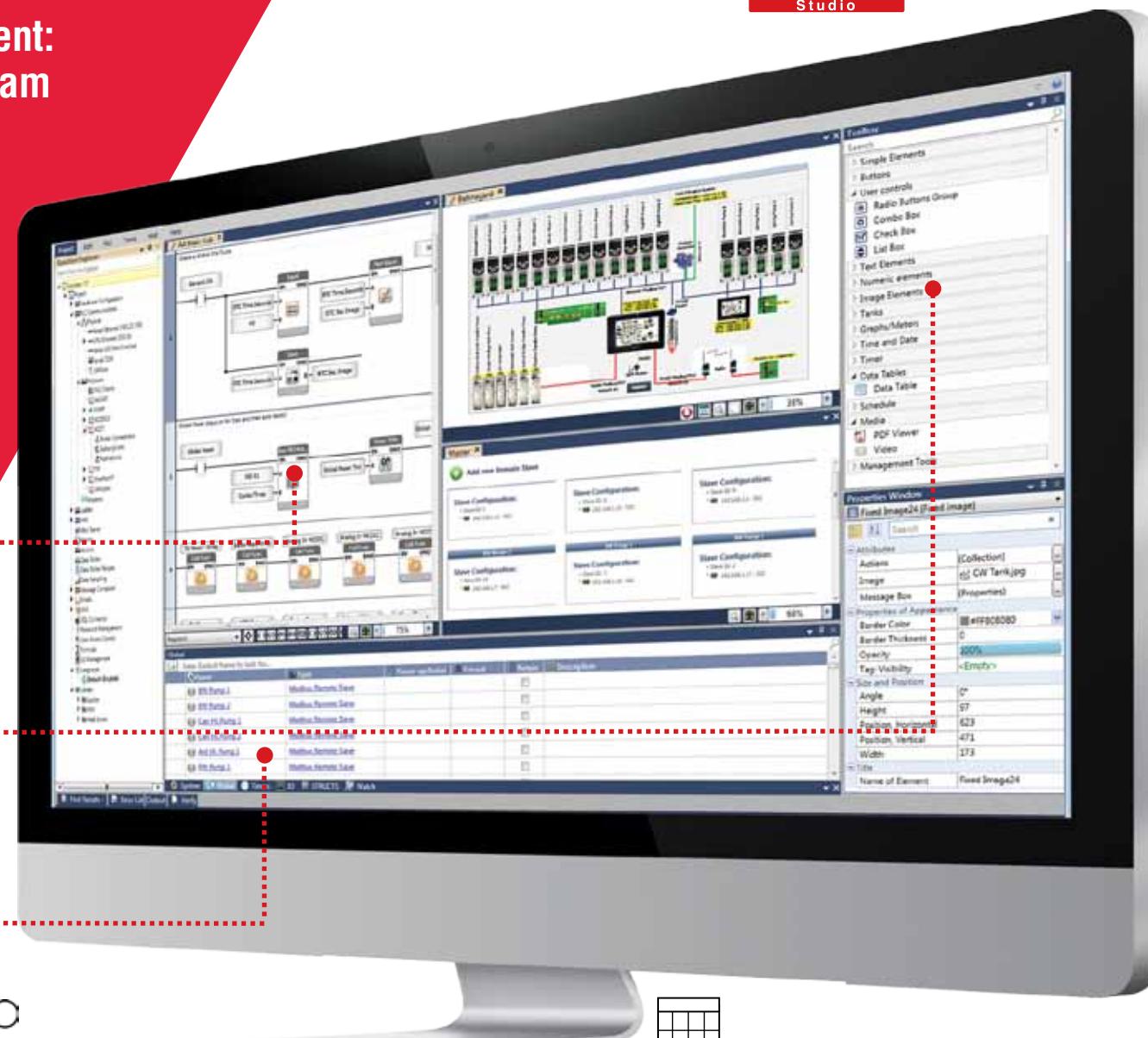
Structs & C Functions



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.

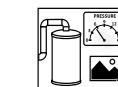


MQTT

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

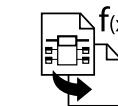
You create Structs - groups of data tags of different types organized into a single, logical unit - and reuse them across programs, especially with UDFBs (User Defined Function Blocks). UniLogic’s built-in Structs enable you to configure and control hardware and complex functions such as Communications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



Design Beautiful HMI Displays - Stream Video, Audio, PDF

UniLogic’s extensive free graphics library and HMI widgets enable you to be a graphic artist. The simple HMI editor supports layers, image transparency, overlap, and rotation. The Toolbox offers drag & drop widgets: Video and Audio players, Data Tables, complex Trend graphs and gauges for the display of run-time values, and more.

New Custom Controls: design controls, store in Library - reuse anywhere!



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

Add your UDFBs, HMI screens, Custom Controls, and Web Pages to the Library. Then, drag & drop them where you need them - UniLogic takes care of the tags. You can import your Library into any project, and share it with others.



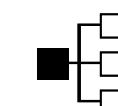
Languages - from Italian to Chinese at the Touch of a Button

UniLogic supports any language that you can type - including Asian languages such as Chinese, Japanese, and Korean. You simply enter translated text into the Language Table Translation. 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. Intuitive features allow operators to detect Alarms, analyze them, and take action. Export your Alarm Log via FTP, send it via email, or copy it directly from the controller via a DOK. 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 for data communications 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:

HMI

- Size: 7", 10.4" or 15.6"
- High quality touch screen. 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 up to 2048 I/Os
- 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

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.



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	2048 (See I/O Expansion Modules- page 15)				
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	Add Local I/O via expansion port • Add Remote I/Os via CANbus				
Local I/O Expansion	Use Local Expansion Adapters to add up to 80 slim or 50 wide modules ¹				
Remote I/O Expansion	Use EX-RC1 adapters to add I/Os via CANbus ²				
Onboard COM modules	Supports up to 3 COM modules ¹	Supports up to 4 COM modules ¹			
Program	8 MB				
HMI Panel	Resistive, Analog				
Touch screen	Resistive, Analog / Multi-Touch				
Viewing Area	211.2 x 158.4	344.23 x 193.53			
Height x Width (mm)	USP-070-B08: 152.4 x 91.44 USP-070-B10: 154.08 x 85.92	249.0 x 395.0			
Cut Out	134.0 x 196.0	214.0 x 281.0			
Height x Width (mm)	800 x 480 (WVGA)				
Resolution	800 x 600 (SVGA)				
Keys	Virtual Keyboard				
Environment	NEMA4X, IP66, IP65 when panel-mounted ³				
Protection	-4°F to 131°F				
Operating Temperature	32°F to 122°F				
Standard	UL, CE, Class 1 Div 2 and GOST				
General	4 years typical at 77°F, battery back-up for memory and RTC				
Battery	Real-time clock functions (date and time)				
Clock	12/24VDC ⁴				
Power Supply	Real-time clock functions (date and time)				

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 Modules¹

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

¹ Onboard 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 EX-RC1: via CANbus, integrate standard Unitek's I/O modules at distances of up to 1000m.

³ UniStream complies with IP66 and NEMA4X only if audio-jack seal is installed. Refer to HMI panel installation guide.

⁴ 12V applies to PLC power supply only, and not to the I/O.

UNISTREAM® Built-in

Features:

HMI

- Size: 5"
- High quality 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 up to 2048 I/Os
- 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 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

General Features:

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

Powerful PLC in a superbly compact hardware profile: PLC+HMI+I/Os built into one single unit. Available in two versions: 5" and 5" Pro. Expands up to 2048 I/Os.



UniStream® 5"



UniStream® 5" Pro

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 • Add Remote I/Os via CANbus. (See I/O Expansion Modules- page 15) ¹
Local I/O Expansion	Use Local Expansion Adapters to add up to 80 slim, or 50 wide modules ¹
Remote I/O Expansion	Use EX-RC1 adapters to add I/Os via CANbus ²
Onboard COM Modules	
Program	Add up 3 COM modules ³
Application Memory	8 MB
HMI Panel	
Touch screen	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
Standard	CE
General	
Battery	4 years typical at 77°F, battery back-up for memory and RTC
Clock	Real-time clock functions (date and time)
Power Supply	12/24VDC ⁴

Uni-COM™ Communication Modules

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

Local Expansion Adapters

Article Number	Communication Ports
UAG-CX-XKP125	UniStream CX IO Exp.Kit 1.25m
UAG-CX-XKP300	UniStream CX IO Exp.Kit 3m

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 EX-RC1: via CANbus, integrate standard Unitronics' I/O modules at distances of up to 1000m. Refer to website for more information.

³ Up to 2 serial modules and one CAN bus module.

⁴ 12V applies to US5-XX-B1 only.

Expandability

Modular, Built-in, Local & Remote I/Os

UniStream 5" Built-in I/O Configurations

	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	No built-in I/Os	-	-	-	-	-	-	-	-	12/24VDC
US5-B5-TR22 US5-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	10 Digital Inputs, 2 Analog Inputs, 12 Transistor Outputs, npn, 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	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	14 Digital Inputs, including 2 HSC, 2 Analog Inputs, 2 Temperature Inputs, 10 Transistor outputs, npn, 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	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	24 Digital Inputs, including 4 HSC, 2 Analog Inputs, 16 Transistor Outputs, npn, 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

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.

Local & remote I/O modules for UniStream® series. Expand up to 2048 I/Os.

	Article Number	Inputs				Outputs			
		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	250kHz 32-bit	—	—	—	8 Source(pnp)	2 ² 250kHz 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	—	—	—	—	—
	UIS-04PTN	—	—	—	—	4 PT100/NI100/NI120	—	—	—
	UIS-04PTKN	—	—	—	—	4 PT1000/NI1000/NI1200	—	—	—
Digital/Analog	UIS-08TC	—	—	—	8 (Isolated) Thermocouple	—	—	—	—
	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 (pnp)	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 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, 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
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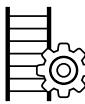
VisiLogic™ - Vision™ and Samba™ All-in-One programming software

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

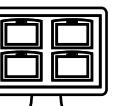
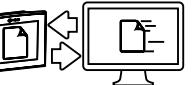
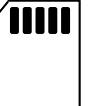
Display dynamic values in real-time



Web Server

Display and edit application values via browser

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

Utility Name	Function	Key Features	Targeted Users
Remote Access		<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Operators requiring Remote Access System integrators: remote debugging, troubleshooting, fault-finding
Remote Operator		<ul style="list-style-type: none"> Simultaneously view and operate the HMI panels of multiple PLCs in multiple locations Run the HMI applications via PC keyboard + mouse 	<ul style="list-style-type: none"> Control room operators Installation managers
DataXport		<ul style="list-style-type: none"> Harvest data from multiple PLCs on demand or according to time/date Export the data to ± Excel/.csv files Automatically email files 	<ul style="list-style-type: none"> Data analysts Plant managers Process engineers
UniDownload Designer		<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> Protect source code Enable customers to install an application without using VisiLogic or U90Ladder
Download Manager & UniDownloader		<ul style="list-style-type: none"> Securely install .udc applications in local or remote PLCs UniDownloader: installs an application in a single PLC 	<ul style="list-style-type: none"> OEMs / System Integrators in installations with high security requirements
SD Card Suite		<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Data analysts Plant managers Process engineers
UniVision Licensing		<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> System integrators OEMs
UniOPC Server		<ul style="list-style-type: none"> Create channel to connect PLCs to SCADA systems, such as plant control rooms Compliant with the OPC foundation standards 	Control room operators
UniDDE		<ul style="list-style-type: none"> 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 room operators
Programming tools for developers		<ul style="list-style-type: none"> Easily implement communication between PLC & PC applications 	Developers

Software features vary according to controller model

VISION 1210™ / 1040™

Features:

HMI

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

PLC

- I/O options including 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
- 1 port may be added for an additional Serial/Ethernet

Protocols:

- MODBUS TCP
- SNMP*
- 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

* SNMP V1 Trap, SNMP community Name



V1210



V1040

Advanced PLC from the back—big, high-resolution color touch screen from the front. Snap in I/Os for an All-in-One solutions, expand up to 1000 I/Os.



Snap-in I/O

Plug a Snap-in module directly into the back of a Vision 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 35). Local or Remote I/Os may be added via expansion port or via CANbus (See I/O Expansion Modules- page 34).	
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		
Touch screen	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 and IP65 (when panel mounted)
Operating Temperature	32 to 122°F	
Standards	CE, UL Many of our products are also UL Class 1 Div 2 and GOST - please contact Unitronics	
General		
Battery	7 years typical at 77°F, battery back-up for all memory sections and RTC	
Clock	Real-time clock functions (date and time)	
Power Supply	12/24VDC ²	

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

² 12V applies to PLC power supply only, and not to the I/O.

“I've not yet encountered a job that a Unitronics PLC was unable to cover.”

Timothy Moulder,
Engineer at Black & Decker

VISION 700™

Features:

HMI

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

PLC

- I/O options including 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
- 2 Ports may be added: 1 Serial/Profibus and 1 CANbus

Protocols:

- MODBUS TCP
- SNMP*
- 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

* SNMP V1 Trap, SNMP community Name

Advanced PLC from the back—high-resolution color 7" touch-screen from the front. Snap in I/Os for an All-in-One solutions, expand up to 1000 I/Os.



V700



"Reliability, ease of use, connectivity and competitive prices are Unitronics' main strengths."

Mr. Andrea Della Bosca,
EV srl

I/O Options	1000
Total supported I/Os	
I/O Expansion	Snap-in I/O Modules plug directly into the back of the Vision unit (See Snap-in I/O Modules- page 35). Local or Remote I/Os may be added via expansion port or via CANbus (See I/O Expansion Modules- page 34).
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	
Touch screen	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
Operating Temperature	32 to 122°F
Standards	CE, UL Many of our products are also UL Class 1 Div 2 and GOST - please contact Unitronics
General	
Battery	7 years typical at 77°F, battery back-up for all memory sections and RTC
Clock	Real-time clock functions (date and time)
Power Supply	12/24VDC ²

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

² 12V applies to PLC power supply only, and not to the I/O.

VISION 570™/560™

Features:

HMI

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

PLC

- I/O options including 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

Communication

Built-in ports:

- 1 Mini USB for programming in V570
- 1 CANbus
- 2 Isolated RS485/ RS232
- 1 port may be added for an additional Serial/Ethernet

Protocols:

- MODBUS TCP
- SNMP*
- 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

* SNMP V1 Trap, SNMP community Name

Advanced PLC from the back- big, high—resolution color 5.7" touchscreen from the front. Snap-in I/Os for an All-in-One solution, expands up to 1000 I/Os.



V570



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

Article Number	Vision 570	Vision 560
I/O Options	V570-57-T20B-J²	V560-T25B
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 35). Local or Remote I/Os may be added via expansion port or via CANbus (See I/O Expansion Modules- page 34).	
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		
Touch screen	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	
Standards	CE, UL Many of our products are also UL Class 1 Div 2 and GOST - please contact Unitronics	
General		
Battery	7 years typical at 77°F, 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 To order a classic V570 with a Bezel panel, order V570-57-T20B.

³ 12V applies to PLC power supply only, and not to the I/O.

VISION 430™

Features:

HMI

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

PLC

- I/O options including 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
- 2 ports may be added: 1 Serial/Ethernet/Profinet and 1 CANbus

Protocols:

- MODBUS TCP
- SNMP*
- 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

* SNMP V1 Trap, SNMP community Name

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



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	512 According to model (See Built-in I/Os table below)
Built-in	Add Local I/O via expansion port • Add Remote I/Os via CANbus (See I/O Expansion Modules- page 34)
I/O Expansion	Use Local Expansion Adapters to add up to 8 modules
Local I/O Expansion	Use EX-RC1 adapters to further extend the number of I/Os ¹
Remote I/O Expansion	
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	
Touch screen	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
Standards	CE, UL Many of our products are also UL Class 1 Div 2 and GOST - please contact Unitronics
General	
Battery	7 years typical at 77°F, battery back-up for all memory sections and RTC
Clock	Real-time clock functions (date and time)
Power Supply	24VDC, except for V430-J-B1, which is 12/24VDC

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

Vision430™ models - Built-in I/Os

Article	Summary	Inputs ¹				Outputs				Operating Voltage
		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.



VISION350™

Features:

HMI

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

PLC

- I/O options including 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
- 2 ports may be added: 1 Serial/Ethernet/Profinet and 1 CANbus

Protocols:

- MODBUS TCP
- SNMP*
- 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

* SNMP V1 Trap, SNMP community Name

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.



V350



“There were significant cost savings using the Unitronics PLC.”

Justin Butler,
Senior Electrical Engineer at Energy Plant Solutions

I/O Options	512
Total supported I/Os	
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 34)
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	
Touch screen	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, For V350-JS-TA24 & V350-S-TA24: -22°F to 140°F ⁴
Standards	CE, UL Many of our products are also UL Class 1 Div 2 and GOST - please contact Unitronics
General	
Battery	7 years typical at 77°F, battery back-up for all memory sections and RTC
Clock	Real-time clock functions (date and time)
Power Supply	24VDC, except for V350-J-B1, which is 12/24VDC

Vision350™ models - Built-in I/Os

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

Article ⁵	Summary	Inputs ¹					Outputs			Operating Voltage
		Digital ²	HSC/Shft-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 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 (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 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 (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 npn 0.5kHz	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 npn 0.5kHz	7 0.5kHz	—	—	24VDC
V350-J-TA24 V350-S-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 npn 0.5kHz	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.
² Extended temperature cards:
CANbus in/r: V100-S-CAN, Ethernet p/n V100-S-ET2

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

VISION130™

Features:

HMI

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

PLC

- I/O options including 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
- 2 ports may be added: 1 Serial/Ethernet/Profinet and 1 CANbus

Protocols:

- MODBUS TCP
- SNMP*
- 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

* SNMP V1 Trap, SNMP community Name, SNMP V2C Trap

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



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	256 According to model (See Built-in I/Os table below)							
Built-in	Add Local I/O via expansion port • Add Remote I/Os via CANbus. (See I/O Expansion Modules- page 34)							
I/O Expansion	Use Local Expansion Adapters to add up to 8 modules							
Local I/O Expansion	Use EX-RC1 adapters to further extend the number of I/Os ¹							
Remote I/O Expansion								
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							
Standards	CE, UL Many of our products are also UL Class 1 Div 2 and GOST - please contact Unitronics							
General								
Battery	7 years typical at 77°F, battery back-up for all memory sections and RTC							
Clock	Real-time clock functions (date and time)							
Power Supply	24VDC, except for V130-J-B1, which is 12/24VDC							

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

Vision130™ models - Built-in I/Os

Article ⁴	Summary	Inputs ¹					Outputs			Operating Voltage
		Digital ²	HSC/Shaf-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	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	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 npn	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 npn	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 npn	5 0.5kHz	—	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:

HMI

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

PLC

- I/O options including 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
- 2 ports may be added: 1 Serial/Ethernet and CANbus

Protocols:

- MODBUS TCP
- SNMP*
- 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

* SNMP V1 Trap, SNMP community Name

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



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			
Touch screen		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		
Standards	CE, UL Many of our products are also UL Class 1 Div 2 and GOST - please contact Unitronics		
General			
Battery	7 years typical at 77°F, battery back-up for RTC and system data, including variable data		
Clock	Real-time clock functions (date and time)		
Power Supply	24VDC		

Samba™ models - Built-in I/Os

¹ EX-RC1: via CANbus, integrate standard Unitronics I/O modules at distances of up to 1000m. Refer to website for more information.

Article	Summary	Inputs ¹			Outputs				Operating Voltage
		Digital ²	HSC/Shft-encoder ²	Analog	Temperature Measurement	Transistor ³	PWM/HSO ³	Relay	
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/Shft-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 0-10V, 4-20mA, 12-bit	24VDC
SM35-J-TA22 SM43-J-TA22 SM70-J-TA22	12 Digital, 1 HSC/Shft-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 0.5kHz	5 0.5kHz	— 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 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.

Features:

HMI

- Up to 60 user-designed screens
- Multi language

PLC

- I/O options including digital, analog, temperature and high speed
- Auto-tune PID, up to 4 independent loops (according to model*)

Communication

Built-in ports:

- 1 Mini USB for programming
- 1 port may be added: Serial/Ethernet (see page 35)

Protocols:

- PC access via MODBUS or OPC server
- Supports MODBUS protocol (according to model)

General Features:

- SMS via GSM
- 3G Modem support
- Remote access utilities

* Up to 4 loops: models UA24 / UN20

1 loop: all other models 1



Jazz®



An All-in-One unit affordable as a "smart relay". Full-function PLC combined with a textual HMI and keypad, with up to 40 built-in I/Os.

I/O Options								
Total supported I/Os	40							
Built-in	According to model (See Built-in I/Os table below)							
I/O Expansion	-							
Program								
Memory Operands	256 coils, 256 registers, 64 timers							
Ladder Memory	48K							
HMI Panel								
Touch screen	-							
Cut Out Height x Width (mm)	117 x 89							
Resolution	2 lines, 16 characters							
Keys	16 keys, including 10 user-labeled keys							
Environment								
Protection	NEMA4X, IP65 (when panel mounted)							
Operating Temperature	32 to 122°F							
Standards	CE, UL Many of our products are also UL Class 1 Div 2 and GOST - please contact Unitronics							
General								
Battery	10 years typical at 77°F, battery back-up for RTC and system data, including variable data							
Clock	Real-time clock functions (date and time)							
Power Supply	24VDC							

Jazz® models - Built-in I/Os

Article ⁴	Summary	Inputs ¹				Outputs				Operating Voltage
		Digital ²	HSC/Shft-encoder ²	Analog	Temperature Measurement	Transistor ³	PWM/HSO ³	Relay	Analog	
JZ20-J-R10	6 Digital Inputs 4 Relay Outputs	6	2 10kHz, 16-bit	—	—	—	—	4	—	24VDC
JZ20-J-R16	6 Digital, 2 D/A, 2 Analog Inputs ¹ 6 Relay Outputs	8		2 0-10V 10 or 12-bit 2 0-20mA, 4-20mA 10 or 12-bit	—	—	—	6	—	24VDC
JZ20-J-R16HS	6 Digital, 3 HSC/Shft-encoder, 2 A/D, 2 AI, 6 Relay outputs	8	3 10kHz, 16-bit	2 0-10V 10 or 12-bit 2 0-20mA, 4-20mA 10-bit	—	—	—	6	—	24VDC
JZ20-J-R31	16 Digital, 2 D/A, 2 Analog Inputs ¹ 11 Relay Outputs	18		2 0-10V 10 or 12-bit 2 0-20mA, 4-20mA 10-bit	—	—	—	11	—	24VDC
JZ20-J-T10	6 Digital Inputs 4 Transistor Outputs	6	2 10kHz, 16-bit	—	—	4 pnp	—	—	—	24VDC
JZ20-J-T18	6 Digital, 2 D/A, 2 Analog Inputs ¹ 8 Transistor Outputs	8		2 0-10V 10-bit 2 0-20mA, 4-20mA 10-bit	—	8 pnp	—	—	—	24VDC
JZ20-J-T20HS	6 Digital, 3 HSC/Shft-encoder, 2 A/D, 2 AI, 10 Transistor outputs	8	3 10kHz, 16-bit	2 0-10V 10-bit	—	8 pnp 2 npn	2 32kHz	—	—	24VDC
JZ20-J-T40	16 Digital, 2 D/A, 2 Analog Inputs ¹ 20 Transistor Outputs	18	2 10kHz, 16-bit	2 0-10V 10-bit 2 0-20mA, 4-20mA 10-bit	—	20 pnp	—	—	—	24VDC
JZ20-J-UA24	9 Digital Inputs, 1 HSC, 2 A/D, 2 AI, 2 TC/PT100, 5 Relay Outputs, 2 Transistor Outputs, 2 AO	11	2 10kHz, 16-bit	2 0-20mA 4-20mA 2 0-10 VDC	2 Thermocouple, PT100	2 pnp	2	5	2 +/-10V, 4 -20mA 12-bit	24VDC
JZ20-J-UN20	9 Digital, 2 D/A, 1 Analog 1 TC/PT100 Inputs ¹ 5 Relay 2 Transistor Outputs	11	1 5kHz, 16-bit	2 0-10V 10-bit 1 0-20mA, 4-20mA 10-bit	1 Thermocouple, PT100	2 pnp	2	5	—	24VDC

¹ In some models certain inputs are adaptable, and can function as either digital or analog. Adapting requires input pins. This reduces the number of digital inputs. Pin requirements: Each analog input requires 1 pin.

² Note that the high-speed inputs are included in the total number of digital inputs

³ Note that the high-speed outputs are included in the total number of npn/pnp digital outputs

⁴ To order a classic Jazz with a Bezel panel, omit the 'J' from the model number, ex. JZ20-R10

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-T08	8 pnp/pnp	1 5kHz 16-bit	—	—	—	8 pnp	—	—	—	24VDC ⁹
	IO-DI8-R04	8 pnp/pnp	1 5kHz 16-bit	—	—	—	—	—	4	—	24VDC ⁹
	IO-DI8-R08	8 pnp/pnp	1 5kHz 16-bit	—	—	—	—	—	8	—	24VDC ⁹
	EX90-DI8-R08 ³	8 pnp	1 5kHz 16-bit	—	—	—	—	—	8	—	24VDC
	IO-DI16	16 pnp/pnp	1 5kHz 16-bit	—	—	—	—	—	—	—	24VDC ⁹
	IO-T016	—	—	—	—	—	16 pnp	—	—	—	24VDC
	IO-R08	—	—	—	—	—	—	—	8	—	24VDC ⁹
	IO-R016	—	—	—	—	—	—	—	16	—	24VDC ⁹
	IO-DI8ACH	8 AC	—	—	—	—	—	—	—	—	110/220 VAC
Analog, Temperature and Weight/Strain Measurements	IO-AI4-A02	—	—	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	—	—	—	Loadcell / Strain gauge	2 pnp	—	—	—	24VDC
	IO-LC3	1 pnp	—	—	—	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
	IO-D16A3-R016	16 pnp/pnp	2 30kHz 16/32-bit ⁸	3 0-20mA, 4-20mA 10-bit	—	—	—	—	16	—	24VDC
XL Digital/ Analog	IO-D16A3-T016	16 pnp/pnp	1 30kHz 16/32-bit ⁸	3 0-20mA, 4-20mA 10-bit	—	—	15 pnp, 1 pnp/pnp	1 pnp 0.5kHz 1 pnp 50kHz	None	—	24VDC
	EX-D16A3-R08 ⁷	16 pnp/pnp	2 30kHz 16/32-bit ⁸	3 0-20mA, 4-20mA 10-bit	—	—	None	None	8	—	24VDC
	EX-D16A3-T016 ⁷	16 pnp/pnp	1 30kHz 16/32-bit ⁸	3 0-20mA, 4-20mA 10-bit	—	—	15 pnp 1 pnp/pnp	1 pnp 0.5kHz 1 pnp 50kHz	None	—	24VDC
	High-speed Remote I/O Module	EXF-RC15 ^{2,4,10}	9 pnp/pnp	3 200kHz 32-bit	—	—	4 pnp	4 (up to 3 PTO)	2	—	24VDC

I/O Expansion Module Adapters

I/O Expansion Module Adapters	Article	Description	
	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 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.

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 D16A3-T016 offers a total of 16 pnp/pnp inputs. You can configure 14 as a HSC and 15 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 D16A3-T016 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/pnp	2 10kHz 32-bit	3 0-10 V, 0-20mA, 4-20mA 10-bit	—	—	4 pnp/pnp	2 pnp 0.5kHz pnp 50kHz	10	—	24VDC
V200-18-E2B	16 pnp/pnp	2 10kHz 32-bit	2 0-10 V, 0-20mA, 4-20mA 10-bit	—	—	4 pnp/pnp	2 pnp 0.5kHz pnp 50kHz	10	2 0-10 V, 0-20mA, 4-20mA 12-bit	24VDC
V200-18-E3XB	18 pnp/pnp	2 10kHz 32-bit	4 (Isolated) Thermocouple, PT100, 0-10V, 0-20mA, 4-20mA 14-bit			2 pnp/pnp	2 pnp 0.5kHz pnp 50kHz	15	4 (Isolated) 0-10 V, 4-20mA 12-bit	24VDC
V200-18-E4XB	18 pnp/pnp	2 10kHz 32-bit	4 (Isolated) Thermocouple, PT100, 0-10V, 0-20mA, 4-20mA 14-bit			15 pnp 2 pnp/pnp	2 pnp 0.5kHz pnp 50kHz	—	4 (Isolated) 0-10 V, 4-20mA 12-bit	24VDC
V200-18-E5B	18 pnp/pnp	2 10kHz 32-bit	3 0-10 V, 0-20mA, 4-20mA 10-bit	—	—	15 pnp 2 pnp/pnp	2 pnp 0.5kHz pnp 50kHz	—	—	24VDC
V200-18-E6B	18 pnp/pnp	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/pnp	2 pnp 0.5kHz pnp 50kHz	15	2 (Isolated) 0-10 V, 4-20mA 12-bit	24VDC
V200-18-E46B	18 pnp/pnp	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/pnp	2 pnp 0.5kHz pnp 100kHz	15	2 (Isolated) 0-10 V, 4-20mA 12-bit	24VDC
V200-18-E62B ³	30 pnp/pnp	2 10kHz 32-bit	2 0-10 V, 0-20mA, 4-20mA 10-bit	—	—	28 pnp 2 pnp/pnp	2 pnp 0.5kHz pnp 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 capabilities¹

Vision 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 ³	V100-17-RS4	V100-17-RS4X	V100-17-CAN, V100-S-CAN ³	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



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