UNITRONICS®

PLC
+HMI
ALL IN ONE™

Powerful Software

Outstanding Support

Complete Range of PLCs

UNISTREAM®
VISION™
SAMBA™
JAZZ®

Powerful Software

Single, intuitive, feature-rich programming environment & utilities suite
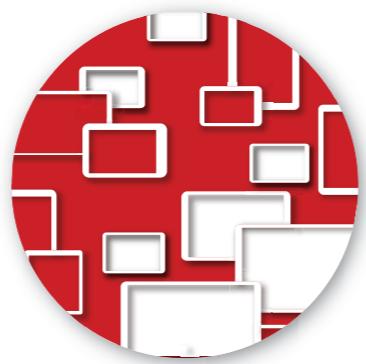
Unitronics provides a powerful solution; our software is more than a match for any requirement. Hardware configuration, HMI design and communications are all programmed in an single, intuitive software environment, which includes a extensive utilities suite with DataExport, Remote Access and more. This 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.
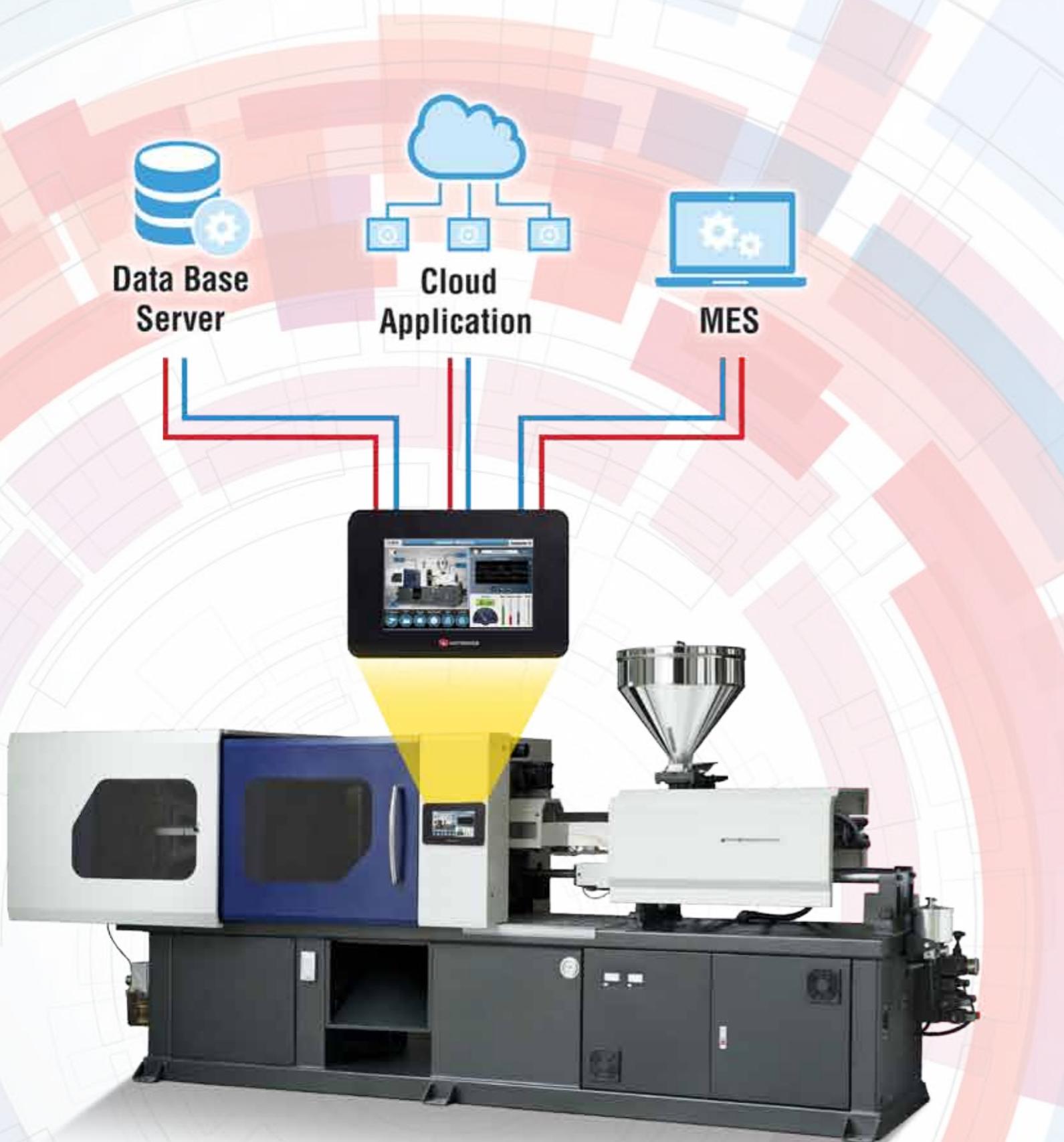
About Unitronics

PLC +HMI

ALL IN ONE™
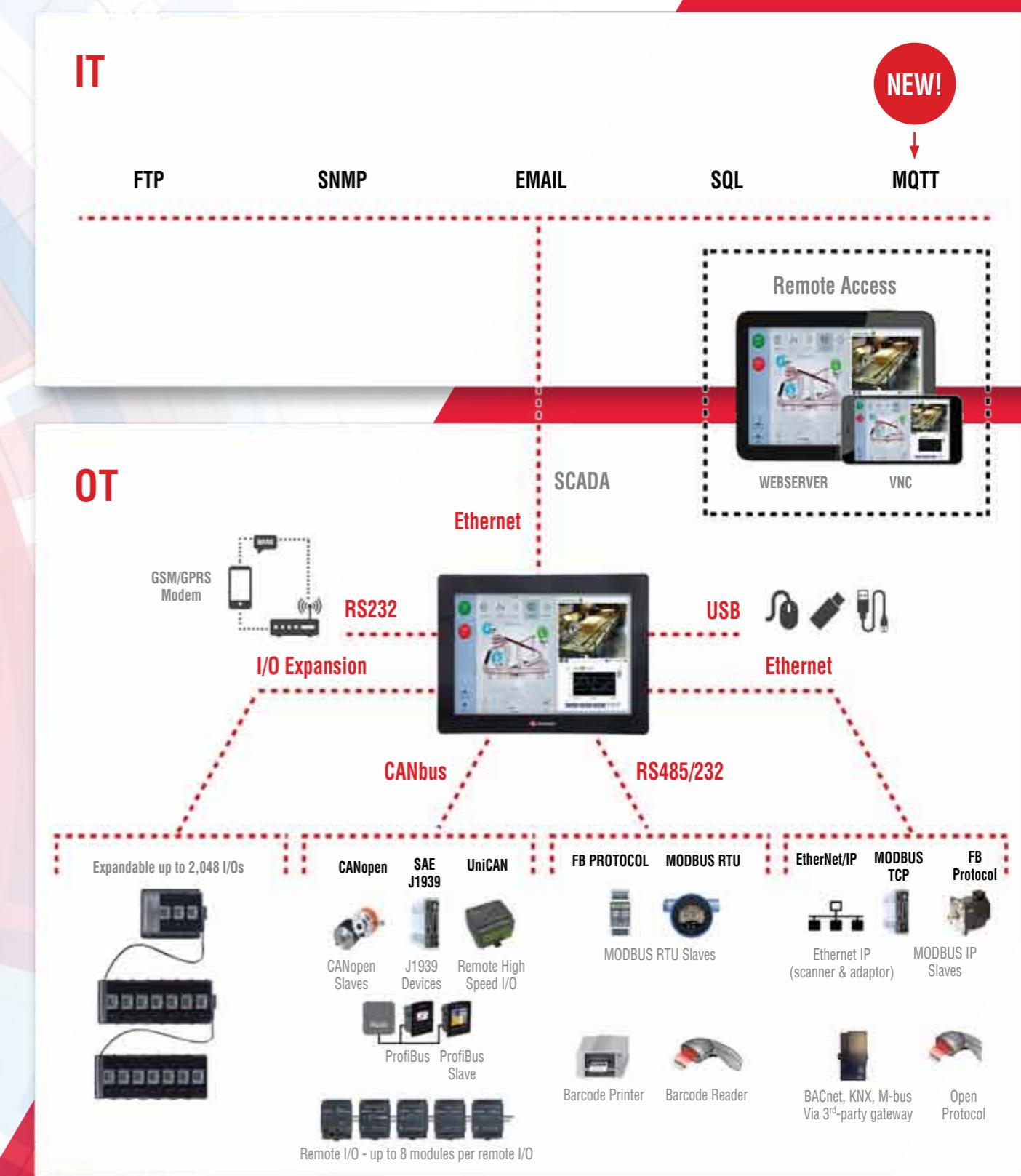
Enter the world of Industry 4.0 with Unitronics

Data Base Server

Cloud Application

MES

Bridge the gap between OT and IT with

ÜNISTREAM® PLC+HMI

IT

NEW!

FTP   SNMP   EMAIL   SQL   MQTT

Remote Access

WEBSERVER   VNC

OT

SCADA

Ethernet

GSM/GPRS Modem

RS232   USB

I/O Expansion   Ethernet

CANbus   RS485/232

Expandable up to 2,048 I/Os

| CANopen | SAE J1939 | UniCAN | FB PROTOCOL | MODBUS RTU | EtherNet/IP | MODBUS TCP | FB Protocol |

CANopen Slaves   J1939 Devices   Remote High Speed I/O

MODBUS RTU Slaves

Ethernet IP (scanner & adaptor)   MODBUS IP Slaves

ProfiBus   ProfiBus Slave

Barcode Printer   Barcode Reader

BACnet, KNX, M-bus Via 3rd-party gateway   Open Protocol

Remote I/O - up to 8 modules per remote I/O

UNISTREAM®

The Powerful award winning Programmable Logic Controllers Series

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

UniStream® Modular

Complete 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.

Integrate third-party devices via EtherNet/IP™, CANbus or RS232/485 using MODBUS or CANopen.
Use the UniLogic® Message Composer to adapt UniStream to any protocol.

Audio Out

MicroSD card

2 x USB (Host)

Mini USB (Programming)

2 x Ethernet TCP/IP
(for daisy-chaining)

CANbus

RS485

CPU   **Slim I/O**   **Wide I/O**   **COM module**

UniStream® Built-in

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

A multi-function PLC in a superbly compact hardware profile: PLC+HMI+I/O built into a single unit and in a range of built-in I/O configurations. Available in two versions: 5" and 5" Pro.

Mini USB (Programming)

Ethernet TCP/IP

USB (Host)

MicroSD card

CANbus   **RS485**   **RS232**   **I/O Expansion Adaptor**

UniLogic®- UniStream® All-in-One Programming Software

UniLogic® Studio

Ultimate All-in-One programming environment: configure hardware, communications, program Ladder, design HMI, web pages and more.
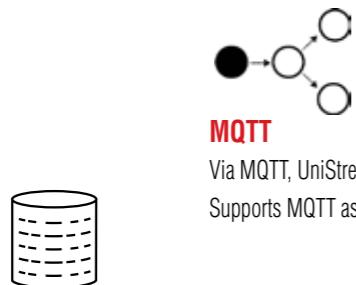
Build-it-Once …
Reuse Library: Functions, HMI & Webpages

Context-sensitive …
Toolbox for Ladder, HMI & Web Elements
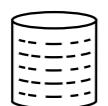
Power from C …
Structs & C Functions
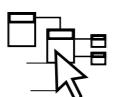
MQTT
Via MQTT, UniStream bridges between the production floor all the way up to the MES. Supports MQTT as a 'client' that can both publish and subscribe to messages.

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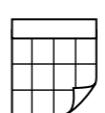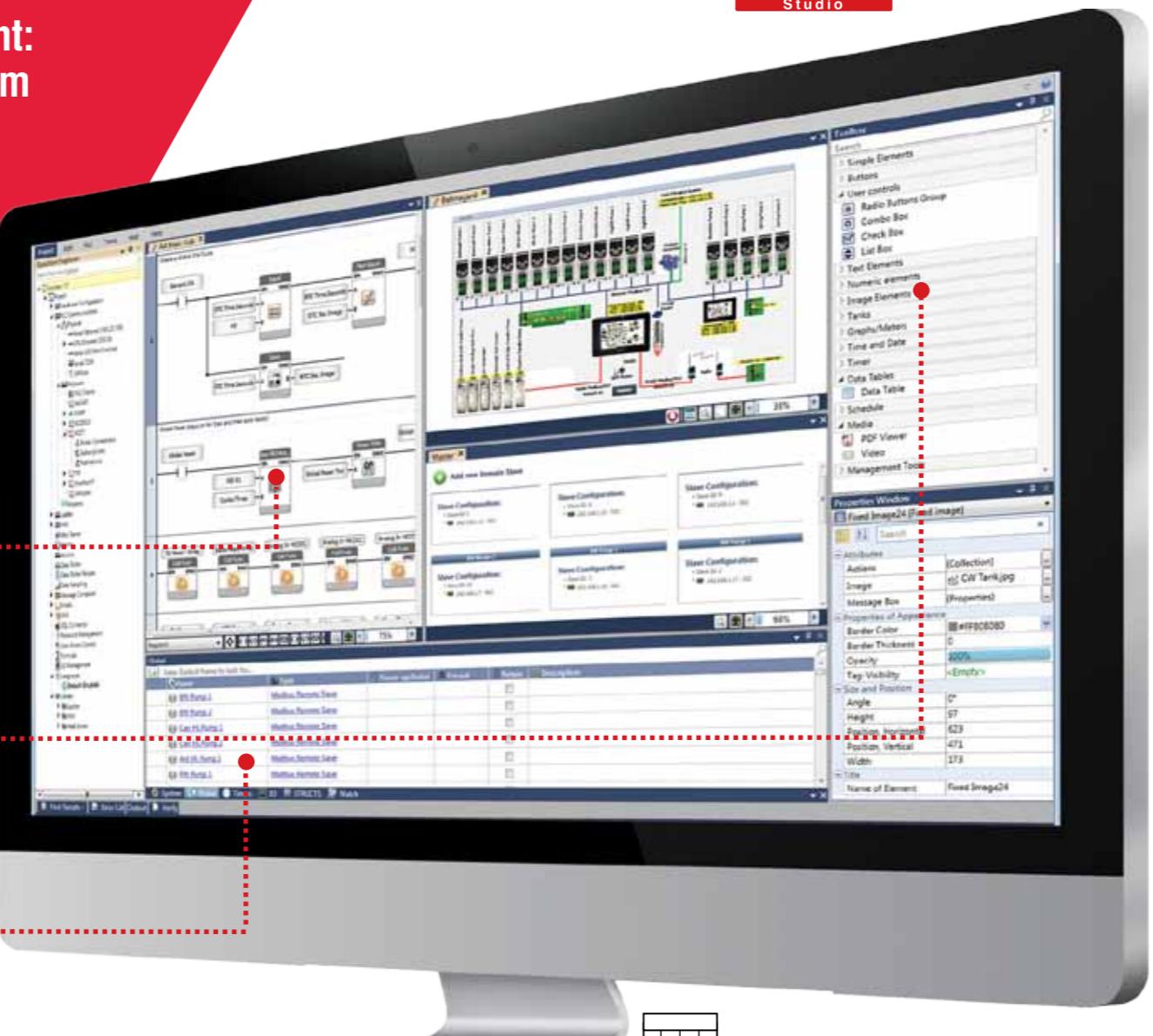
Speed Ladder Programming - plus "C" Power
Build your Ladder: drag & drop elements that snap into place, error-free. Use the built-in C Function editor to write C functions. UniLogic means you 'write-it-once': create code to use, reuse, and export across projects. Create UDFBs (User Defined Function Blocks)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

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.
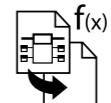
Web Server: Web Pages – No HMTL Required
Design elegant web pages via a drag & drop interface, identical to the HMI editor. A rich graphic library is at your disposal.
The Web toolbox offers user controls and widgets, enabling the end user to view and enter application data via any web browser.

Design Beautiful HMI Displays - Stream Video, Audio, PDF
UniLogic's extensive free graphics library 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.
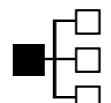
Languages - from Italian to Chinese at the Touch of a Button
UniLogic supports any language that you can type - including Asian languages such as Chinese, Japanese, and Korean. You simply enter translated text into the Language Table Translation. Instantly switch HMI language via user actions or program 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.

U**NI**S**TREAM**® Modular

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.

Features:

HMI

- Size: 7", 10.4" or 15.6"
- High quality touch screen, 64K. UniStream 10.4" available in Multi-Touch
- 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 port
- 2 Ethernet TCP/IP ports
- 1 RS485
- 2 USB host ports
- 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 in 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	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			
Application Memory	2M		
Ladder Memory	1 MB		
HMI Panel			
Touch screen	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	IP66, IP65 and NEMA4X when panel-mounted[3]		
Operating Temperature	-20°C to 55°C		0°C to 50°C
Standard	UL, CE, Class 1 Div 2 and GOST certificate		
General			
Battery	4 years typical at 25°C, battery back-up for memory and RTC		
Clock	Real-time clock functions (date and time)		
Power Supply	12/24VDC[4]		

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] 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 Unitronics' 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 digital inputs. These require 24V.

UNISTREAM® Built-in

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.

Features:

HMI
- Size: 5"
- High quality touchscreen, 64K
- 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 port
- 1 Mini USB for programming

Add-on ports:
- 1 CANbus
- 2 RS485
- 2 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

* Pro version only

UniStream® 5"

I/O Options	
Total supported I/Os	2048
Built-In	According to model (See Built-in I/O Modules - page 14)
I/O Expansion	Add Local I/O via expansion port • Add Remote I/Os via CANbus. (See Unistream 5" 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]
COM Modules	Add up 3 COM modules[3]
Program	
Application Memory	2M
Ladder Memory	1 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	IP66, IP65 and NEMA4X
Operating Temperature	-20°C to 55°C
Standard	CE
General	
Battery	4 years typical at 25°C, battery back-up for memory and RTC
Clock	Real-time clock functions (date and time)
Power Supply	12/24VDC

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

> **"We have found Unitronics to be one of those companies which inspire you to push the boundaries."**
>
> **David Graham**

[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.

UniStream 5" – Built-in I/Os

	Summary	Inputs Digital (Isolated)	HSC/Shaft-encoder[1]	Analog	Temperature inputs, RTD/TC	Outputs Transistor[2] (Isolated)	PWM[2]	Relay	Analog	Operating Voltage
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, 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	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 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	24 Digital inputs, including 4 HSC, 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, 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

[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.

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

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

	Articles Number	Inputs Digital (Isolated)	HSC/Shaft-encoder[4]	Analog	Temperature Measurement	Outputs 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 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	—	—	—	—
	UIS-08TC	—	—	—	8 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

UniStream® Series | Vision™ Series | Samba™ Series | Jazz® 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
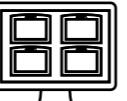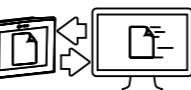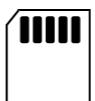
Web Server
Display and edit application values via browser

Software features vary according to controller model

16

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

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VISION 1210™/1040™

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.

Features:

HMI
- Size: 12.1" and 10.4"
- High quality touchscreen, 64K
- 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 CANbus
- 2 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: message Composer for 3rd party protocols

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

* SNMP V1 Trap, SNMP community Name

V1210
Flat Panel

V1040
Classic Panel

> " 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

Plug a Snap-in module directly into the back of a Vision PLC.
Compatible with all V560, V570, V700, V1040 and V1210.

Article Number	Vision 1040	Vision 1210
	V1040-T20B	V1210-T20BJ
I/O Options		
Total supported I/Os	1000	
I/O Expansion	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)	230 x 274	228.5 x 297
Resolution	800 x 600 (SVGA)	
Keys	9 programmable function keys	Virtual Keyboard
Environment		
Protection	IP65 / NEMA4X	IP66, IP65 and NEMA4X
Operating Temperature	0 to 50ºC	
Standards	CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics	
General		
Battery	7 years typical at 25°C, battery back-up for all memory sections and RTC	
Clock	Real-time clock functions (date and time)	
Power Supply	12/24VDC	

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

CE/UL

VISION 700™

Advanced PLC from the back-
high-resolution color 7" touch-screen
from the front, expand up to 1000 I/Os.

Features:

HMI

- Size: 7"
- High quality touchscreen, 64K
- 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 CANbus
- 2 RS485
- 2 RS232

Protocols:

- MODBUS TCP
- SNMP*
- Remote access utilities
- CANopen, CANlayer2, UniCAN
- BACnet, KNX and M-Bus via gateway
- FB Protocol: message Composer for 3rd party protocols

General Features:

- Web server
- E-mail & SMS
- 3G Modem support

* SNMP V1 Trap, SNMP community Name

V700

I/O Options	
Total supported I/Os	1000
I/O Expansion	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	IP66, IP65 and NEMA4X
Operating Temperature	0 to 50° C
Standards	CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics
General	
Battery	7 years typical at 25°C, battery back-up for all memory sections and RTC
Clock	Real-time clock functions (date and time)
Power Supply	12/24VDC

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

CE/UL

VISION 570™/560™

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.

Features:

HMI
- Size: 5.7"
- High quality touchscreen, 64K
- 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 Ethernet TCP/IP
- 1 Mini USB for programming
- 1 CANbus
- 2 RS485
- 2 RS232
- 1 port may be added for an additional serial/Ethernet

Protocols:
- MODBUS TCP
- SNMP*
- Remote access utilities
- CANopen, CANlayer2, UniCAN
- BACnet, KNX and M-Bus via gateway
- FB Protocol: message Composer for 3rd party protocols

General Features:
- Web server
- E-mail & SMS
- 3G Modem support

* SNMP V1 Trap, SNMP community Name

V570-J
Flat Panel

V560

	Vision 570	Vision 560
Article Number	V570-57-T20B-J	V560-T25B
I/O Options		
Total supported I/Os	1000	
I/O Expansion	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)	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	0 to 50ºC	
Standards	CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics	
General		
Battery	7 years typical at 25°C, battery back-up for all memory sections and RTC	
Clock	Real-time clock functions (date and time)	
Power Supply	12/24VDC	

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

CE/UL

VISION 430™

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

Features:

HMI

- Size: 4.3"
- High quality touchscreen, 64K
- 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 Ethernet TCP/IP
- 1 Mini USB for programming
- 1 CANbus
- 1 RS485
- 1 RS232
- 2 ports may be added: 1 Serial/Ethernet/Profibus and 1 CANbus

Protocols:

- MODBUS TCP
- SNMP*
- Remote access utilities
- CANopen, CANlayer2, UniCAN
- BACnet, KNX and M-Bus via gateway
- FB Protocol: message Composer for 3rd party protocols

General Features:

- Web server
- E-mail & SMS
- 3G Modem support

* SNMP V1 Trap, SNMP community Name

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/O Modules 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: 12MB • Fonts: 512KB
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)	480 x 272
Resolution	Virtual Keyboard
Keys	5 programmable
Environment	
Protection	NEMA4X, IP66, IP65 (when panel mounted)
Operating Temperature	0 to 50°C
Standards	CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics
General	
Battery	7 years typical at 25°C, 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

Vision430™ models - Built-in I/Os

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

Article	Summary	Digital[2]	Inputs[1] HSC/Shaft-encoder[2]	Inputs[1] Analog	Temperature Measurement	Transistor[3]	Outputs PWM/HSO[3]	Relay	Analog	Operating Voltage
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.

CE/UL

VISION 350™

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.

Features:

HMI

- Size: 3.5"
- High quality touchscreen, 64K
- 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 Ethernet TCP/IP
- 1 Mini USB for programming
- 1 CANbus
- 1 RS485
- 1 RS232
- 2 ports may be added: 1 Serial/Ethernet/Profibus and 1 CANbus

Protocols:

- MODBUS TCP
- SNMP*
- Remote access utilities
- CANopen, UniCAN, CANlayer2
- BACnet, KNX and M-Bus via gateway
- FB Protocol: message Composer for 3rd party protocols

General Features:

- Web server
- E-mail & SMS
- 3G Modem support

* SNMP V1 Trap, SNMP community Name

V350-J
Flat Panel

> " There were significant cost savings using the Unitronics PLC. "
>
> **Justin Butler,**
> Senior Electrical Engineer at Energy Plant Solutions

Series labels (sidebar):
UniStream® Series · Vision™ Series · Samba™ Series · Jazz® Series

Right column:

I/O Options	
Total supported I/Os	512
Built-in	According to model (See Built-in I/O Modules 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: 12MB • Fonts: 512KB
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	0°C to 50°C, For V350-JS-TA24 & V350-S-TA24: -30°C to 60°C[4]
Standards	CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics
General	
Battery	7 years typical at 25°C, 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		Summary	Inputs[1]				Outputs				Operating Voltage
			Digital[2]	HSC/Shaft-encoder[2]	Analog	Temperature Measurement	Transistor[3]	PWM/HSO[3]	Relay	Analog	
V350-J-B1	V350-35-B1	No onboard I/Os	—	—	—	—	—	—	—	—	12/24VDC
V350-J-TR20	V350-35-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	V350-35-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	V350-35-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	V350-35-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	V350-35-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	V350-35-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	V350-35-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	V350-35-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	V350-35-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 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 cards: CANBus p/n: V100-S-CAN, Ethernet p/n V100-S-ET2

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VISION **130**™

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

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 Ethernet TCP/IP
- 1 CANbus
- 1 RS485
- 1 RS232
- 2 ports may be added: 1 Serial/Ethernet/Profibus and 1 CANbus

Protocols:
- MODBUS TCP
- SNMP*
- Remote access utilities
- CANopen, UniCAN, CANlayer2
- BACnet; KNX and M-Bus via gateway
- FB Protocol: message Composer for 3rd party protocols

General Features:
- Web server
- E-mail & SMS
- 3G Modem support

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

V130-J
Flat Panel

> " 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

Side tabs: UniStream® Series | Vision™ Series | Samba™ Series | Jazz® Series

I/O Options	
Total supported I/Os	256
Built-in	According to model (See Built-in I/O Modules 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: 512KB • Images: 256KB • 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	0 to 50ºC
Standards	CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics
General	
Battery	7 years typical at 25°C, battery back-up for all memory sections and RTC
Clock	Real-time clock functions (date and time)
Power Supply	24VDC, except for V130J-B1, which is 12/24VDC

Vision130™ models - Built-in I/Os

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

Article		Summary	Inputs [1]				Outputs				Operating Voltage
			Digital[2]	HSC/Shaft-encoder[2]	Analog	Temperature Measurement	Transistor[3]	PWM/HSO[3]	Relay	Analog	
V130-J-B1	V130-33-B1	No onboard I/Os	—	—	—	—	—	—	—	—	12/24VDC
V130-J-TR20	V130-33-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	V130-33-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	V130-33-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	V130-33-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	V130-33-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	V130-33-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	V130-33-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	V130-33-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	V130-33-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.

CE /UL

SAMBA™

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

Features:

HMI

- Size: 3.5", 4.3", 7"
- High quality touchscreen, 64K
- 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

Add-on ports:

- 1 Ethernet TCP/IP
- 1 CANbus
- 1 RS232/ RS485

Protocols:

- MODBUS TCP
- Remote access utilities
- SNMP*
- CANopen, UniCAN, CANlayer2
- BACnet, KNX and M-Bus via gateway
- FB Protocol: message Composer for 3rd party protocols

General Features:

- E-mail & SMS
- 3G Modem support

* SNMP V1 Trap, SNMP community Name

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/O Modules 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], 1 Ethernet		
Program			
Application Memory	Application Logic: 112KB • Images: 1 MB • Fonts: 512 KB	Application Logic: 176KB • Images: 2 MB • Fonts: 512 KB	Application Logic: 176KB • Images: 5 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		
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	0 to 50ºC		
Standards	CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics		
General			
Battery	7 years typical at 25°C, battery back-up for RTC and system data, including variable data		
Clock	Real-time clock functions (date and time)		
Power Supply	24VDC		

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

Samba™ models - Built-in I/Os

Article	Summary	Digital[2]	HSC/Shaft-encoder [2]	Analog	Temperature Measurement	Transistor[3]	PWM/HSO[3]	Relay	Analog	Operating Voltage
		Inputs[1]				**Outputs**				
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	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.

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.

Features:

HMI
- Up to 60 user-designed screens
- Multi language

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

Communication

Built-in ports:
- 1 Mini USB for programming

Protocols:
- PC access via MODBUS or OPC server
- Remote access utilities
- Supports MODBUS protocol (according to model)

General Features:
- SMS via GSM
- 3G Modem support

* Up to 4 loops: models UA24 / UN20 / PT15 1 loop: all other models 1

Jazz®-J
Flat Panel

Jazz®
Classic Panel

I/O Options	
Total supported I/Os	40
Built-in	According to model
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	0 to 50℃
Standards	CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics
General	
Battery	10 years typical at 25°C, 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	Summary	Inputs[1]				Outputs				Operating Voltage
		Digital[2]	HSC/Shaft-encoder[2]	Analog	Temperature Measurement	Transistor[3]	PWM/HSO[3]	Relay	Analog	
JZ20-R10 JZ20-J-R10	6 Digital Inputs 4 Relay Outputs	6		—	—	—	—	4	—	24VDC
JZ20-R16 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 3HSC/Shaft-encoder, 2 A/D, 2 AI, 6 Relay outputs	8		2 0-10V 10 or 12-bit 2 0-20mA, 4-20mA 10-bit	—	—	—	6	—	24VDC
JZ20-R31 JZ20-J-R31	16 Digital, 2 D/A , 2 Analog Inputs[1] 11 Relay Outputs	18	2 10kHz, 16-bit	2 0-10V 10 or 12-bit 2 0-20mA, 4-20mA 10-bit		—	—	11	—	24VDC
JZ20-T10 JZ20-J-T10	6 Digital Inputs 4 Transistor Outputs	6		—	—	4 pnp	—	—	—	24VDC
JZ20-T18 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 3HSC/Shaft-encoder, 2 A/D, 2 AI, 10 Transistor outputs	8		2 0-10V 10-bit	—	8 pnp	2 32kHz	—	—	24VDC
JZ20-T40 JZ20-J-T40	16 Digital, 2 D/A, 2 Analog Inputs[1] 20 Transistor Outputs	18		2 0-10V 10-bit 2 0-20mA, 4-20mA 10-bit	—	20 pnp	—	—	—	24VDC
Z20-UA24 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
JZ10-11-UN20 JZ10-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] In order to download applications and enable communications, install Jazz® with the appropriate Add-on Module. JZ20 can be programmed via built-in USB device port.

CE / UL

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

	Expansion Modules Article	Inputs					Outputs				Operating Voltage
		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 Measurements	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]	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 Vision and Samba 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.

UniStream® Series | Vision™ Series | Samba™ Series | Jazz® Series

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Snap-in I/O Modules

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

Snap-in I/O Article	Inputs				Outputs				Operating Voltage
	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

Additional COM Modules
Enhance Vision's communication capabilities[1]

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	V100-17-ET2, V100-S-ET2[5]	V100-17-RS4	V100-17-RS4X	V100-17-CAN, V100-S-CAN[2]	V100-17-PB1
V200,V500, V1040,V1210[4]	V200-19-ET2	V200-19-RS4	V200-19-RS4-X	Included	—
V700[6]	Built-in	V100-17-RS4	V100-17-RS4X	V100-17-CAN	V100-17-PB1

4 V560, V570/V700/V1040/V1210: 1 optional port for serial or Ethernet, V130/V350: 1 optional port for serial or Ethernet & 1 optional port for CANbus/ Profibus.
5 Extended temperature cards, operational temperature : -30°C to 60°C (-22°F to 140°F).
6 V700 is supplied with an onboard Ethernet port. 1 port may be added, either serial, CANbus, or Profibus.

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

Add-on modules and accessories

COM Port kit	Ethernet Communication Port	Program Cloner module	Keypad Slide kit
RS232/RS485 Add-on port (isolated) Article No.: JZ-RS4	Ethernet Add-on port Supported by Jazz® 2 series only Article No.: MJ20-ET1*	Copy applications from PLC to PLC Article No.: MJ20-MEM1	Customize the Jazz® keypad to your application Article No.: MJ20-JZ-SL1

* Not yet UL certified

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