UNITRONICS®
www.unitronics.com

ONE
INTEGRATED SOLUTION
for Control & Automation

- Full Range of PLCs
- Motion Control
- Powerful Software
- Cloud Platform

Controllers & Accessories Catalogue

UniCloud By UNITRONICS

PLC
+HMI
ALL IN ONE™

Unitronics

Solutions that Simplify Complex Tasks

Founded in 1989, Unitronics designs, manufactures, and markets advanced control and automation solutions. Our goal is to simplify complex tasks in automation.
Our extensive offering includes complete lines of PLCs, AC Servo Drives & Motors, VFDs, a broad array of I/Os and complementary devices, programming software for all aspects of control, motion, HMI, and communications—and an end-to-end IIoT platform designed specifically for machine builders.
Today, our field-proven products automate hundreds of thousands of installations in diverse fields, including petrochemicals, automotive, food processing, plastics & textiles, energy & environment, water & waste water management – anywhere automated processes are required.
Represented by more than 180 distributors in over 55 countries around the globe, Unitronics customers receive local support in their local languages.

Unitronics Benefits - One Integrated Solution for Control & Automation

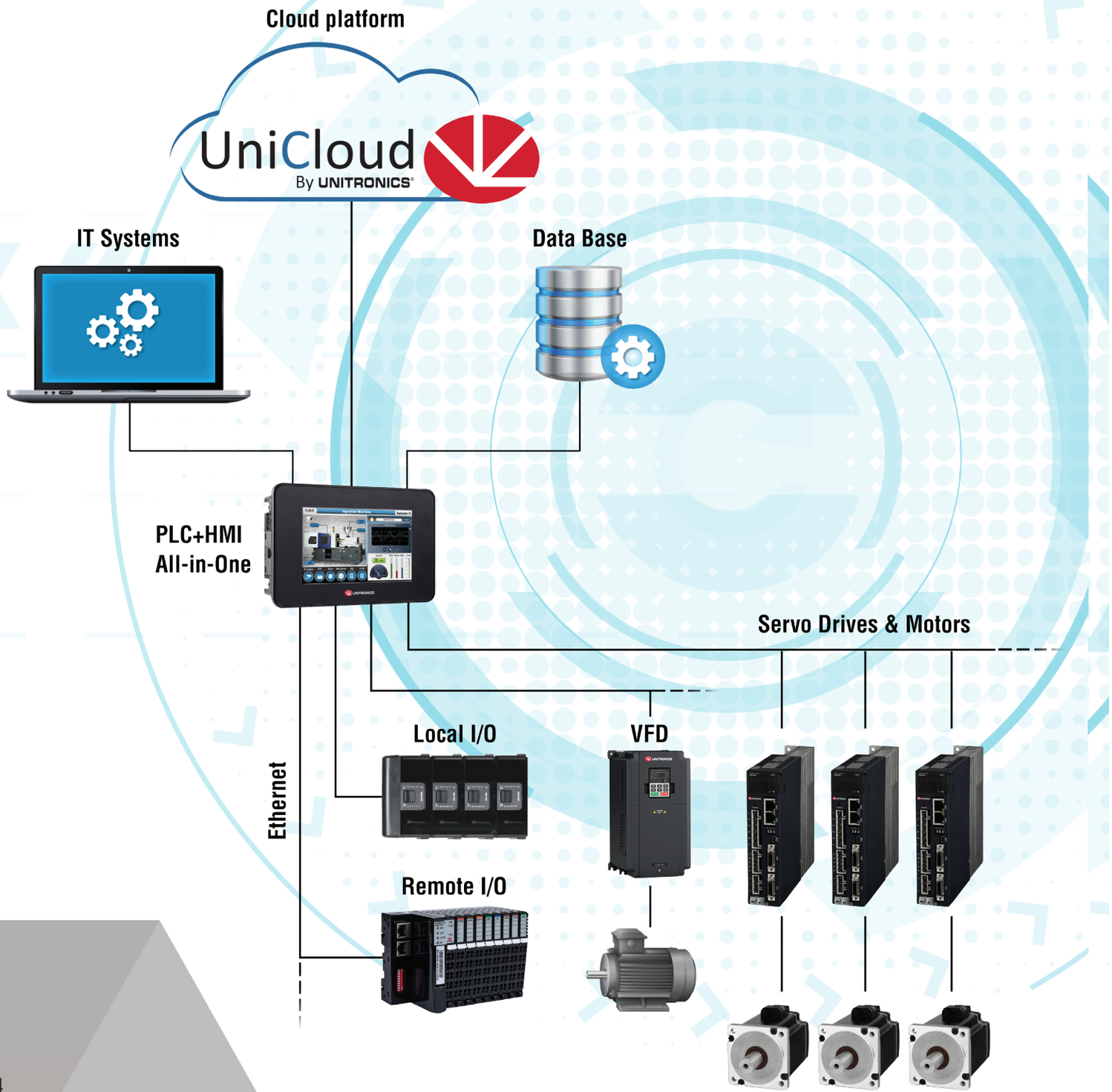
- **One Contact** for Sales, Service, and Support
- **Customized Products** to your specifications
- **Award-winning Software** included with any purchase
- **24/7 Support** - at no charge
- **UniCloud:** Unitronics' Do-it-Yourself IIoT Cloud platform, designed for Machine Builders
- **Integrate easily** any device via communications

Motion Solution - For information on our full lines of Servos & VFDs, refer to our Motion Control catalogue.

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.

One Integrated Solution for

One Integrated Solution means that all components work together perfectly, every time.
Unitronics' hardware—PLC, HMI, I/Os, VFDs, AC Servos, and more—is backed by All-In-One software. Efficiently program all aspects of configuration, control, motion, HMI/Web design—easily integrate UniCloud and avoid dealing with multiple suppliers.



Control & Automation

ONE INTEGRATED SOLUTION for Control & Automation

Controllers: a Complete Range

PLC + HMI, PLC, Cloud Controllers

- UniStream® Series - For easy execution of challenging projects
- UniStream® Cloud - Controllers with embedded cloud services
- Vision™ series - For advanced machines & automation projects
- Samba™ Series - Ideal for small machines that require graphic display
- Jazz® - Great for simple control—text-only HMI + keypad

Motion Control: Full lines of VFDs & Servos

Motion made Simple

(See our Motion catalogue)

- Automatic, transparent setup
- Built-in Diagnostics
- Communications: effortless, seamless with Unitronics products
- VFDs: high performance, cost-effective
- Servos: Servo made Simple--Ready-made Motion code, PLCopen

All-in-One Programming Software

At no extra charge

- Program Ladder Logic
- Design HMI & Web pages
- Motion—perform all tasks
- Hardware & Communication Configuration
- One Powerful Programming Environment

No-code IIoT Cloud Platform: UniCloud

Designed for Machine Builders

- Increase Profit: analyze data to reduce costs
- Secure
- Simple - No knowledge of IT needed
- Get up and running within 30 minutes

UniCloud By UNITRONICS

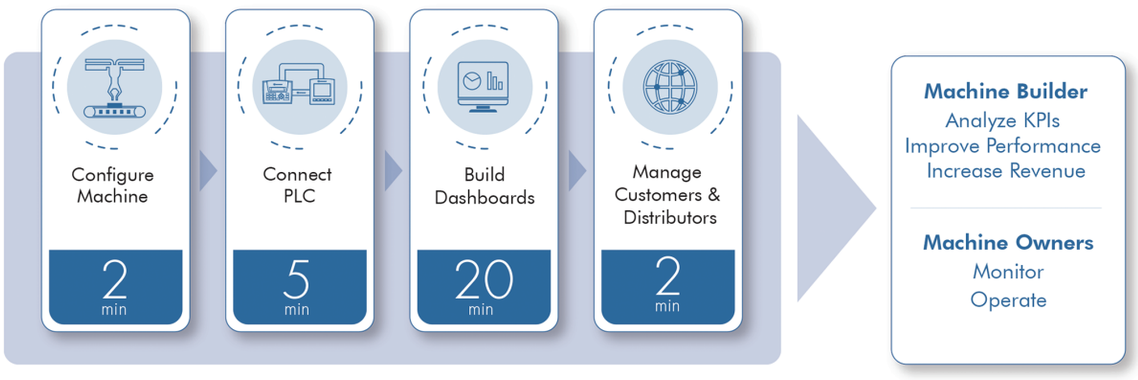
UniCloud

Complete No-Code IIoT Cloud

Designed specifically for OEMs & Machine Builders

‘Go Cloud’ Under 30 Minutes

Build a working, live, fully-functional dashboard that harvests, analyzes, and displays data—in less than 30 minutes.



Use Your Data To Increase Profits

Gain full control of your data, without relying on programmers or IT/Cloud professionals.

UniCloud is that simple: Do-It-Yourself

- Monitor & improve processes
- Reduce operational and maintenance costs
- Predict failures and minimize unplanned slowdowns & shutdowns
- Integrate—easily--with any device over MODBUS protocol

Platform

SECURED

UniCloud's architecture is designed with multilayered security at its backbone.

NO CODE

NOCODE
DEVELOPMENT

No programming, IT knowledge, or Cloud expertise needed.
UniCloud has it all—built-in cloud infrastructure,
easy user interfaces & incredible functionality.

INCREASE PROFIT

Monitor & improve processes, while reducing operational and maintenance costs.
Predict failures, minimize unplanned slowdowns and shutdowns.

CUSTOMIZE

Display data your way—customize data display with UniCloud's Wizards.

Enjoy a 3-month free trial

Log into the UniCloud website - try it yourself:

www.unitronics.cloud

UNISTREAM®

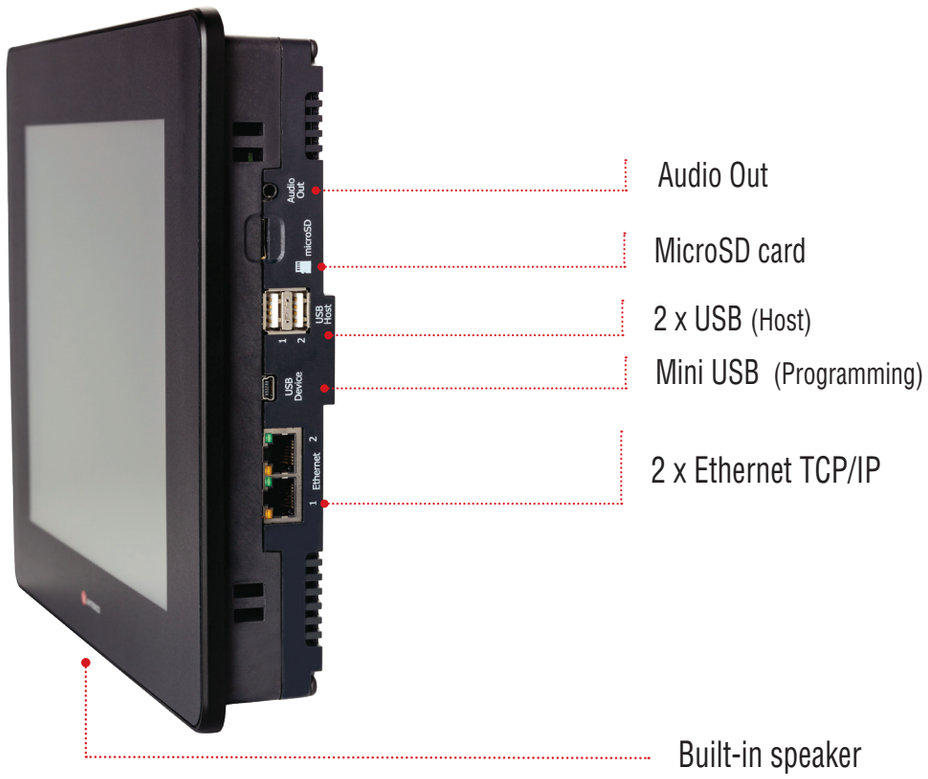
Powerful Award-winning Programmable Logic Controllers

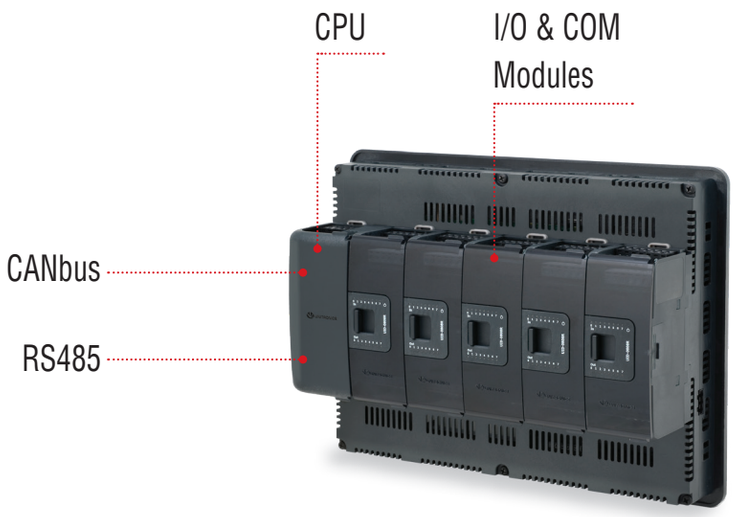
For high-end automation projects—available in 3 series: UniStream Modular, UniStream Built in, and UniStream PLC.
All UniStream models are available as 'UniStream Cloud' controllers, PLC with built-in cloud services.

1. UNISTREAM® Modular

Create a custom control solution, perfectly matched to your requirements

Unique design enables you to create a customized controller in 3 steps: select an HMI panel, snap in a CPU, and add any I/O or communication modules necessary for your specific application.





Remote Access - All Unitronics controllers are securely, remotely accessible. Access UniStream from your mobile or PC, via web browser, VNC, or UniCloud's secure tunnel utility.

2. UniStream® Built-in

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

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

Mini USB (Programming)

Ethernet TCP/IP

USB (Host)

MicroSD card

Built-in I/Os

I/O Expansion Adaptor

COM Modules

UNISTREAM®

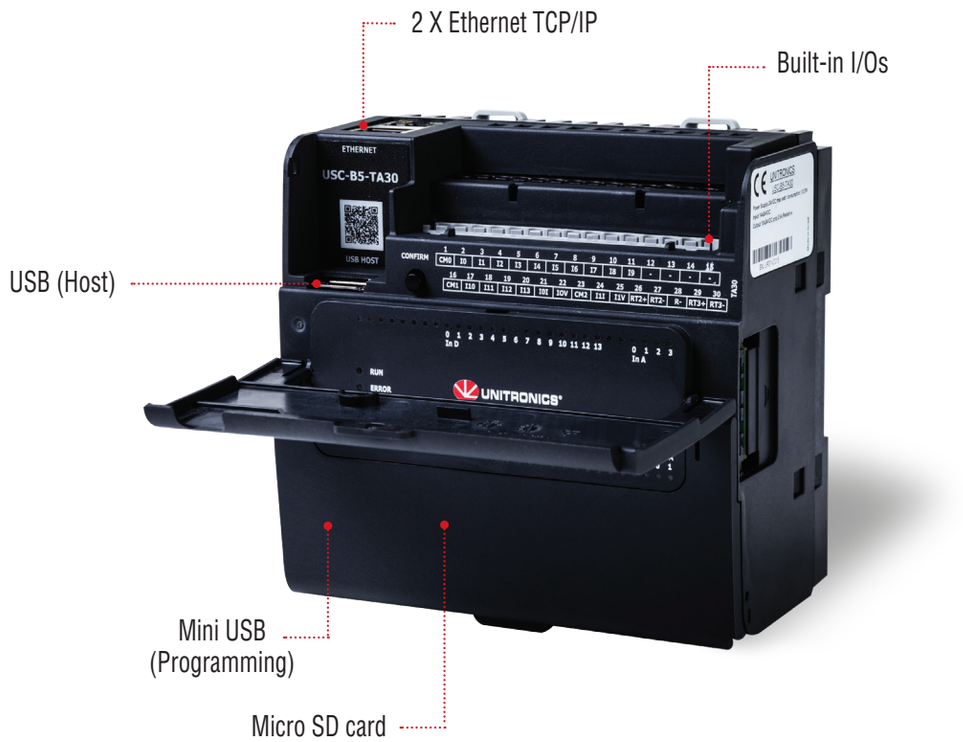
Powerful Award-winning Programmable Logic Controllers

All UniStream models are available as 'UniStream Cloud' controllers, PLC with built-in cloud services.

3. UNISTREAM® PLC

Two technologies in one product:
Powerful, Robust Controller with Virtual HMI

CPU + built-in I/O; the CPU runs both the control and HMI applications—viewable via VNC/mobile.



Virtual HMI

- Build your PLC & HMI applications using the same programming software
- Download your program applications to the PLC
- The UniStream PLC simultaneously stores & runs both the program logic and HMI application
- **Remote Access** - Remotely operate your machine or process via any mobile or PC, web browser, VNC, or UniCloud's secure tunnel utility

UNISTREAM® Cloud Series

Any UniStream controller is also available with 'Cloud-Inside'—the easiest path to IIoT. UniStream "Cloud" controllers come with an embedded 5 years subscription to UniCloud, at no extra charge— there is no monthly subscription fee.

An industry first

PLC series with built-in, no-cost cloud services.

UniLogic®

All-in-One programming software for UniStream Controllers

Slash your development time by 50%!

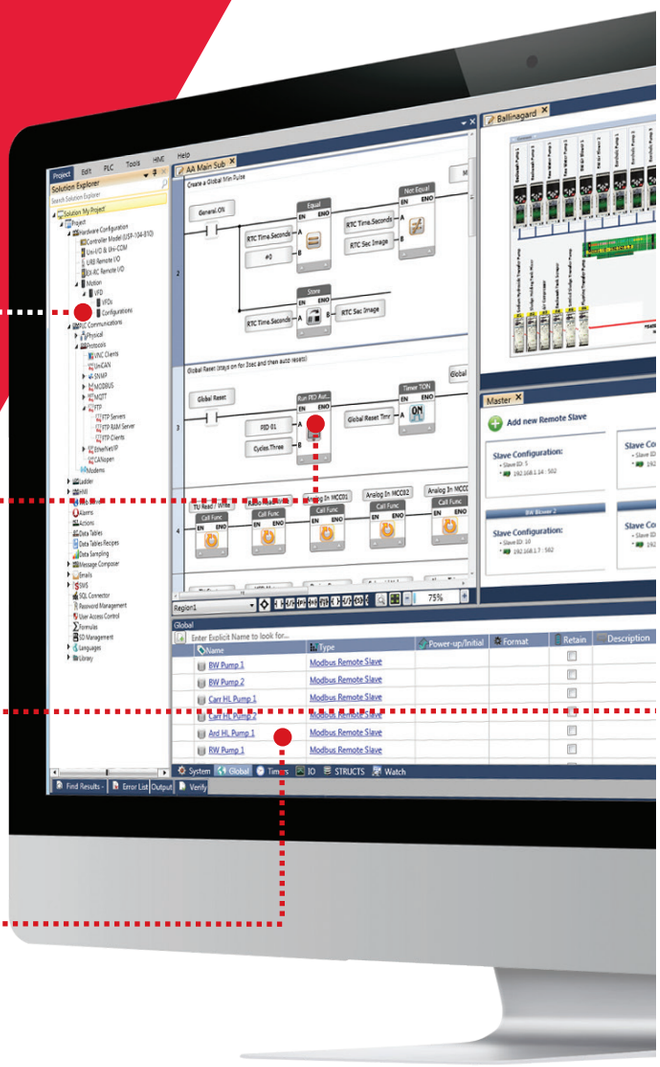
Quickly setup, configure & commission PLCs, HMIs, AC Servos, VFDs & I/Os—program control, COM, Motion, HMI & Web and integrate UniCloud IIoT platform—in one software environment.

Motion
Ready-Made Motion code! Configure & Operate Unitronics Servos & VFDs – No programming needed

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

Context-sensitive
Toolbox for Ladder, HMI & Web Elements

Power from C
Structs & C Functions

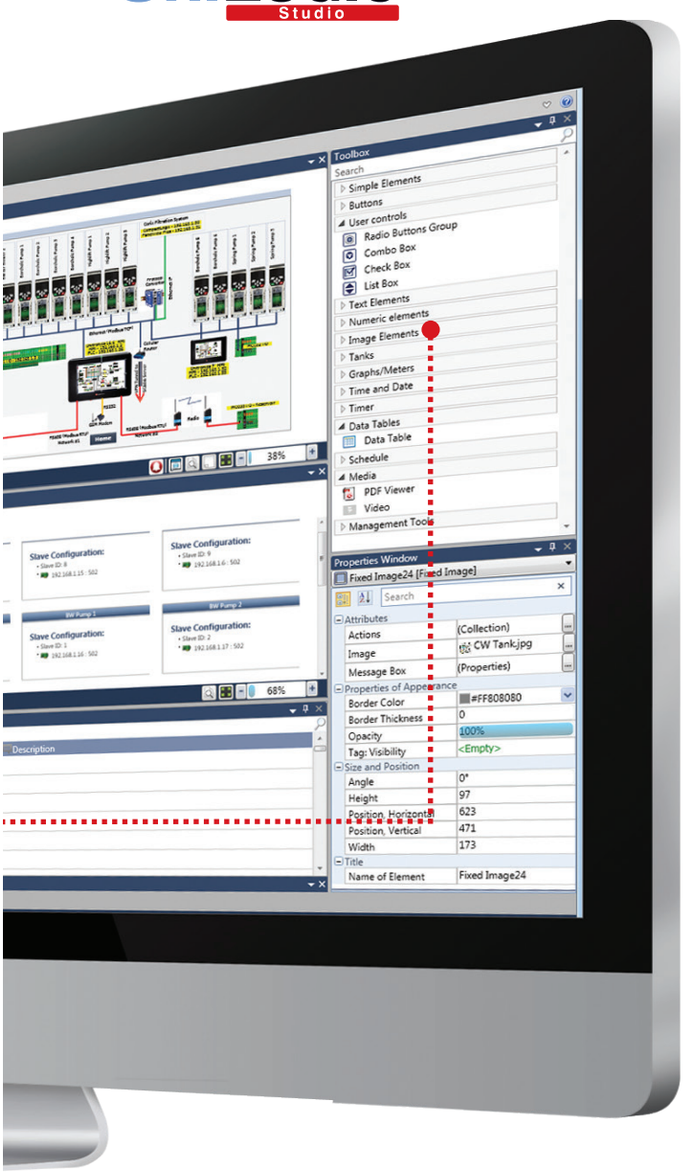


UniCloud: your no-code IIoT Cloud Platform
IIoT perfected for OEMs & Machine Builders—enter the Cloud without programmers or cloud professionals. Build customized **Dashboards** using secure, scalable UniCloud.

Motion: Servos, Motors
Instant, seamless hardware integration, totally transparent communications, automatic setup—plus free, Ready-Made Motion code. Get moving immediately – No programming needed.

Speed Ladder + "C" Power
Build your Ladder: drag/drop/snap elements into place, error-free. Write C code with the built-in editor. Create UDFBs for repetitive tasks.

UNILOGIC® Studio



MQTT, OPC-UA, SQL Connector, FTP, SNMP, REST

Use IT technologies to enable your Controller to bridge the gap between OT and IT—from the production floor up to the MES.

Routers and Modems

Use Unitronics routers and modems to enable secure access to your controllers.

Structs: Smart Tags

Build your Ladder: drag/drop/snap elements into place, error-free.
Write C code with the built-in editor. Create UDFBs for repetitive tasks.

EtherCAT, BACnet, CANopen, EtherNet/IP, Modbus-RTU, OPC UA, Modbus

Industrial Fieldbus Communications

Communication via Configuration.
Incredibly fast & easy to implement, data communications are independent of Ladder. Plug & Play EtherNet/IP, EtherCAT, MODBUS TCP/RTU, CANopen, BACnet Server, Hart, and more.

Build-it-Once, then Reuse

Add UDFBs (User Defined Function Blocks), HMI screens, & Web Pages to the Library. Drag & drop anywhere—UniLogic does the tags. Use Library across projects.

Remote Access—plus Notifications to your Mobile

Access UniStream via any VNC application from PC, cellphone, or tablet. Built-in Web Server enables secure remote monitoring & data editing. Send event notifications via email and SMS text messages.

Communicate with any Device

Message Composer: datacom via any Ethernet, CANbus/serial 3rd -party protocol. Also supports **CAN Layer 2, FTP Client/Server, SMS, email, GSM/GPRS.**

HMI & Web Pages—You, as Artist

Elegant design via drag & drop graphics, user controls, & widgets to design screens. Display running Trend graphs & Gauges, .pdfs, play audio, & stream video.

Power Data Tools

SQL Client: Connection to **MS SQL** Server or **MySQL** & Send Queries. **Data Sampler**: record time-sensitive dynamic data such as output values; display in Trend graphs. **Data Tables**: log/manipulate data via Ladder, execute **Recipes.**

Built-in Alarm System

Accords with ISA 18.2 guidelines for Alarm systems. Operators can detect, analyze, & act on Alarms. Export log via FTP, send via email, or to a DOK.

Communication via Configuration

Incredibly fast & easy to implement, data communications are independent of Ladder. Plug & Play **MODBUS, CANopen, SNMP, EtherNet/IP.**

Languages: Italian to Chinese

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

UniStream® 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.
Available with UniCloud Inside

Features:

HMI

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

PLC

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

Communication

Built-in ports

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

Add-on ports:

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

Fieldbus

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

Advanced Communications

- OPC UA
- MQTT Client
- SNMP
- SQL Client
- REST API
- FTP server & client
- Web Server
- E-mail & SMS
- Remote access via VNC
- VNC Client
- 4G Routers

UniStream® 7"

Available with Multi-Touch

UniStream® 10.4"

UniStream® 15.6"

		UniStream 7	UniStream 10.4	UniStream 15.6
Article Number	CPU	USC-P-B10		
	HMI panel*	USP-070-B08/ USP-070-B10	USP-104-B10**	USP-156-B10
I/O Options				
Total supported I/Os		2048 (See I/O Expansion Modules- page 21)		
Onboard I/O modules		Fit up to 3 slim or 2 wide Uni-I/O™ Modules[1]	Fit up to 5 slim or 3 wide Uni-I/O™ Modules[1]	
Local I/O Expansion		Use Local Expansion Adapters to add up to 80 slim or 50 wide Uni-I/O™ modules[1]		
Remote I/O via Ethernet		Use UniStream Ethernet-based Remote I/O adapters to add I/Os (See I/O Expansion Modules - page 22)		
Add-on COM modules		Supports up to 3 Uni-COM™ Modules[1]	Supports up to 4 Uni-COM™ Modules[1]	
Program				
Application Memory		8 MB		
HMI Panel				
Color Touchscreen		Resistive, Analog	Resistive, Analog / Multi-Touch	Resistive, Analog
Viewing Area Width x Height (mm)		USP-070-B08: 154.08 x 85.92 USP-070-B10: 152.4 x 91.44	211.2 x 158.4	344.23 x 193.53
Cut Out Width x Height (mm)		196.0 x 134.0	281.0 x 214.0	395.0 x 249.0
Resolution		800 x 480 (WVGA)	800 x 600 (SVGA)	1366 x 768
Keys		Virtual Keyboard		
Environment				
Protection		IP66 / NEMA4X when panel-mounted[2]		
Operating Temperature		-20°C to 55°C		0°C to 50°C
Standard		UL, CE, UKCA, EAC, UL Hazardous Locations, Class I, Division 2[4]		
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[3]		

*** For embedded UniCloud: replace the letter B with 'C'**

** For Multi-Touch version use article number: USP-104-M10

Local Expansion Adapters

UAG-XK125	Short Range Kit, 1.25m
UAG-XKP125	Short Range + embedded Power Supply Kit, 1.25m
UAG-XK300	Short Range Kit, 3m
UAG-XKP300	Short Range Kit + embedded Power Supply, 3m
UAG-XKPLXXXX	Long Range + embedded Power Supply, lengths: 6, 12, 15, 20, 30m

Uni-COM™ Communication Modules[1]

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

“This is the best PLC I have used ‘til now. I have used Unitronics in rubber, steel, pharma, textile, packaging and food applications.”

Sunit Gupte,
System Integration Specialist at Shriram Automation

[1] Add-on Modules, I/O and COM: the total number of modules, both I/O and COM that you can snap onboard an HMI panel is limited by the size of the panel. I/O modules are "Slim" &" Wide". 1 “Wide” I/O module = 1.5 “Slim” or COM module.

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

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

[4] For a list of relevant models, contact Unitronics

UniStream® Built-in

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

Available with UniCloud Inside

Features:

HMI

- Size: 5", 7", 10.1"
- High quality color touchscreen
- Multi-language display
- Built-in Alarm Screens
- Media support: Video*, Audio* and PDF viewer
- Multi-level password protection –easy and fast

PLC

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

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

Fieldbus

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

Advanced Communications

- OPC UA
- MQTT Client
- SNMP
- SQL Client*
- REST API
- FTP server & client
- Web Server*
- E-mail & SMS
- Remote access via VNC
- VNC Client
- 4G Routers

UniStream® 5"

UniStream® 7"

UniStream® 10.1"

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

	UniStream 5	UniStream 7	UniStream 10.1
Article Number	According to model (See UniStream Built-in & UniStream PLC I/O Configurations on page 20)		
I/O Options			
Total supported I/Os	2048		
Built-In I\O	According to model (See Built-in I/Os configurations - page 20)		
Local I/O Expansion	Use Local Expansion Adapters, according to model (See Uni-I/O table - page 21)[1]		
Remote I/O via Ethernet	Use UniStream Ethernet-based Remote I/O adapters to add I/Os (See Ethernet-based Remote I/O - page 22)		
Add-on COM Modules	Add up to 3 Uni-COM™ Modules[2]		
Program			
Application Memory	8 MB		
HMI Panel			
Color Touchscreen	Resistive, Analog		
Viewing Area Width X Height (mm)	108 X 64.8	154.08 X 85.92	222.72 X 125.28
Cut Out Width X Height (mm)	148.2 X 93.2	196 X 134	266.6 X 177.3
Resolution Width X Height (mm)	800 X 480 (WVGA)		1024 x 600 (WSVGA)
Keys	Virtual Keyboard		
Environment			
Protection	IP66 / NEMA4X when panel-mounted[2]		
Operating Temperature	-20°C to 55°C		
Standard	CE, UKCA, UL, EAC[3]		
General			
Battery	4 years typical at 25°C, battery back-up for memory and RTC		
Clock	Real-time clock functions (date and time)		

Local Expansion Adapters

UAG-CX-XKP125	UniStream CX IO Exp.Kit 1.25m
UAG-CX-XKP300	UniStream CX IO Exp.Kit 3m
UAG-CX-XKPLXXXX	Long Range + embedded Power Supply, lengths: 6, 12, 15, 20, 30m

Uni-COM™ Communication Modules

UAC-CX-01RS2	Uni-COM: 1xRS232 port
UAC-CX-01RS4	Uni-COM: 1xRS485 port
UAC-CX-01CAN	Uni-COM: 1xCANbus port

[1] UniStream I/O Expansion:
-The first unit plugged into the I/O expansion jack must be from the CX series Local Expansion Adapters.
-The CX end unit may be followed by Uni-I/O modules or by UAG-XKPxxx/UAG-XKPLxxxx adapters.
[2] Up to 2 serial modules and one CANbus module.
[3] For a list of relevant models, contact Unitronics.

UniStream® PLC

Powerful, Robust Controller with: Virtual HMI. Expands up to 2,048 I/Os. Build your PLC & HMI applications using the same programming software. Available in 3 models: Classic (B3), Standard B5 and Pro (B10).

Available with UniCloud Inside

Features:

PLC

- I/O options include digital, analog, high speed, and temperature
- Expand locally: up to 2048 I/Os[1]
- Expand remotely: via UniStream Remote I/O
- Auto-tune PID, up to 64 independent loops[2]
- Recipes & data logging via data tables & sampling[1]
- MicroSD card - log, backup, clone & more[1]
- Function Blocks & Structs

Communication

Built-in ports

- 2 Ethernet TCP/IP
- 1 USB host
- 1 Mini USB for programming[1]

Add-on ports[3]

- 1 CANbus
- 1 RS485
- 1 RS232

Fieldbus

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

Advanced Communications

- OPC UA
- MQTT Client
- SNMP
- SQL Client[4]
- REST API
- FTP server & client
- Web Server[4]
- E-mail & SMS
- Remote access via VNC
- VNC Client
- 4G Routers

Virtual HMI

- Full HMI functionality
- Support different resolution type
- Includes Drag & Drop graphic library
- Multi-language display
- Built-in Alarm Screens
- PDF viewer[1]
- Multi-level password protection – easy and fast

Supports UniStream® Display Panels

UniStream Display:

- Size: 5“ (USL-050-B05)
- Size: 7" (USL-070-B05)
- Size: 10.1" (USL-101-B05)
- Size: 15.6" (USL-156-B05)

UniStream Display

[1] Pro (B10) and Standard (B5) only.
[2] Basic (B3) supports up to 2 independent PID loops
[3] Up to two serial modules for B10/B5 and one for B3
[4] Pro (B10) only

	UniStream PLC
Article Number	According to model (See UniStream Built-in & UniStream PLC I/O Configurations on page 20)
I/O Options	
Total supported I/Os	Up to 2,048 I/O points
Built-in I/O	According to model (See Built-in I/Os table - page 20)
Onboard I/O modules	Directly connect up to 8 Uni-I/O modules to the PLC, on the DIN rail
Local I/O Expansion	Use Local Expansion Adapters (see table below), according to model (See Uni-I/O table- page 21)
Remote I/O via Ethernet	Use UniStream Ethernet-based Remote I/O adapters to add I/Os (See Ethernet-based Remote I/O - page 22)
Add-on COM modules	**Add up to 3 COM modules[1]**
Program	
Application Memory	8 MB
HMI	Virtual HMI: the PLC stores and runs both control and HMI user applications View and operate the virtual HMI via mobile, PC, and on UniStream Displays
Environment	
Protection	IP20, NEMA1
Operating Temperature	~20°C to 55°C
Standards	UL, CE, UKCE, EAC, UL Hazardous Locations, Class I, Division2[2]
General	
Battery	Model: 3V CR2032 Lithium battery 4 years typical at 25°C, battery back-up for memory and RTC
Clock	Real-time clock functions (date and time)

Local Expansion Adapters

UAG-XK125	Short Range Kit, 1.25m
UAG-XKP125	Short Range + embedded Power Supply Kit, 1.25m
UAG-XK300	Short Range Kit, 3m
UAG-XKP300	Short Range Kit + embedded Power Supply, 3m
UAG-XKPLXXXX	Long Range + embedded Power Supply, lengths: 6, 12, 15, 20, 30m

Uni-COM™ Communication Modules[1]

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

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

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

I/O Configurations

UniStream Built-in & UniStream PLC

* Article	Summary	Inputs				Outputs				Operating Voltage
		Digital (Isolated)	HSC/Shaft-encoder[1]	Analog	Temperature inputs, RTD/TC	Transistor[2] (Isolated)	PWM[2]	Relay	Analog	
US5-B5-B1 US5-B10-B1 US7-B5-B1 US7-B10-B1 US10-B5-B1 US10-B10-B1 USC-B5-B1 USC-B10-B1	No built-in I/Os	-	-	-	-	-	-	-	-	12/24VDC
US5-B5-TR22 US5-B10-TR22 US7-B5-TR22 US7-B10-TR22 US10-B5-TR22 US10-B10-TR22 USC-B5-TR22 USC-B10-TR22	Inputs: 10 Digital, 2 Analog Outputs: 2 Transistor, npn, incl 2 PWM & 8 Relay	10 Sink/ Source	-	2 0-10V, 0-20mA, 4-20mA 12-bit	-	2 Sink (npn)	2 30kHz	8	-	24VDC
US5-B5-T24 US5-B10-T24 US7-B5-T24 US7-B10-T24 US10-B5-T24 US10-B10-T24 USC-B5-T24 USC-B10-T24	Inputs: 10 Digital, 2 Analog Outputs: 12 Transistor, pnp, incl. 2 PWM	10 Sink/ Source	-	2 0-10V, 0-20mA, 4-20mA 12-bit	-	12 Source (pnp)	2 3kHz	-	-	24VDC
US5-B5-RA28 US5-B10-RA28 US7-B5-RA28 US7-B10-RA28 US10-B5-RA28 US10-B10-RA28 USC-B5-RA28 USC-B10-RA28	Inputs: 14 Digital incl. 2 HSC, 2 Analog, 2 Temperature Outputs: 8 Relay 2 Analog	14 Sink/ Source	2 90kHz 32-bit	2 (isolated) 0-10V, 0-20mA, 4-20mA 14-bit	2 (isolated) Thermocouple, PT100/NI100/ NI120/ PT1000/NI1000	-	-	8	2 0-10V 12-bit, ±10V, 11-bit+sign 0-20mA, 4-20mA 12-bit	24VDC
US5-B5-TA30 US5-B10-TA30 US7-B5-TA30 US7-B10-TA30 US10-B5-TA30 US10-B10-TA30 USC-B5-TA30 USC-B10-TA30	Inputs: 14 Digital incl. 2 HSC, 2 Analog, 2 Temperature Outputs: 10 Transistor, pnp incl. 2 PWN 2 Analog	14 Sink/ Source	2 90kHz 32-bit	2 (isolated) 0-10V, 0-20mA, 4-20mA 14-bit	2 (isolated) Thermocouple, PT100/NI100/ NI120/ PT1000/NI1000	10 Source (pnp)	2 3kHz	-	2 0-10V 12-bit, ±10V 11-bit+sign 0-20mA, 4-20mA 12-bit	24VDC
US5-B5-R38 US5-B10-R38 US7-B5-R38 US7-B10-R38 US10-B5-R38 US10-B10-R38 USC-B5-R38 USC-B10-R38	Inputs: 24 Digital incl. 4 HSC, 2 Analog, Outputs: 12 Relay	24 Sink/ Source	4 90kHz 32-bit	2 0-10V, 0-20mA, 4-20mA 12-bit	-	-	-	12	-	24VDC
US5-B5-T42 US5-B10-T42 US7-B5-T42 US7-B10-T42 US10-B5-T42 US10-B10-T42 USC-B5-T42 USC-B10-T42	Inputs: 24 Digital incl. 4 HSC, 2 Analog, Outputs: 16 Transistor, pnp, incl. 2 PWN	24 Sink/ Source	4 90kHz 32-bit	2 0-10V, 0-20mA, 4-20mA 12-bit	-	16 Source (pnp)	2 3kHz	-	-	24VDC
USC-B3-R20	Inputs: 10 Digital, 2 Analog Outputs: 8 Relay	10 Sink/ Source	-	2 0-10V, 0-20mA, 4-20mA 12-bit	-	-	-	8	-	24VDC
USC-B3-T20	Inputs: 10 Digital, 2 Analog, Outputs: 8 Transistor, pnp incl. 2 PWN	10 Sink/ Source	-	2 0-10V, 0-20mA, 4-20mA 12-bit	-	8 Source (pnp)	2 3kHz	-	-	24VDC

*** To order as a UniCloud Inside model: replace the letter B with 'C'-> US5-B5-B1 to US5-C5-B1**

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

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

Expand Locally via Uni-I/O™

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

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

DIN-rail Power Supplies

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

[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

Remote I/O via Ethernet

UniStream Modular, Built-in, & UniStream PLC

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

Remote Ethernet I/O Adapter

Article Number	Description
URB-TCP	UniStream Remote IO Adapter, 63 Modules
URB-TCP2	UniStream Remote IO Adapter, 6 Modules
URB-EC1	Unistream EtherCAT Remote IO adaptor 16 Modules

Input Modules

Article	Description	Inputs	
		Digital	Analog
URD-0800	8 Digital inputs, universal, 10RTB	8	-
URD-1600-8	16 Digital inputs, universal, 18RTB	16	-
URD-3200-4	32 Digital inputs, universal, 40Pin	32	-
URD-0400B	4 Digital inputs, 120VAC, 10RTB	4	-
URD-0400C	4 Digital inputs, 240VAC, 10RTB	4	-
URD-0200E	2, 24VDC, High Speed / Encoder Inputs, 10RTD	2	-
URD-0200D	2, 5VDC, High Speed / Encoder Inputs, 10RTD	2	-
URA-0400O	4 Analog Current Inputs 12bit, 10RTB	-	4
URA-0800O	8 Analog Current Inputs 12bit, 10RTB	-	8
URA-1600O-8	16 Analog Current Inputs 12bit, 18RTB	-	16
URA-0400P	4 Analog Voltage Inputs 12bit, 10RTB	-	4
URA-0800P	8 Analog Voltage Inputs 12bit, 10RTB	-	8
URA-1600P-8	16 Analog Voltage Inputs 12bit, 18RTB	-	16
URA-0400T	4 Analog Current Inputs 16bit, 10RTB	-	4
URA-0800T	8 Analog Current Inputs 16bit, 10RTB	-	8
URA-1600T-8	16 Analog Current Inputs 16bit, 18RTB	-	16
URA-0400U	4 Analog Voltage Inputs 16bit, 10RTB	-	4
URA-0800U	8 Analog Voltage Inputs 16bit, 10RTB	-	8
URA-1600U-8	16 Analog Voltage Inputs 16bit, 18RTB	-	16
URS-04RT	4 RTD / Resistance Input, 10RTB	-	4
URS-08RT-2	8 RTD / Resistance Input, 20Pin	-	8
URS-04TC	4 Thermocouple / mV Input, 10RTB	-	4
URS-08TC-2	8 Thermocouple / mV Input, 20Pin	-	8
URS-02LC-8	2 Load cells / Strain gauge, 18RTB	-	2

Output Modules

Article	Description	Outputs		
		Transistor	Relay	Analog
URD-0004RH	4 Relay Outputs, 10RTB	-	4	-
URD-0004SK	4 Solid State Relay Outputs, 240V, 10RTB	-	4	-
URD-0004SM	4 Solid State Relay Outputs, 110V, 10RTB	-	4	-
URD-0004SN	4 Solid State Relay Outputs, 24V, 10RTB	-	4	-
URD-0008NH	8 Digital Outputs (Sink), 24V/0.5A, 10RTB	8	-	-
URD-0008NI	8 Digital Outputs (Sink), 24V/2A, 10RTB	8	-	-
URD-0016NG-8	16 Digital Outputs (Sink), 24V/0.3A, 18RTB	16	-	-
URD-0032NG-4	32 Digital Outputs (Sink), 24V/0.3A, 40Pin	32	-	-
URD-0008CH	8 Digital Outputs (Source), 24V/0.5A, 10RTB	8	-	-
URD-0008CI	8 Digital Outputs (Source), 24V/2A, 10RTB	8	-	-
URD-0016CG-8	16 Digital Outputs (Source), 24V/0.3A, 18RTB	16	-	-
URD-0032CG-4	32 Digital Outputs (Source), 24V/0.3A, 40Pin	32	-	-
URD-02PU	2 Pulse Outputs, 10RTB	2	-	-
URD-02PW	2 PWM Outputs, 10RTB	2	-	-
URD-04PW	4 PWM Outputs, 10RTB	4	-	-
URA-0004W	4 Analog Current Outputs 12bit, 10RTB	-	-	4
URA-0008W	8 Analog Current Outputs 12bit, 10RTB	-	-	8
URA-0004X	4 Analog Voltage Outputs 12bit, 10RTB	-	-	4
URA-0008X	8 Analog Voltage Outputs 12bit, 10RTB	-	-	8
URA-0016X-8	16 Analog Voltage Outputs 12bit, 18RTB	-		16
URA-0004Y	4 Analog Current Outputs 16bit, 10RTB	-	-	4
URA-0008Y	8 Analog Current Outputs 16bit, 10RTB	-	-	8
URA-0004Z	4 Analog Voltage Outputs 16bit, 10RTB	-	-	4
URA-0008Z	8 Analog Voltage Outputs 16bit, 10RTB	-	-	8
URA-0016Z-8	16 Analog Voltage Outputs 16bit, 18RTB	-	-	16

Power

Article Number	Description
URP-PS24V	Input 24VDC, Output system Power 5VDC/1A
URP-C0V0V	8, 0VDC Potential Distributer
URP-C24V24V	8, 24VDC Potential Distributer
URP-C0V24V	4, 24VDC and 4, 0VDC Potential Distributer
URP-PDIST	Universal Field Power Distributer
URP-SHIELD	External Universal Shield Distributer

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

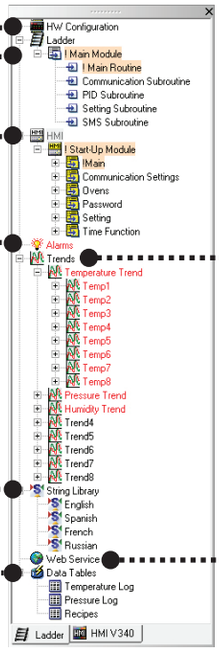
Ladder Programming
Rapidly drag & drop elements and Function Blocks

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

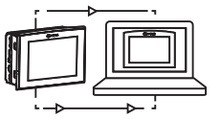
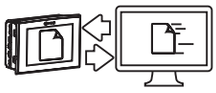
Web Server
Display and edit application values via browser

Software features vary according to controller model

Connect Vision, Samba & Jazz series
to UniCloud via Unitronics routers.
No cloud development or coding skills required!

UniCloud By UNITRONICS

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

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

VISION 700™ / 1040™ / 1210™

Advanced PLC with a built-in 7"/10.4"/12.1" high-resolution color touch screen.
Snap in I/Os to expand up to 1000 I/Os.

Features:

HMI

- Size: 7", 10.4" and 12.1"
- High quality color touchscreen
- Multi-language display
- Built-in Alarm Screens

PLC

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

Communication

Built-in ports

- 1 Ethernet TCP/IP[1]
- 1 Mini USB for programming
- 1 CANbus[2]
- 1 Isolated RS485/RS232[1]
- 2 Isolated RS485/RS232[2]

Add-on ports

- 1 Serial/Ethernet
- 1 CANbus[1]

Protocols

- MODBUS TCP
- SNMP V1
- CANopen, J1939, CANlayer2, UniCAN
- BACnet, KNX and M-Bus via gateway
- FB Protocol: for any 3rd party protocol

Advanced Communications

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

V700

V1040

V1210

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

[1] Applies only to V700
[2] Applies only to V1040 and 1210

Snap-in I/O

Plugs directly into the back of your PLC

	V700	V1040	V1210
Article Number	**V700-T2BJ**	**V1040-T20B**	**V1210-T20BJ**
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 33). Local or Remote I/Os may be added via expansion port or via CANbus (See I/O Expansion Modules- page 32).		
Local /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 memory floats, 384 timers, 32 counters. Additional non-retainable operands: 1024 X-bits, 512 X-integers, 256 X-long integers, 64 X-double words		
HMI Panel			
Color Touchscreen	Resistive, Analog		
Viewing Area Width X Height (mm)	154.08 x 85.92	210 x 157.5	246.8 x 185.3
Cut Out Width x Height (mm)	193 x 125	274 x 230	297 x 228.5
Resolution	800 x 480 (WVGA)	800 x 600 (SVGA)	
Keys	Virtual Keyboard	9 programmable function keys	Virtual Keyboard
Environment			
Protection	IP65 / NEMA4X when panel mounted		
Operating Temperature	0 to 50ºC		
Standards	UKCA, UL, CE, EAC, UL Hazardous Locations, Class I, Division2[2]		
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[3]		

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

VISION 570™ / 560™

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

Features:

HMI

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

PLC

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

V570

Communication

Built-in ports

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

Add-on ports

- 1 Serial/Ethernet

Protocols

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

Advanced Communications

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

V560

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

Jeremy Charles Keene,
Controls Manager at General Broach Company

	Vision 560	Vision 570
Article Number	**V560-T25B**	**V570-57-T20B-J**
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 33). Local or Remote I/Os may be added via expansion port or via CANbus (See I/O Expansion Modules- page 32).	
Local I/O Expansion	Use Local Expansion Adapters to add up to 8 modules	
Remote I/O Expansion	Use EX-RC1 adapters to further extend the number of I/Os[1]	
Program		
Application Memory	Application Logic: 2MB • Images: 16MB • Fonts: 1MB	
Scan Time	9µsec per 1K of typical application	
Memory Operands	8192 coils, 4096 registers, 512 long integers (32-bit), 256 double words (32-bit unsigned), 64 floats, 384 timers (32-bit), 32 counters. Additional non-retainable operands: 1024 X-bits, 512 X-integers, 256 X-long integers, 64 X-double words	
HMI Panel		
Color Touchscreen	Resistive, Analog	
Viewing Area Width x Height (mm)	115.2 x 86.4	
Cut Out Width x Height (mm)	209 x 126.0	182 x 124.5
Resolution	320 x 240 (QVGA)	
Keys	24 programmable keys Labeling options – function keys or customized	Virtual Keyboard
Environment		
Protection	IP66 / NEMA4X when panel mounted	
Operating Temperature	0 to 50°C	
Standards	UKCA, UL, CE, EAC2[2]	UKCA, UL, CE, EAC, UL Hazardous Locations, Class I, Division2[2]
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[3]	

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

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

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

VISION 350™ / 430™ / 130™

Advanced PLC controllers with built-in HMI panel. Includes built-in, expandable I/O configuration.

Features:

HMI

- Size: 3.5", 4.3" and 2.4"
- Vision 350, 450: High quality color touchscreen
  Vision 130: Monochrome
- Multi-language display
- Built-in Alarm Screens

PLC

- I/O options include digital, analog, high speed, temperature, and weight measurement
- V350 and V450: Expand up to 512 I/Os.
  V130: 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 Mini USB for programming[1]
- 1 RS485/RS232

Add-on ports

- 1 Serial/Ethernet/Profibus
- 1 CANbus

Protocols

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

Advanced Communications

- Web server
- E-mail & SMS
- 4G Modem support
- Remote access utilities

[1] Applies only to V350 and V450

V350

V430

V130

60°C
-30°C

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

	V350	V430	V130
Total supported I/Os	512		256
Built-in	According to model (See Built-in I/Os table below)		
I/O Expansion	Add Local I/O via expansion port • Add Remote I/Os via CANbus. (See I/O Expansion Modules- page 32)		
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: 512K	Application Logic: 1MB • Images: 12MB • Fonts: 512K	Application Logic: 488KB • Images: 128KB • Fonts: 128KB
Scan Time	15µ sec per 1K of typical application		20µ sec per 1K of typical application
Memory Operands	8192 coils, 4096 registers, 512 long integers (32 bit), 256 double words (32 bit unsigned), 64 memory floats, 384 timers, 32 counters.		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			
Color Touchscreen	Resistive, Analog		~
Viewing Area Width x Height (mm)	72 x 54.5	96.7 x 55.5	58 x 30.5
Cut Out Width x Height (mm)	92 x 92	122.5 x 91.5	92 x 92
Resolution	320 x 240 (QVGA)	480 x 272	128 x 64
Keys	5 programmable keys. Labeling options - function keys, arrows, or customized	5 programmable	20, including 10 user labeled keys (slide kit sold separately)
Environment			
Protection	NEMA4X, IP66 (when panel mounted)		
Operating Temperature	0°C to 50°C, For V350-JS-TA24: -30°C to 60°C[2]	0 to 50°C	
Standards	UL, CE, EAC, UL Hazardous Locations, Class I, Division 2[2]		
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)		

Vision 350™ / 430™ / 130™ models

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

		Inputs [1]				Outputs				Operating Voltage
Article[5]	**Summary**	**Digital[2]**	**HSC/Shaft-encoder[2]**	**Analog**	**Temperature Measurement**	**Transistor[3]**	**PWM/HSO[3]**	**Relay**	**Analog**	
V350-J-B1 V430-J-B1 V130-J-B1	No onboard I/Os	—	—	—	—	—	—	—	—	12/24VDC
V350-J-TR20 V430-J-RH2 V130-J-TR20	**10** Digital, **2** D/A Inputs[1] **6** Relay Outputs 2 High-speed Transistor Outputs[6]	**12**	**3** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	**2** npn[6]	**2** (2 PTO) 200 kHz max[6]	**6**	—	24VDC
V350-J-R34 V430-J-R34 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
V350-J-TR34 V430-J-TR34 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**	None	24VDC
V350-J-TR6 V430-J-RH6 V130-J-TR6	**6** Digital, 2 D/A[1], **4** Analog Inputs **6** Relay Outputs 2 High-speed Transistor Outputs[6]	**8**	**1** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA and **4** 0-20mA, 4-20mA 10-bit	—	**2** npn[6]	**2** (2 PTO) 200 kHz max[6]	**6**	None	24VDC
V350-J-RA22 V430-J-RA22 V130-J-RA22	**8** Digital, **2** D/A, **2** TC/PT100/ Digital Inputs[1] **4** Relay, **2** Analog Outputs	**12**	**1** 200kHz, 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 V430-J-TRA22 V130-J-TRA22	**8** Digital, **2** D/A, **2** TC/PT100/ Digital Inputs[1] **4** Relay, **2** Analog, **4** High-Speed Transistor Outputs	**12**	**1** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	**4** npn	**4** (2 PTO) 200 kHz max	**4**	**2** 0-10V, 4 -20mA 12-bit	24VDC
V350-J-T2 V430-J-T2 V130-J-T2	**10** Digital, **2** D/A Inputs[1] **12** Transistor Outputs	**12**	**3** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	**12** pnp	**7** 0.5kHz	—	—	24VDC
V350-J-T38 V430-J-T38 V130-J-T38	**20** Digital, **2** D/A Inputs [1] **16** Transistor Outputs	**22**	**2** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	**16** pnp	**7** 0.5kHz	—	—	24VDC
V350-J-TA24 V350-JS-TA24[4] V430-J-TA24 V130-J-TA24	**8** Digital, **2** D/A, **2** TC/PT100/ Digital Inputs [1] **10** Transistor, **2** Analog Outputs	**12**	**1** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	**10** pnp	**5** 0.5kHz	—	**2** 0-10V, 4 -20mA 12-bit	24VDC

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

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

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

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

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

[4] Extended temperature unit

[5] To order a classic V350 with a Bezel panel, switch the 'J' in the model number to '33', ex. V350, V350-33- TR20

[6] Refers only to V350 and V130 Models

I/O Expansion Modules & Accessories- Vision Series

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

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

I/O Expansion Module Adapters

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

[1] Number of supported I/Os & I/O modules varies according to module.
[2] The EXF-RC15 functions as a node in a Vision UniCAN network and connects to the Vision controller via CANbus and programmed in VisiLogic.
The EXF-RC15 cannot be extended as regular I/O unit.
High-speed inputs are configurable as either high-speed counter (HSC) or shaft-encoder.
[3] The EX90 is housed in an open casing. Only one EX90 can be connected per PLC, as a single expansion module; Expansion adapter not required.
[4] Supported by Samba, Vision and UniStream series.
[5] The total number of digital inputs listed includes high-speed inputs.
Example: the IO-D16A3-TO16 offers a total of 16 pnp/npn inputs. You can configure I4 as a HSC and I5 as a Counter reset; this reduces the available number of digital inputs to 14.
[6] The total number of digital outputs listed includes high-speed outputs.
Example: the IO-D16A3-TO16 offers a total of 16 transistor outputs. You can configure 1 to High-speed output, reducing the number of available digital outputs to 15.
[7] Functions as local adapter. Can support up to 7 I/O modules.
[8] 16-bit or 32-bit, depending on the PLC.
[9] Also available as 12VDC – contact us for part number.
[10] One HSC may be configured as a shaft encoder.

Snap-in I/O Modules

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

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

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

Vision & Samba COM Modules

Enhance Vision's communication capabilities

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

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

DIN-rail Power Supplies

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

SAMBA™

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

Features:

HMI

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

PLC

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

Communication

Built-in ports

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

Add-on ports

- 1 Serial/Ethernet
- 1 CANbus

Protocols

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

Advanced Communications

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

SAMBA 3.5"

SAMBA 4.3"

SAMBA 7"

	SAMBA		
Article Number	According to model (See Built-in I/O configurations table below)		
I/O Options			
Total supported I/Os	22		
Built-in	According to model (See Built-in I/Os table below)		
I/O Expansion	-		
Remote I/O Expansion	Use EX-RC1 adapters to further extend the number of I/Os[1]		
COM Modules	Fit up to 1 CANbus, 1 RS232/RS485[3] or 1 Ethernet		
Program			
Application Memory	Application Logic: 80KB • Images: 1.5 MB • Fonts: 320 KB	Application Logic: 192KB • Images: 3 MB • Fonts: 320 KB	Application Logic: 192KB • Images: 8 MB • Fonts: 512 KB
Scan Time	15µS per 1K of typical application		
Memory Operands	512 coils, 256 registers, 32 long integers (32-bit), 32 double words (32-bit unsigned), 24 floats, 32 timers (32-bit), 16 counters. Additional non-retainable operands: 64 X-bits, 32 X-integers, 16 X-long integers, 16 X-double words (32-bits unsigned)		
HMI Panel			
Color Touchscreen	Resistive, Analog		
Viewing Area Width x Height (mm)	72 x 54.5	96.7 x 55.5	153.7 x 86.7
Cut Out Width x Height (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	IP66 / NEMA4X when panel mounted		
Operating Temperature	0 to 50ºC		
Standards	UKCA, UL, CE, EAC, UL Hazardous Locations, Class I, Division 2[2]		
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)		

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

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

Samba™ models - Built-in I/O configurations

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

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

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

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

[4] When selecting NPN for the digital inputs, the 2 Analog inputs cannot be used.

JAZZ®

An All-in-One unit as 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 include digital, analog, temperature and high speed
- Auto-tune PID, up to 4 independent loops (according to model*)

Jazz®

Communication

Built-in ports

- 1 Mini USB for programming

Add-on ports

- 1 Ethernet TCP/IP
- 1 RS232 / RS485

Protocols

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

Advanced Communications

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

Accessories

- Program Cloner module- Copy applications from PLC to PLC
- Keypad Slide kit- Customize the Jazz keypad to your application

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

DIN-rail Power Supplies

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

Jazz Add-on ports and Accessories

COM Port kit	Ethernet Communication Port	Program Cloner module	Keypad Slide kit
RS232/RS485 (isolated) Article No.: JZ-RS4	Article No.: MJ20-ET1[1]	Article No.: MJ20-MEM1	Article No.: MJ20-JZ-SL1[1]

[1] Not yet UL certified

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 Width x Height (mm)	117 x 89
Resolution	2 lines, 16 characters
Keys	16 keys, including 10 user-labeled keys
Environment	
Protection	IP65 / NEMA4X when panel mounted
Operating Temperature	0 to 50ºC
Standards	UKCA, UL, CE, EAC
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)

Jazz® models - Built-in I/O configurations

		Inputs[1]				Outputs				
Article [4]	**Summary**	**Digital [2]**	**HSC/Shaft-encoder [2]**	**Analog**	**Temperature Measurement**	**Transistor [3]**	**PWM/HSO [3]**	**Relay**	**Analog**	**Operating Voltage**
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** 3HSC/Shaft-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 or 12-bit	—	—	—	**6**	—	24VDC
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 or 12-bit	—	—	—	**11**	—	24VDC
JZ20-J-T10	**6** Digital Inputs **4** Transistor Outputs	**6**		—	—	**4** pnp	—	—	—	24VDC
JZ20-J-T18	**6** Digital, **2** D/A, **2** Analog Inputs [1] **8** Transistor Outputs	**8**		**2** 0-10V 10 or 12-bit **2** 0-20mA, 4-20mA 10 or 12-bit	—	**8** pnp	—	—	—	24VDC
JZ20-J-T20HS	**6** Digital, **3** 3HSC/Shaft-encoder, **2** A/D, **2** AI, **10** Transistor outputs	**8**	**3** 10kHz, 16-bit	**2** 0-10V 10 or 12-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 or 12-bit **2** 0-20mA, 4-20mA 10 or 12-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** 0-10V 10 or 12-bit **2** 0-20mA, 4-20mA 10 or 12-bit	**2** Thermocouple, PT100	**2** pnp	**2**	**5**	**2** +/-10V, 4-20mA 12-bit	24VDC
JZ20-J-UN20	9 Digital, 2 D/A[1], 1 AI 1 TC/PT100 Inputs [1] 5 Relay 2 Transistor Outputs	**11**	**1** 10kHz, 16-bit	**2** 0-10V 10 or 12-bit **1** 0-20mA, 4-20mA 10 or 12-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

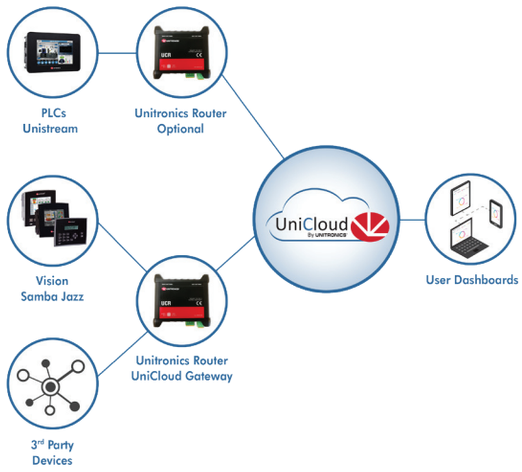
[4] To order a classic Jazz with a Bezel panel, omit the 'J' from the model number, ex. JZ20-R10

UniCloud Gateway for any

Connect any device and any application -

- Dual functionality: as a cellular 4G LTE router and as a UniCloud gateway for Vision, Samba, and Jazz controllers
- MODBUS gateway to UniCloud: Connect any device that supports MODBUS to UniCloud
- Embedded Firewall for Robust Security, Remote Monitoring, & Control
- Geo-Location via GNSS (GPS)
- Send SMS via Ethernet
- On-board Digital & Analog I/Os

Connections: Ethernet ports, Micro-SD, RS232,RS485, USB interface



Router Models

B5 Series: UCR-ST-B5	4G LTE & WiFi cellular router with embedded Firewall, 2 Ethernet ports and Digital I/O.

B8 Series: UCR-ST-B8	Dual-SIM 4G LTE & WiFi cellular router with embedded Firewall, 4 Ethernet ports. Digital & Analog I/Os, RS232, RS485, GNSS (GPS), microSD & USB interface.

Hardware

	B5 Series	B8 Series
Mobile	4G (LTE) Cat 4 DL up to 150 Mbps, UL up to 50 Mbps; DC HSPA+; UMTS; TD SCDMA; EDGE; GPRS	
CPU	Atheros Hornet, MIPS 24 Kc, 400 MHz	Atheros Wasp, MIPS 74 Kc, 550 MHz
Memory	16 MB Flash, 64 MB DDR 2 RAM	16MB Flash, 128 MB DDR 2 RAM
Ethernet	2x 10/100 Ethernet ports: 1 x WAN (configurable as LAN), 1 x LAN	4x 10/100 Ethernet ports: 1 x WAN (configurable as LAN), 3 x LAN ports
Power Supply	9 - 30 VDC, 4 pin DC connector	
PoE (passive)	Passive PoE over spare pairs (available from HW revision 0007 and batch number 0010). Possibility to power up through LAN port, not compatible with IEEE 802.3 af and 802.3 at	
Inputs/Outputs	1x Digital Input, 1 x Digital Open Collector Output on power connector	3x Inputs (Digital, Digital galvanically isolated, Analog) + 1 x Digital Input on power connector
Connectors	1x 4 pin DC, 2 x Ethernet, 2 x Mobile SMA, 1 x WiFi RP SMA	1x 4 pin DC, 4 x Ethernet, 2 x Mobile SMA, 2 x WiFi RP SMA , 1 x GPS SMA, 1 x RS 232 , 1 x 6 pin
Memory Cards	X	microSD, Hinge Type slot
SIM	1x external SIM holder	2x external SIM holders
Status LEDs	2x connection type status, 5 x connection strength, 2 x LAN status, 1 x Power	1x bi color connection status, 5 x connection strength, 4 x LAN status, 1 x Power
Operating Temperature	-40 C to 75 C	
Housing	Aluminum housing, plastic panels	
Dimensions	83mm x 74 mm x 25 mm	100mm x 110 mm x 50 mm
Weight	125 g	287 g

Device: Unitronics 4G Routers

old or new - to UniCloud via Unitronics routers

Software Features

	B5 Series	B8 Series
Dynamic DNS	✓	✓
Multiple VPN Protocols	✓	✓
Wireless Access Point and Wireless Client	✓	✓
GPS Geo-fencing		✓
Firewall	✓	✓
I/O Control	✓	✓
MQTT Broker	✓	✓
Modbus TCP and Modbus RTU	✓	✓
NTP Server	✓	✓

Network Coverage

	Article Number	Region Coverage*	Frequency Bands
B5 Series	UCR-ST-B5-AT	North America (AT&T)	• 4G (LTE-FDD): B2, B4, B12 • 3G: B2, B4, B5
	UCR-ST-B5-EU	Europe, the Middle East, Africa, Korea, Thailand, Malaysia	• 4G (LTE-FDD): B1, B3, B7, B8, B20, B28A • 3G: B1, B8 • 2G: B3, B8
	UCR-ST-B5-SA	South America, Australia, New Zealand, Taiwan	• 4G (LTE-FDD): B1, B2, B3, B4, B5, B7, B8, B28 • 4G (LTE-TDD): B40 • 3G: B1, B2, B5, B8 • 2G: B2, B3, B5, B8
	UCR-ST-B5-VE	North America (Verizon)	• 4G (LTE-FDD): B4, B13
B8 Series	UCR-ST-B8-AT	North America (AT&T)	• 4G (LTE-FDD): B2, B4, B12 • 3G: B2, B4, B5
	UCR-ST-B8-EU	Europe, the Middle East, Africa, Korea, Thailand, India, Malaysia	• 4G (LTE-FDD): B1, B3, B7, B8, B20, B28A • 4G (LTE-TDD): B38, B40, B41 • 3G: B1, B8 • 2G: B3, B8
	UCR-ST-B8-SA	South America, Australia, New Zealand, Taiwan	• 4G (LTE-FDD): B1, B2, B3, B4, B5, B7, B8, B28 • 4G (LTE-TDD): B40 • 3G: B1, B2, B5, B8 • 2G: B2, B3, B5, B8
	UCR-ST-B8-VE	North America (Verizon)	• 4G (LTE-FDD): B4, B13

*Please check with your mobile network provider

Accessories

UCR-OP-B5-DIN	UCR B5/B8 DIN RAIL KIT
UCR-ACC-02	B8 LTE ANTENNA (SMA,3m CBL)
UCR-ACC-03	B8 WiFi ANTENNA (SMA,1.5m CBL)
UCR-ACC-04	GNSS ANTENNA (SMA, 3m CBL)
UCR-ACC-07	B5 LTE ANTENNA (SWIVEL,SMA)
UCR-ACC-08	B5 WiFi ANTENNA (SWIVEL,SMA)

Motion Control with Unitronics Easy

Servo Drive and Motors & VFD

- **One Software:** Why struggle with multiple software tools to build your application? Unitronics provides one integrated software environment to control it all: PLC, HMI, Servo, VFD, and I/O
- **Automatic** communication setup: absolutely seamless
- **Minimal room for error:** UniLogic software analyzes mechanical properties and recommends safe values for your Servo and VFD Motion applications
- **Diagnostics:** View servo and VFD run-time performance via UniLogic's built-in powerful, high-speed scope
- **Single Parameter Tuning:** For both Servo and VFD
- **No coding needed!** Use Ready-Made Motion code to test your completed system
- **Embedded Diagnostic tools: no PC needed.** Tap a panel - even mobile - to:
  - Set motion parameters
  - Monitor Axis behavior and I/Os
  - Execute movements, such as Point-to-Point, Jog, and Homing
- **Ready-Made Motion code: simply open and edit as needed**

No motion programming knowledge needed!

to set up. Painless to program.

UniLogic® Studio Software: Eliminates the complicated operations associated with Motion Control.

Powerful, award-winning software that enables you to do it all in one project:

- Configure all hardware: PLC, HMI, VFDs, Servo drives, motors, actuators
- Build PLC, HMI, and Motion applications
- Set up and implement all communications—including IIoT Cloud
- Remotely perform any task that doesn't require a screwdriver

Motion Control programming: drag & drop function blocks

Add Axes, drag & drop actuators; UniLogic automatically converts units

Test & view performance via built-in powerful, high-speed scope

UniLogic **automatically defines the correct configuration & sets up** communications

Analyzes mechanical properties, and recommends safe values

Ready-Made Motion Code - Get moving immediately – No programming needed!

Download Ready-Made Motion code and tap a panel – even mobile – to:

- Set motion parameters
- Monitor Axis behavior and I/Os
- Execute movements, such as Point-to-Point, Jog, and Homing

For more information on our full lines of Servos & VFDs, refer to our Motion Control catalogue

Fast. Easy. Cost-effective

Unitronics' One Integrated Solution for Control & Automation offers the best of two worlds: great flexibility in component selection, together with the simplicity of an all-inclusive, time-saving, single-vendor solution.

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

Justin Butler, Energy Plant Solutions

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

Dan Murphy, Owner of Marathon Bottling and Automation

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

Jeferson Franco, an Engineer at AI7 Automation Ltda.

- Complete range of controllers
- Full line of VFDs
- AC Servo Drive & Motor
- All-in-One programming software
- IIoT cloud platform: UniCloud

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UNITRONICS®
www.unitronicsPLC.com

International Headquarters: P.O.B. 300, Ben Gurion Airport 7019900, Israel. Tel: +972 3 977 88 88, global.sales@unitronics.com