



PLC
+HMI
ALL IN ONE™

Powerful Software
Outstanding Support
Complete Range of PLCs

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.



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.

PLC
+ HMI
ALL IN ONE™

Unitronics designs, manufactures, and markets quality PLCs for the global market.

Easy to use, efficient, and affordable, our products have been automating processes, systems, and stand-alone applications since 1989.

We maintain more than 160 distributors in over 55 countries around the globe, enabling our customers to purchase our products with local marketing support.

Unitronics' field-proven PLCs automate hundreds of thousands of installations in diverse fields: petrochemical, automotive, food processing, plastic & textile, energy & environment, water & waste water management - anywhere automated processes are required.

Our clients include:

Coca-Cola, General Motors, Michelin, Tupperware, Intel, Bayer, Colgate-Palmolive,

Land Instruments, Mercedes-Benz, Agfa, Tyson Foods, Pirelli, Fiat, Samsonite.

Download Unitronics' App:



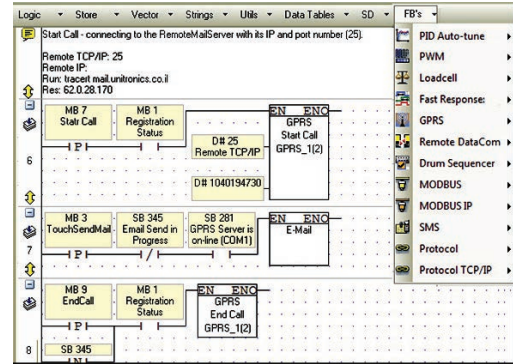
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Powerful software – included with your All-in-One package

A single, intuitive environment for all of your application needs



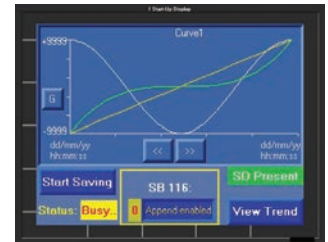
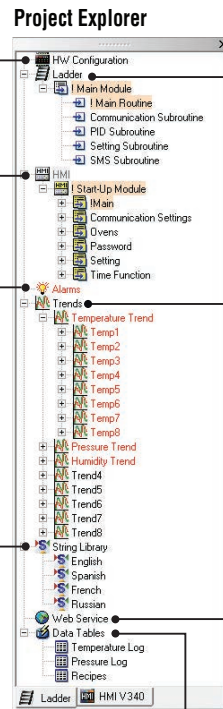
Hardware Configuration
Intuitive set up: controller, I/Os, and COM channels



Ladder Programming
Rapidly drag & drop elements and Function Blocks



HMI Application
Create beautiful HMI displays – includes rich image library



Trend Graphs
Display dynamic values in real-time

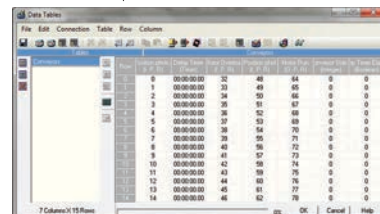


Alarms: Built-in Screens
Effectively alert staff via Alarm screens



Web Server
Display and edit application values via browser

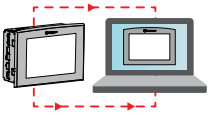

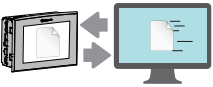




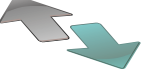


Languages - String Library
Instantly switch HMI language via screen touch



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

Software features vary according to controller model

Smart Utilities – Remote Access, Efficient Data Management and more

| Utility Name | Function | Key Features | Targeted Users |
|---|--|---|---|
| Remote Access  | View and control a PLC directly from PC, via local or remote connection | <ul style="list-style-type: none"> View an HMI panel; use the PC keyboard + mouse to run the HMI application Operand and Data Table values: view values during runtime, import and export values to/from Excel/.csv files | <ul style="list-style-type: none"> Operators requiring Remote Access System integrators: remote debugging, troubleshooting, fault-finding |
| Remote Operator  | Simultaneously view and operate the HMI panels of multiple PLCs in multiple locations | <ul style="list-style-type: none"> Easily place HMI panels side-by-side to monitor distributed systems, or applications in several locations Run the HMI applications via PC keyboard + mouse | <ul style="list-style-type: none"> Control room operators Installation Managers |
| DataXport  | Create Data Logs from Data Tables and operand values in PLCs | <ul style="list-style-type: none"> Harvest data from multiple PLCs - on demand or according to time/date Export the data to Excel/CSV files Automatically email files | <ul style="list-style-type: none"> Data analysts Plant managers Process engineers |
| UniDownload Designer  | Create compressed VisiLogic / U90Ladder applications(.udc files) for secure installation in local or remote PLCs | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> Download Manager: installs the same application in multiple PLCs UniDownloader: installs an application in a single PLC | <ul style="list-style-type: none"> OEMs / System Integrators in installations with high security requirements |
| SD Card Suite  | Remotely access and manage SD cards and their data | <ul style="list-style-type: none"> Browse a remote PLC's SD card. Read/write data, including Data Table files View SD card contents - Trends, logs, alarm history, data tables - export to Excel | <ul style="list-style-type: none"> Data analysts Plant managers Process engineers |
| UniVision Licensing  | Safeguard your PLC application security | <ul style="list-style-type: none"> Embeds unique licenses in the PLC, which enables application to run only on a licensed PLC Option to activate or deactivate different sections of your application Prevents theft of applications | <ul style="list-style-type: none"> System integrators OEMs |
| UniOPC Server  | Exchange data between Unitronics PLCs and OPC-supported software | <ul style="list-style-type: none"> Create channel to connect PLCs to SCADA systems, such as plant control rooms Compliant with the OPC foundation standards | Control room operators |
| UniDDE  | Exchange data with Windows based applications | Enables data exchange between Unitronics PLC's and software that supports Microsoft's Dynamic Data Exchange protocols, like Excel. | Control rooms operators |
| Programming tools for developers  | Easily implement communication between PLC & PC applications | Using ActiveX & .NET communication drivers | Developers |

VISION 1210™/1040™

Advanced PLC from the back-big & beautiful color touchscreen from the front, 12.1" /10.4". Snap-in I/Os for an All-in-One; expand up to 1000 I/Os

Features:

HMI

- Up to 1024 user-designed screens
- 500 images per application
- HMI graphs - color-code Trends
- Built-in alarm screens
- Text String Library - easy localization
- Memory and communication monitoring via HMI - No PC needed

PLC

- I/O options include high-speed, temperature & weight measurement
- Auto-tune PID, up to 24 independent loops
- Recipe programs and datalogging via Data Tables
- Micro SD card - log, backup, clone, & more
- Date & Time-based control

Communication

- TCP/IP via Ethernet
- Web server: Use built-in HTML pages, or design complex pages to view and edit PLC data via the Internet
- Send e-mail function
- SMS messaging
- GPRS/GSM
- Remote Access utilities
- MODBUS protocol support
- BACnet, M-bus – via 3rd-party converter
- CANbus: CANopen, UniCAN, SAE J1939 and more
- DF1 Slave
- SNMP agent V1
- FB Protocol Utility: enables serial or TCP/IP communications with 3rd-party device; barcode readers, frequency converters, etc
- Ports: supplied with 2 isolated RS232/RS485, 1 CANbus, 1 USB programming port; 1 port may be added for serial/Ethernet



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

| | V1040 | V1210 |
|--------------------------------|--|---------------------------------------|
| Article Number | V1040-T20B | V1210-T20BJ |
| I/O Options | | |
| Snap-in I/O Modules | Plug these modules directly into the back of the Vision unit to create a self-contained PLC with up to 62 I/Os. Inputs may include Digital, Analog and Temperature Measurement. Outputs may include Transistor, Relay or Analog (sold separately). | |
| I/O Expansion | Local or Remote I/Os may be added via expansion port or via CANbus. Expand up to 1000 I/Os | |
| Program | | |
| Application Memory | Application Logic: 2MB • Images: 32MB • Fonts: 1MB | |
| Scan Time | 9µsec per 1K of typical application | |
| Memory Operands | 8192 coils, 4096 registers, 512 long integers (32 bit), 256 double words (32 bit unsigned), 64 floats, 384 timers (32 bit), 32 counters Additional non-retainable operands: 1024 X-bits, 512 X-integers, 256 X-long integers, 64 X-double words | |
| Data Tables | 120K dynamic RAM data (recipe parameters, datalogs, etc.), up to 256K fixed data | |
| SD Card (Micro) | Store datalogs, Alarm History, Data Tables, Trend data, export to Excel • Back up Ladder, HMI & OS, clone PLCs | |
| USB | 1 USB programming port (Mini-B) | |
| Enhanced Features | Trends: graph any value and display on HMI • Built-in Alarm management system • String Library: instantly switch HMI language | |
| Operator Panel | | |
| Type | TFT LCD | |
| Display Backlight Illumination | White LED | |
| Colors | 65,536 colors, 16-bit resolution • Brightness - Adjustable via touchscreen or software | |
| Display Resolution & Size | 800 x 600 pixels (SVGA), 10.4" | 800 x 600 pixels (SVGA), 12.1" |
| Touchscreen | Resistive, Analog | |
| Keys | 9 programmable function keys | Virtual Keyboard |
| General | | |
| Power Supply | 12/24VDC | |
| Battery | 7 years typical at 77°F, battery back-up for all memory sections and RTC | |
| Clock | Real-time clock functions (date and time) | |
| Environment | NEMA4X/IP65 (when panel mounted) | NEMA4X/IP66/IP65 (when panel mounted) |
| Standard | CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics | |

VISION700™

Advanced PLC from the back - big & beautiful color 7" touchscreen from the front. Snap-in I/Os for an All-in-One; expand up to 1000 I/Os

Vision700™ has Ethernet port onboard, that supports 8 sockets, enabling to communicate with 8 devices simultaneously.

Features:

HMI

- Up to 1024 user-designed screens
- 500 images per application
- HMI graphs - color-code Trends
- Built-in alarm screens
- Text String Library - easy localization
- Memory and communication monitoring via HMI - No PC needed

PLC

- I/O options include high-speed, temperature & weight measurement
- Auto-tune PID, up to 24 independent loops
- Recipe programs and datalogging via Data Tables
- SD card - log, backup, clone & more
- Date & Time-based control

Communication

- TCP/IP via Ethernet
- Web server: Use built-in HTML pages, or design complex pages to view and edit PLC data via the Internet
- Send e-mail function
- SMS messaging
- GPRS/GSM
- Remote Access utilities
- MODBUS protocol support
- BACnet, M-bus – via 3rd-party converter
- CANbus: CANopen, UniCAN, SAE J1939, and more
- DF1 Slave
- SNMP Agent V1
- FB Protocol Utility: enables serial or TCP/IP communications with 3rd-party device; barcode readers, frequency converters, etc
- Ports: supplied with mini-USB programming port , 1 RS232/RS485 and 1 Ethernet port. 1 ports may be added: 1 Serial/Ethernet/Profibus and 1 CANbus



V700

“ Reliability, ease of use, connectivity and competitive prices are Unitronics' main strengths ”

CE/UL

Mr. Andrea Della Bosca,
EV srl

| | |
|--------------------------------|--|
| | <h1>V700</h1> |
| Article Number | V700-T20BJ |
| I/O Options | |
| Snap-in I/O Modules | Plug these modules directly into the back of the Vision unit to create a self-contained PLC with up to 62 I/Os. Inputs may include Digital, Analog, and Temperature measurement. Outputs may include Transistor, Relay, or Analog. (sold separately) |
| I/O Expansion | Local or Remote I/Os may be added via expansion port or via CANbus |
| Program | |
| Application Memory | Application Logic: 2MB • Images: 60MB • 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 |
| Data Tables | 120K dynamic RAM data (recipe parameters, datalogs, etc.), up to 256K fixed data |
| SD Card | Store datalogs, Alarm History, Data Tables, Trend data, export to Excel • Back up Ladder, HMI & OS, clone PLCs |
| Enhanced Features | Trends: graph any value and display on HMI • Built-in Alarm management system • String Library: instantly switch HMI language |
| Operator Panel | |
| Type | TFT LCD |
| Display Backlight Illumination | White LED |
| Colors | 65,536 colors, 16 bit resolution • Brightness - Adjustable via touchscreen or software |
| Display Resolution & Size | 800 x 480 pixels, 7" |
| Touchscreen | Resistive, Analog |
| Keys | Virtual keyboard |
| General | |
| Power Supply | 12/24VDC |
| Battery | 7 years typical at 77°F, battery back-up for all memory sections and RTC |
| Clock | Real-time clock functions (date and time) |
| Environment | NEMA4X/IP66/IP65 (when panel mounted) |
| Standard | CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics |

VISION 570™/560™

Advanced PLC from the back-big & beautiful color 5.7" touchscreen from the front. Snap-in I/Os for an All-in-One; expand up to 1000 I/Os

Features:

HMI

- Up to 1024 user-designed screens
- 500 images per application
- HMI graphs - color-code Trends
- Built-in alarm screens
- Text String Library - easy localization
- Memory and communication monitoring via HMI - No PC needed

PLC

- I/O options include high-speed, temperature & weight measurement
- Auto-tune PID, up to 24 independent loops
- Recipe programs and datalogging via Data Tables
- SD card - log, backup, clone, & more
- Date & Time-based control

Communication

- TCP/IP via Ethernet
- Web server: Use built-in HTML pages, or design complex pages to view and edit PLC data via the Internet
- Send e-mail function
- SMS messaging
- GPRS/GSM
- Remote Access utilities
- MODBUS protocol support
- BACnet, M-bus – via 3rd-party converter
- CANbus: CANopen, UniCAN, SAE J1939 and more
- DF1 Slave
- SNMP Agent V1
- FB Protocol Utility: enables serial or TCP/IP communications with 3rd-party device; barcode readers, frequency converters, etc
- Ports: supplied with 2 isolated RS232/RS485 and 1 CANbus; In Vision570: 1 USB programming port; 1 port may be added for serial/Ethernet

V560



V570
Classic Panel



V570-J
Flat Panel

“ 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

| | V570 | | V560 |
|--------------------------------|--|--|-------------------------------------|
| Article Number | V570-57-T20B | V570-57-T20B-J | V560-T25B* |
| I/O Options | | | |
| Snap-in I/O Modules | Plug these modules directly into the back of the Vision unit to create a self-contained PLC with up to 62 I/Os. Inputs may include Digital, Analog, and Temperature measurement. Outputs may include Transistor, Relay, or Analog. (sold separately) | | |
| I/O Expansion | Local or Remote I/Os may be added via expansion port or via CANbus. Expand up to 1000 I/Os | | |
| Program | | | |
| Application Memory | Application Logic: 2MB • Images: 12MB • 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 | | |
| Data Tables | 120K dynamic RAM data (recipe parameters, datalogs, etc.), up to 256K fixed data | | |
| SD Card | Store datalogs, Alarm History, Data Tables, Trend data, export to Excel • Back up Ladder, HMI & OS, clone PLCs | | |
| Enhanced Features | Trends: graph any value and display on HMI • Built-in Alarm management system • String Library: instantly switch HMI language | | |
| Operator Panel | | | |
| Type | TFT LCD | | |
| Display Backlight Illumination | White LED | | |
| Colors | 65,536 colors, 16 bit resolution • Brightness - Adjustable via touchscreen or software | | |
| Display Resolution & Size | 320 x 240 pixels (QVGA), 5.7" | | |
| Touchscreen | Resistive, Analog | | |
| Keys | Virtual keyboard | 24 programmable keys. Labeling options – function keys or customized | |
| General | | | |
| Power Supply | 12/24VDC | | |
| Battery | 7 years typical at 77°F, battery back-up for all memory sections and RTC | | |
| Clock | Real-time clock functions (date and time) | | |
| Environment | NEMA4X/IP65 (when panel mounted) | NEMA4X/IP66/IP65 (when panel mounted) | NEMA4X/IP65 (when panel mounted) |
| Standard | CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics | | |

* Not yet UL certified

VISION 430™

Advanced PLC integrated with a 4.3" wide aspect color touchscreen. Includes an onboard I/O configuration; expand up to 512 I/Os

Features:

HMI

- 1024 user-designed screens and 250 images per application
- HMI graphs - color-code Trends
- Built-in alarm screens
- Text String Library - easy localization
- Memory and communication monitoring via HMI - No PC needed

PLC

- I/O options include high-speed, temperature & weight measurement
- Auto-tune PID, up to 24 independent loops
- Recipe programs and datalogging via Data Tables
- Micro SD card - log, backup, clone, & more
- Date & Time-based control

Communication

- TCP/IP via Ethernet
- Web server: Use built-in HTML pages, or design complex pages to view and edit PLC data via the Internet
- Send e-mail function
- SMS messaging
- GPRS/GSM
- Remote Access utilities
- MODBUS protocol support
- BACnet, M-bus – via 3rd-party converter
- CANbus: CANopen, UniCAN, SAE J1939 and more
- DF1 Slave
- SNMP Agent V1
- FB Protocol Utility: enables serial or TCP/IP communications with 3rd-party device; barcode readers, frequency converters, etc
- Ports: supplied with mini-USB programming port and 1 RS232/RS485; 2 ports may be added:
1 Serial/Ethernet/Profibus and 1 CANbus



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



| V430 | | | | | | | | | | |
|--|--|---|---|---|--|--|--|--|--|---|
| Article Number | V430-J-B1 | V430-J-RH2 | V430-J-R34 | V430-J-TR34 | V430-J-RH6 | V430-J-RA22 | V430-J-TRA22 | V430-J-T2 | V430-J-T38 | V430-J-TA24 |
| No onboard I/Os | No onboard I/Os | 10 Digital 2 D/A Inputs ¹ 6 Relay Outputs 2 High-speed Transistor Outputs | 20 Digital 2 D/A Inputs ¹ 12 Relay Outputs | 20 Digital 2 D/A Inputs ¹ 8 Relay 4 High speed Transistor Outputs | 6 Digital, 2 D/A 4 Analog Inputs ¹ 6 Relay Outputs 2 High-speed Transistor Outputs | 8 Digital 2 D/A, 2 PT100/TC/ Digital ¹ Inputs 8 Relay 2 Analog Outputs | 8 Digital, 2 D/A 2 PT100/TC/ Digital ¹ Inputs 4 Relay, 2 Analog 4 High-speed Transistor Outputs | 10 Digital 2 D/A Inputs ¹ 12 Transistor Outputs | 20 Digital 2 D/A Inputs ¹ 16 Transistor Outputs | 8 Digital 2 D/A, 2 PT100/ TC/Digital ¹ Inputs 10 Transistor 2 Analog Outputs |
| Inputs | | | | | | | | | | |
| Digital pnp/npn | | 12 | 22 | 22 | 8 | 12 | 12 | 12 | 22 | 12 |
| HSC/Shaft-Encoder/ Max. Freq. Measurer ^{2&3} | | 3 200kHz ⁴ 32-bit | 3 30kHz 32-bit | 3 200kHz ⁴ 32-bit | 1 200kHz ⁴ 32-bit | 1 30kHz 32-bit | 1 200kHz ⁴ 32-bit | 3 30kHz 32-bit | 2 30kHz 32-bit | 1 30kHz 32-bit |
| Analog | None | 2 10-bit, 0-10V 0-20mA 4-20mA | 2 10-bit, 0-10V 0-20mA 4-20mA | 2 10-bit, 0-10V 0-20mA 4-20mA | 2 10-bit, 0-10V 0-20mA, 4-20mA and 4 10-bit, 0-20mA 4-20mA | 2 14-bit 0-10V, 0-20mA 4-20mA | 2 (2 modes) Normal: 14-bit Fast: 12-bit 0-10V, 0-20mA 4-20mA | 2 10-bit 0-10V 0-20mA 4-20mA | 2 10-bit 0-10V, 0-20mA 4-20mA | 2 (2 modes) Normal: 14-bit Fast: 12-bit 0-10V, 0-20mA, 4-20mA |
| Temperature Measurement | | None | None | None | None | PT100/TC | PT100/TC | None | None | 2 PT100/TC |
| Outputs | | | | | | | | | | |
| Digital | | 6 relay | 12 relay | 8 relay | 6 relay | 8 relay | 4 relay | 12 pnp | 16 pnp | 10 pnp |
| High-Speed Outputs/PWM | None | None | None | 4 npn (3 PTO) 200kHz max | None | None | 4 npn (2 PTO) 200kHz max | 7 0.5kHz | 7 0.5kHz | 5 0.5kHz |
| Analog | | None | None | None | None | 2 12-bit 0-10V, 4-20mA | 2 12-bit 0-10V, 4-20mA | None | None | 2 12-bit 0-10V, 4-20mA |
| I/O Expansion | Local or Remote I/Os may be added via expansion port or via CANbus. Expand up to 512 I/Os | | | | | | | | | |
| Program | Application Logic: 512K • Images: 12MB • Fonts: 1MB | | | | | | | | | |
| Application Memory | 15µ sec per 1K of typical application | | | | | | | | | |
| Scan Time | 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 | | | | | | | | | |
| Memory Operands | 120K dynamic RAM data (recipe parameters, datalogs, etc.), up to 256K fixed data | | | | | | | | | |
| Data Tables | Store datalogs, Alarm History, Data Tables, Trend data, export to Excel • Back up Ladder, HMI & OS, clone PLCs | | | | | | | | | |
| SD Card (Micro) | Trends: graph any value and display on HMI • String Library: instantly switch HMI language | | | | | | | | | |
| Enhanced Features | | | | | | | | | | |
| Operator Panel | TFT LCD • 65,536 colors, 16-bit resolution • Brightness - Adjustable via touchscreen or software | | | | | | | | | |
| Type & Colors | Resolution: 480x272 pixels • Size: 4.3" | | | | | | | | | |
| Display | Resistive, Analog | | | | | | | | | |
| Touchscreen | 5 programmable keys. Labeling options - function keys, arrows, or customized | | | | | | | | | |
| Keys | | | | | | | | | | |
| General | 24VDC, except for V430-J-B1, which is 12/24VDC | | | | | | | | | |
| Power Supply | 7 years typical at 77°F, battery back-up for all memory sections and RTC | | | | | | | | | |
| Battery | Real-time clock functions (date and time) | | | | | | | | | |
| Clock | NEMA4X/IP66/IP65 (when panel mounted) | | | | | | | | | |
| Environment | CE, UL | | | | | | | | | |
| Standard | Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics | | | | | | | | | |

¹ Adapt specific inputs to function as digital or analog, and in certain models as TC or PT100. This reduces the number of free digital inputs. For example, V430-J-RA22 offers 12 digital inputs. Implementing 2 TC inputs requires 4, leaving 8 free.

² Certain inputs can function as high-speed counters, shaft-encoder inputs, or normal digital inputs.

³ This specification depends on cable length.

⁴ This specification depends upon driver type.

VISION350™

Advanced PLC integrated with a 3.5" color touchscreen. Includes an onboard I/O configuration; expand up to 512 I/Os

Features:

HMI

- 1024 user-designed screens
- 250 images per application
- HMI graphs - color-code Trends
- Built-in alarm screens
- Text String Library - easy localization
- Memory and communication monitoring via HMI - No PC needed

PLC

- I/O options include high-speed, temperature & weight measurement
- Auto-tune PID, up to 24 independent loops
- Recipe programs and datalogging via Data Tables
- Micro SD card - log, backup, clone, & more
- Date & Time-based control

Communication

- TCP/IP via Ethernet
- Web server: Use built-in HTML pages, or design complex pages to view and edit PLC data via the Internet
- Send e-mail function
- SMS messaging
- GPRS/GSM
- Remote Access utilities
- MODBUS protocol support
- BACnet, M-bus – via 3rd-party converter
- CANbus: CANopen, UniCAN, SAE J1939 and more
- DF1 Slave
- SNMP Agent V1
- FB Protocol Utility: enables serial or TCP/IP communications with 3rd-party device; barcode readers, frequency converters, etc
- Ports: supplied with 1 RS232/RS485; 2 ports may be added: 1 Serial/Ethernet/Profibus and 1 CANbus



V350-J
Flat Panel



V350
Classic Panel



NEW! Extended temperature range unit, operational temperature between -30°C to 60°C.

Available with classic or flat panel design
Extended temperature options also available for Ethernet and CANBus cards.

Classic panel p/n: V350-S-TA24, Flat panel p/n:
V350-JS-TA24, CANBus p/n: V100-S-CAN Ethernet p/n V100-S-ET2



There were significant cost savings using the Unitronics PLC. ”

Justin Butler, Senior Electrical Engineer at Energy Plant Solutions



| | | V350 | | | | | | | | | |
|--|---------------|--|---|---|---|--|---|--|--|--|---|
| | | <div style="float: right; border: 1px solid black; padding: 2px;"> V350-S-TA24 V350-JS-TA24 </div> | | | | | | | | | |
| Article Number | Classic Panel | V350-35-B1 | V350-35-TR20 | V350-35-R34 | V350-35-TR34 | V350-35-TR6 | V350-35-RA22 | V350-35-TRA22 | V350-35-T2 | V350-35-T38 | V350-35-TA24 |
| | Flat Panel | V350-J-B1 | V350-J-TR20 | V350-J-R34 | V350-J-TR34 | V350-J-TR6 | V350-J-RA22 | V350-J-TRA22 | V350-J-T2 | V350-J-T38 | V350-J-TA24 |
| | | No onboard I/Os | 10 Digital 2 D/A Inputs ¹ 6 Relay Outputs 2 High-speed Transistor Outputs | 20 Digital 2 D/A Inputs ¹ 12 Relay Outputs | 20 Digital 2 D/A Inputs ¹ 8 Relay 4 High speed Transistor Outputs | 6 Digital, 2 D/A 4 Analog Inputs ¹ 6 Relay Outputs 2 High-speed Transistor Outputs | 8 Digital, 2 D/A 2 PT100/TC/ Digital ¹ Inputs 8 Relay 2 Analog Outputs | 8 Digital, 2 D/A 2 PT100/TC/ Digital ¹ Inputs 4 Relay, 2 Analog 4 High-speed Transistor Outputs | 10 Digital 2 D/A Inputs ¹ 12 Transistor Outputs | 20 Digital 2 D/A Inputs ¹ 16 Transistor Outputs | 8 Digital 2 D/A, 2 PT100/TC/Digital ¹ Inputs 10 Transistor 2 Analog Outputs |
| Inputs | | | | | | | | | | | |
| Digital pnp/npn | | None | | | | | | | | | |
| HSC/Shaft-Encoder/ Max. Freq. Measurer ^{2&3} | | None | | | | | | | | | |
| Analog | | None | | | | | | | | | |
| Temperature Measurement | | None | | | | | | | | | |
| Outputs | | | | | | | | | | | |
| Digital | | None | | | | | | | | | |
| High-Speed Outputs/PWM | | None | | | | | | | | | |
| Analog | | None | | | | | | | | | |
| I/O Expansion | | Local or Remote I/Os may be added via expansion port or via CANbus. Expand up to 512 I/Os | | | | | | | | | |
| Program | | Application Logic: 1MB • Images: 6MB • Fonts: 512K | | | | | | | | | |
| Application Memory | | 15µ sec per 1K of typical application | | | | | | | | | |
| Scan Time | | 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 | | | | | | | | | |
| Memory Operands | | 120K dynamic RAM data (recipe parameters, datalogs, etc.), up to 256K fixed data | | | | | | | | | |
| Data Tables | | Store datalogs, Alarm History, Data Tables, Trend data, export to Excel • Back up Ladder, HMI & OS, clone PLCs | | | | | | | | | |
| SD Card (Micro) | | Trends: graph any value and display on HMI • String Library: instantly switch HMI language | | | | | | | | | |
| Enhanced Features | | | | | | | | | | | |
| Operator Panel | | TFT LCD • 65,536 colors, 16-bit resolution • Brightness- Adjustable via touchscreen or software | | | | | | | | | |
| Type & Colors | | Resolution: 320 x 240 pixels (QVGA) • Size: 3.5” | | | | | | | | | |
| Display | | Resistive, Analog | | | | | | | | | |
| Touchscreen | | 5 programmable keys. Labeling options- function keys, arrows, or customized | | | | | | | | | |
| Keys | | | | | | | | | | | |
| General | | 24VDC, except for V350-35-B1, which is 12/24VDC | | | | | | | | | |
| Power Supply | | 7 years typical at 77°F, battery back-up for all memory sections and RTC | | | | | | | | | |
| Battery | | Real-time clock functions (date and time) | | | | | | | | | |
| Clock | | NEMA4X/IP66/IP65 (when panel mounted) | | | | | | | | | |
| Environment | | CE, UL | | | | | | | | | |
| Standard | | Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics | | | | | | | | | |

¹ Adapt specific inputs to function as digital or analog, and in certain models as TC or PT100. This reduces the number of free digital inputs. For example, V350-35-RA22 offers 12 digital inputs. Implementing 2 TC inputs requires 4, leaving 8 free.

² Certain inputs can function as high-speed counters, shaft-encoder inputs, or normal digital inputs.

³ This specification depends on cable length.
⁴ This specification depends upon driver type.

VISION 130™

Palm-size, powerful PLC with built-in, black & white LCD 1.3" graphic display, keypad, & onboard I/O configuration, expand up to 256 I/Os

Features:

HMI

- 1024 user-designed screens
- 400 images per application
- HMI graphs & Trends
- Built-in alarm screens
- Text String Library - easy localization
- Memory and communication monitoring via HMI - No PC needed

PLC

- I/O options include high-speed, temperature & weight measurement
- Auto-tune PID, up to 24 independent loops
- Recipe programs and datalogging via Data Tables
- Micro SD card - log, backup, clone, & more
- Date & Time-based control

Communication

- TCP/IP via Ethernet
- Web server: Use built-in HTML pages, or design complex pages to view and edit PLC data via the Internet
- Send e-mail function
- SMS messaging
- GPRS/GSM
- Remote Access utilities
- MODBUS protocol support
- BACnet, M-bus – via 3rd-party converter
- CANbus: CANopen, UniCAN, J1939 and more
- DF1 Slave
- SNMP Agent V1
- FB Protocol Utility: enables serial or TCP/IP communications with 3rd-party device; barcode readers, frequency converters, etc
- Ports: supplied with 1 RS232/RS485; 2 ports may be added: 1 Serial/Ethernet/Profibus and 1 CANbus



V130-J
Flat Panel



V130
Classic 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



| | | V130 | | | | | | | | | |
|--|---------------|---|---|---|---|--|--|--|--|--|---|
| Article Number | Classic Panel | V130-33-B1 | V130-33-TR20 | V130-33-R34 | V130-33-TR34 | V130-33-TR6 | V130-33-RA22 | V130-33-TRA22 | V130-33-T2 | V130-33-T38 | V130-33-TA24 |
| | Flat Panel | V130-J-B1 | V130-J-TR20 | V130-J-R34 | V130-J-TR34 | V130-J-TR6 | V130-J-RA22 | V130-J-TRA22 | V130-J-T2 | V130-J-T38 | V130-J-TA24 |
| | | No onboard I/Os | 10 Digital 2 D/A Inputs ¹ 6 Relay Outputs 2 High-speed Transistor Outputs | 20 Digital 2 D/A Inputs ¹ 12 Relay Outputs | 20 Digital 2 D/A Inputs ¹ 8 Relay 4 High speed Transistor Outputs | 6 Digital, 2 D/A 4 Analog Inputs ¹ 6 Relay Outputs 2 High-speed Transistor Outputs | 8 Digital 2 D/A, 2 PT100/TC/ Digital ¹ Inputs 8 Relay 2 Analog Outputs | 8 Digital, 2 D/A 2 PT100/TC/ Digital ¹ Inputs 4 Relay, 2 Analog 4 High-speed Transistor Outputs | 10 Digital 2 D/A Inputs ¹ 12 Transistor Outputs | 20 Digital 2 D/A Inputs ¹ 16 Transistor Outputs | 8 Digital 2 D/A, 2 PT100/TC/ Digital ¹ Inputs 10 Transistor 2 Analog Outputs |
| Inputs | | | | | | | | | | | |
| Digital pnp/npn | | | | | | | | | | | |
| HSC/Shaft-Encoder/ Max. Freq. Measurer ^{2&3} | | | | | | | | | | | |
| Analog | | None | 2 10-bit, 0-10V 0-20mA 4-20mA | 2 10-bit, 0-10V 0-20mA 4-20mA | 2 10-bit, 0-10V 0-20mA 4-20mA | 2 10-bit, 0-10V 0-20mA, 4-20mA and 4 10-bit, 0-20mA 4-20mA | 2 14-bit 0-10V, 0-20mA 4-20mA | 2 (2 modes) Normal: 14-bit Fast: 12-bit 0-10V, 0-20mA 4-20mA | 2 10-bit 0-10V 0-20mA 4-20mA | 2 10-bit 0-10V, 0-20mA 4-20mA | 2 (2 modes) Normal: 14-bit Fast: 12-bit 0-10V, 0-20mA, 4-20mA |
| Temperature Measurement | | | | | | | | | | | |
| Outputs | | | | | | | | | | | |
| Digital | | | | | | | | | | | |
| High-Speed Outputs/PWM | | None | 2 npn (2 PTO) 200kHz max | None | 4 npn (3 PTO) 200kHz max | 2 npn (2 PTO) 200kHz max | None | 4 npn (2 PTO) 200kHz max | 7 0.5kHz | 7 0.5kHz | 5 0.5kHz |
| Analog | | | | | | | | | | | |
| I/O Expansion | | Local or Remote I/Os may be added via expansion port or via CANbus. Expand up to 256 I/Os | | | | | | | | | |
| Program | | | | | | | | | | | |
| Application Memory | | Application Logic: 512K • Images: 256K • Fonts: 128K | | | | | | | | | |
| 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 | | | | | | | | | |
| Data Tables | | 120K dynamic RAM data (recipe parameters, datalogs, etc.), up to 256K fixed data | | | | | | | | | |
| SD Card (Micro) | | Store datalogs, Alarm History, Data Tables, Trend data, export to Excel • Back up Ladder, HMI & OS, clone PLCs | | | | | | | | | |
| Enhanced Features | | Trends: graph any value and display on HMI • Built-in Alarm management system • String Library: instantly switch HMI language | | | | | | | | | |
| Operator Panel | | | | | | | | | | | |
| Type | | Graphic STN LCD, white LED backlight | | | | | | | | | |
| Display | | Resolution: 128 x 64 pixels • Size: 2.4" | | | | | | | | | |
| Keys | | 20, including 10 user labeled keys (slide kit sold separately) | | | | | | | | | |
| General | | | | | | | | | | | |
| Power Supply | | 24VDC, except for V130-33-B1, which is 12/24VDC | | | | | | | | | |
| Battery | | 7 years typical at 77°F, battery back-up for all memory sections and RTC | | | | | | | | | |
| Clock | | Real-time clock functions (date and time) | | | | | | | | | |
| Environment | | NEMA4X/IP66/IP65 (when panel mounted) | | | | | | | | | |
| Standard | | CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics | | | | | | | | | |

¹ In these models certain inputs are adaptable, and can function as either digital, analog, and in certain models also as thermocouple or PT100. Using adaptable inputs reduces the amount of free digital inputs. For example, V130-33-RA22 offers 12 digital inputs. Implementing 2 TC inputs requires 4 digital inputs, leaving 8 free.

² Certain inputs can function as high-speed counters, shaft-encoder inputs, or normal digital inputs.

³ This specification depends on cable length.

⁴ This specification depends upon driver type.

VISION 120™ Full-function PLC with built-in, monochrome graphic LCD display, keypad, & onboard I/O configuration; expand up to 256 I/Os



120™

- HMI**
- Up to 255 user-designed screens
 - Hundreds of images per application
 - HMI graphs & Trends
 - Memory and communication monitoring via HMI - No PC needed
- PLC**
- I/O options include high-speed, temperature & weight measurement
 - Auto-tune PID, up to 12 independent loops
 - Recipe programs and datalogging via Data Tables
 - Date & Time-based control

Communication

- SMS messaging
- GPRS/GSM
- Remote Access utilities
- MODBUS protocol support
- BACnet, M-bus – via 3rd-party converter
- CANbus: CANopen, UniCAN (in C models only)
- FB Protocol Utility: enables serial or TCP/IP communications with 3rd-party device; barcode readers, frequency converters, etc
- 2 RS232/RS485 built-in ports

| Article Number | V120-22-R1 | V120-22-R2C | V120-22-R6C | V120-22-R34 | V120-22-T1 | V120-22-T38 | V120-22-T2C | V120-22-UN2 | V120-22-UA2 | V120-22-RA22 |
|---|--|--|---|--|--|--|---|--|---|---|
| | 10 Digital 1 Analog Inputs 6 Relay Outputs | 10 Digital 2 Analog Inputs 6 Relay Outputs | 6 Digital 6 Analog Inputs 6 Relay Outputs | 20 Digital 2 D/A ¹ Inputs 12 Relay Outputs | 12 Digital Inputs 12 Transistor Outputs | 22 Digital Inputs 16 Transistor Outputs | 10 Digital 2 D/A ¹ Inputs 12 Transistor Outputs | 10 Digital 2 D/A/PT100/ TC ¹ Inputs 12 Transistor Outputs | 10 Digital 2 D/A/TC ¹ Inputs 10 Transistor 2 Analog Outputs | 8 Digital 2 D/A, 2 PT100/ TC/Digital ¹ Inputs 8 Relay 2 Analog Outputs |
| Inputs | | | | | | | | | | |
| Digital pnp/npn | 10 | 10 | 6 | 22 | 12 | 22 | 12 | 12 | 12 | 12 |
| HSC/Shaft-Encoder/ Max Freq. Measurer ² | 3 10kHz 32-bit | 3 10kHz 32-bit | 1 10kHz 32-bit | 3 10kHz ³ 32-bit | 2 10kHz 32-bit | 2 10kHz ³ 32-bit | 3 10kHz 32-bit | 2 10kHz 32-bit | 1 10kHz ³ 32-bit | 1 10kHz ³ 32-bit |
| Analog | 1 10-bit 0-10V, 0-20mA 4-20mA | 2 10-bit 0-10V, 0-20mA 4-20mA | 6 10-bit, 2 0-10V 0-20mA, 4-20mA and 4 0-20mA 4-20mA | 2 10-bit 0-10V, 0-20mA 4-20mA | None | None | 2 10-bit 0-10V 0-20mA 4-20mA | 2 14-bit 0-10V, 0-20mA 4-20mA PT100/TC | 2 14-bit 0-10V, 0-20mA 4-20mA TC | 2 14-bit 0-10V, 0-20mA 4-20mA |
| Temperature Measurement | None | None | None | None | None | None | None | None | None | 2 PT100/TC |
| Outputs | | | | | | | | | | |
| Digital | 6 relay | 6 relay | 6 relay | 12 relay | 12 pnp | 16 pnp | 12 pnp | 12 pnp | 10 pnp | 8 relay |
| High-Speed Outputs/ PWM ⁴ | None | None | None | None | 2, first 2 outputs can function as HSO, 0.5kHz maximum | | | | | None |
| Analog | None | None | None | None | None | None | None | None | 2 12-bit 0-10V, 4-20mA | 2 12-bit 0-10V, 4-20mA |
| I/O Expansions | Local or Remote I/Os may be added via expansion port or via CANbus. Expand up to 256 I/Os | | | | | | | | | |
| Program | | | | | | | | | | |
| Application Memory | 448K (virtual) Ladder code capacity | | | | | | | | | |
| Memory Scan Time | 48μ sec per 1K of typical application | | | | | | | | | |
| Operands | 4096 coils, 2048 registers, 256 long integers (32-bit), 64 double words (32-bit unsigned), 24 floats, 192 timers (32-bit), 24 counters | | | | | | | | | |
| Data Tables | 120K dynamic RAM data (recipe parameters, datalogs, etc.), up to 256K fixed data | | | | | | | | | |
| Operator Panel | | | | | | | | | | |
| Type | Graphic STN LCD | | | | | | | | | |
| Display | Resolution: 128 x 64 pixels • Size: 2.4" | | | | | | | | | |
| Keys | 16 keys | | | | | | | | | |
| General | | | | | | | | | | |
| Power Supply | 12/24VDC | 12/24VDC | 24VDC | 24VDC | 12/24VDC | 24VDC | 12/24VDC | 12/24VDC | 24VDC | 24VDC |
| Battery | 7 years typical at 77°F, battery back-up for all memory sections and RTC | | | | | | | | | |
| Clock | Real-time clock functions (date and time) | | | | | | | | | |
| Environment | NEMA4X/IP65 (when panel mounted) | | | | | | | | | |
| standard | CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics | | | | | | | | | |

¹ In these models certain inputs are adaptable, and can function as either digital, analog, and in certain models also as thermocouple or PT100. Using adaptable inputs reduces the amount of free digital inputs. For example, V120-22-UA2 offers 12 digital inputs. Implementing 2 TC inputs requires 4 digital inputs, leaving 8 free.

² Certain inputs can function as high-speed counters, shaft-encoder inputs, or normal digital inputs.

³ This specification depends on cable length.

⁴ Certain outputs can function as high-speed or PWM outputs.

VISION 200™

Advanced PLCs with an integrated operator panel graphic or touch. Snap-in I/Os to create an All-in-One; expand up to 316 I/Os

Features:

HMI






- Up to 255 user-designed screens
- Hundreds of images per application
- HMI graphs & Trends
- Virtual alpha-numeric keypad (in V290 & V530)
- Memory and communication monitoring via HMI - No PC needed

PLC

- I/O options include high-speed, temperature & weight measurement
- Auto-tune PID, up to 12 independent loops
- Recipe programs and datalogging via Data Tables
- Date & Time-based control

Communication

- TCP/IP via Ethernet
- Send e-mail function
- SMS messaging
- GPRS/GSM
- Remote Access utilities
- MODBUS protocol support
- BACnet, M-bus – via 3rd-party converter
- CANbus: CANopen, UniCAN, CANlayer 2
- FB Protocol Utility: enables serial or TCP/IP communications with 3rd-party device; barcode readers, frequency converters, etc
- Ports: supplied with 1 RS232, 1 RS232/RS485 and 1 CANbus; 1 port may be added for serial/Ethernet
- V280-B25B & V290-B25B Not yet UL certified.

| | V230™ | V260™ | V280™ | V290™ | V530™ |
|---------------------------|---|---|--|---|---|
| |  |  |  |  |  |
| Article Number | V230-13-B20B | V260-16-B20B | V280-18-B20B | V290-19-B20B | V530-53-B20B |
| I/O Options | Snap-in I/O Modules Plug these modules directly into the back of the Vision unit to create a self-contained PLC with up to 62 I/Os. Inputs may include Digital, Analog and Temperature Measurement. Outputs may include Transistor, Relay or Analog (sold separately) | | | | |
| I/O Expansion | Local or remote I/Os may be added via expansion port or via CANbus. Expand up to 316 I/Os | | | | |
| Program | Application Memory 1MB | | | | |
| Scan Time | 30µsec per 1K of typical application | | | | |
| Operands | 4096 coils, 2048 registers, 256 long integers (32 bit), 64 double words (32 bit unsigned), 24 memory floats, 192 timers, 24 counters | | | | |
| Data Tables | 120K dynamic RAM data (recipe parameters, datalogs, etc.), up to 192K fixed data | | | | |
| Operator Panel | Type STN LCD Negative blue, STN LCD Black & White FSTN LCD | | | | |
| Display Resolution & Size | 128 x 64 pixels 3.2" | 240 x 64 pixels 5.4" | 320 x 240 pixels (QVGA), 4.7" active area | 320 x 240 pixels (QVGA), 5.7" active area | |
| Touch Screen | None | None | Resistive, Analog | | |
| Keys | 24 user labeled keys | 33 user labeled keys | 27 user labeled keys | Virtual keyboard | |
| General | Power Supply 12/24VDC | | | | |
| Battery Back-up | 7 years typical at 77°F, back-up for all memory sections and real-time clock (RTC) | | | | |
| Environment | NEMA4X/IP65 (when panel mounted) | | | | |
| Standard | CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics | | | | |



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

Features:

HMI

- Display: Color touch-screen
3.5" - 320 x 240, 4.3" - 480x272, 7" - 800 x 480
- 24 user-designed screens and 40 images per application
- HMI graphs - color-code Trends
- Built-in alarm screens
- Text String Library - easy localization
- Memory and communication monitoring via HMI - No PC needed

PLC

- I/O options: Digital, Analog, including High-speed
- Auto-tune PID, 2 independent loops
- Recipe programs and data logging via Data Tables
- Date & Time-based control

Communication

- TCP/IP via Ethernet
- Send e-mail function
- SMS messaging
- GPRS/GSM
- Remote Access utilities
- MODBUS protocol supported
- BACnet, M-bus – via 3rd-party converter
- CANbus: CANopen, UniCAN, SAE J1939, and more
- DF1 Slave
- Programming Port: RS232 for 3.5" model, USB for 4.3" & 7"
- 2 ports may be added: 1 Serial (RS232/RS485)/Ethernet & 1 CANbus



SAMBA 3.5"



SAMBA 4.3"



SAMBA 7"



It really enhanced our product's look and flexibility.



Ralph Hannmann,
President of Alyan Pump Company



| <h1>SAMBA</h1> | |
|--|---|
| Article Number | SM35-J-R20 |
| | SM43-J-R20 |
| | New SM70-J-R20 |
| Article Number | SM35-J-T20 |
| | SM43-J-T20 |
| | New SM70-J-T20 |
| | 10 Digital Inputs 2 Digital /Analog ¹ 8 Relay Outputs |
| | 10 Digital Inputs 2 Digital /Analog 8 Transistor Outputs |
| Inputs | |
| Digital | 12 |
| HSC/Shaft-Encoder/Max. Freq. Measurer ^{2,3} | 1 32-bit 30 kHz |
| Analog | 2: 10-bit, 0-10v 0-20mA, 4-20mA |
| | 2: 10-bit, 0-10v 0-20mA, 4-20mA |
| Outputs | |
| Digital | 8 relay |
| High-Speed Outputs/PWM | None |
| Analog | None |
| I/O Expansion | None |
| | Remote I/Os via CANbus |
| Program | |
| Application Memory SM35 SM43 New SM70 | Application Logic: 112kb • Images: 1 MB • Fonts: 512 k Application Logic: 112kb • Images: 2 MB • Fonts: 512 k Application Logic: 112kb • Images: 5 MB • Fonts: 512 k |
| 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 |
| Data Tables | 32K dynamic RAM data (recipe parameters, datalogs, etc.), up to 16K fixed data |
| SD Card (Micro) | None |
| Enhanced Features | Trends: graph any value and display on HMI • String Library: instantly switch HMI language |
| Operator Panel | |
| Type & Colors | TFT LCD • 65,536 colors • 16 bit resolution • Brightness - Adjustable via touchscreen or software |
| Display SM35 SM43 New SM70 | Resolution: 320 x 240 pixels • Size: 3.5" (QVGA) Resolution: 480 x 272 pixels • Size: 4.3" Resolution: 800 x 480 pixels • Size: 7" |
| Touchscreen | Resistive, Analog |
| Keys | Displays virtual keyboard when the application requires data entry |
| General | |
| Power Supply | 24VDC |
| Battery | 7 years typical at 77°F, battery back-up for RTC and system data, including variable data |
| Clock | Real-time clock functions (date and time) |
| Environment | NEMA4X/IP66/IP65 (when panel mounted) |
| Standard | CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics |

¹ When selecting NPN for the digital inputs, the 2 Analog inputs cannot be used.

² Certain inputs can function as high-speed counters, shaft-encoder inputs, or normal digital inputs.

³ This specification depends on cable length

JAZZ®

An All-in-One that is as affordable as a "smart relay" - full-function PLC combined with a textual HMI and keyboard, with up to 40 onboard I/Os

Meet the New Jazz 2 series Advantages:

- Faster performance - 30x faster
- Double the memory
- Built-in mini-USB programming port
- Ethernet via Add-on Port
- Fully compatible with current Jazz projects

Features:

HMI

- Up to 60 user-designed screens
- Multilingual: supports over 15 languages and 20 graphic symbols

PLC

- Ladder Logic programming ensures functional flexibility
- Functions include: interrupt, loops, math, store & compare functions
- Date & Time-based control
- High-speed counters & PWM outputs
- Direct temperature inputs
- Auto-tune PID, up to 4 loops

Communication

- SMS messaging via GSM
- Remote Access utilities
- PC access via MODBUS or OPC server
- Supports MODBUS protocol



Jazz®-J
Flat Panel



Jazz®
Classic Panel

“The Unitronics PLC provided the perfect solution for our need for control. Whether it was safety, mechanical or functionality, the Jazz had it all.”



Peter Spano, President of GTS

| | | JZ20 | | | | | | JZ10 | | |
|----------------------------------|---------------|--|--|--|--|--|--|---|--|--|
| Article Number | Classic Panel | JZ20-R10 | JZ20-R16 | JZ20-R31 | JZ20-T10 | JZ20-T18 | JZ20-T40 | JZ10-11-UN20 | JZ10-11-UA24 | JZ10-11-PT15 |
| | Flat Panel | JZ20-J-R10 | JZ20-J-R16 | JZ20-J-R31 | JZ20-J-T10 | JZ20-J-T18 | JZ20-J-T40 | JZ10-J-UN20 | JZ10-J-UA24 | JZ10-J-PT15 |
| | | 6 Digital Inputs 4 Relay Outputs | 6 Digital, 2 D/A, 2 Analog Inputs ¹ 6 Relay Outputs | 16 Digital, 2 D/A, 2 Analog Inputs ¹ 11 Relay Outputs | 6 Digital Inputs 4 Transistor Outputs | 6 Digital, 2 D/A 2 Analog Inputs ¹ 8 Transistor Outputs | 16 Digital 2 D/A, 2 Analog Inputs ¹ 20 Transistor Outputs | 9 Digital, 2 D/A 1 Analog 1 PT100/TC Inputs ¹ 5 Relay 2 Transistor Outputs | 9 Digital, 2 D/A 2 Analog, 2 PT100/TC Inputs ¹ 5 Relay, 2 Analog 2 Transistor Outputs | 3 Digital, 3 D/A 3 PT1000/NI1000 Inputs ¹ 5 Relay 1 Transistor Outputs |
| Inputs | | | | | | | | | | |
| Digital pnp/npn | | 6 | 8 | 18 | 6 | 8 | 18 | 11 | 11 | 6 |
| High-Speed Counters ⁴ | | 2 10kHz, 16-bit | | | | | | 1 5kHz, 16-bit | | |
| Analog | | None | 2 10 or 12-bit, 0-10V & 2 10-bit 0-20mA, 4-20mA | 2 10 or 12-bit, 0-10V & 2 10-bit 0-20mA, 4-20mA | None | 2 10-bit, 0-10V & 2 10-bit 0-20mA, 4-20mA | 2 10-bit, 0-10V & 2 10-bit 0-20mA, 4-20mA | 2 10-bit, 0-10V & 1 10-bit 0-20mA, 4-20mA | 2 10-bit, 0-10V & 2 10-bit 0-20mA, 4-20mA | 3 10-bit 0-10V ² |
| Temperature Measurement | | None | None | None | None | None | None | 1 PT100/TC | 2 PT100/TC | 3 PT1000/NI1000 |
| Outputs | | | | | | | | | | |
| Digital | | 4 relay | 6 relay | 11 relay | 4 pnp | 8 pnp | 20 pnp | 5 relay, 2 pnp | 5 relay, 2 pnp | 5 relay 1 pnp/npn |
| High-Speed Outputs/PWM | | None | None | None | 2 PWM | 2 PWM | 2 PWM | 2 PWM | 2 PWM | 1 HSO |
| Analog | | None | None | None | None | None | None | None | 2 12-bit +/- 10V, 4-20mA | None |
| Program | | | | | | | | | | |
| Ladder Code Memory | | 48K | | | | | | 24K | | |
| Memory Operands | | 256 coils, 256 registers, 64 timers | | | | | | | | |
| Operator Panel | | | | | | | | | | |
| Type | | STN LCD | | | | | | | | |
| Display Size | | 2 lines x 16 characters | | | | | | | | |
| Keys | | 16 keys, 10 of which may be user-labeled | | | | | | | | |
| General | | | | | | | | | | |
| Power Supply | | 24VDC | | | | | | | | |
| Battery | | 10 years typical at 77°F, battery back-up for RTC and system data, including variable data | | | | | | | | |
| Clock | | Real-time clock functions (date and time) | | | | | | | | |
| Environment | | NEMA4X/IP65 (when panel mounted) | | | | | | | | |
| Standard | | CE, UL | | | | | | | | |
| Programming Port | | On Board Mini USB | | | | | | Article No.: JZ-PRG sold separately | | |
| Communication | | | | | | | | | | |
| Serial | | RS232/RS485 Add-on port (isolated) Article No.: JZ-RS4 sold separately | | | | | | | | |
| Ethernet | | Ethernet add-on port Article No.: MJ20-ET1 sold separately | | | | | | Not supported | | |

¹ These models comprise a total of 10/20 inputs (model-dependent), 6/16 (model-dependent) of these may be wired, in a group, as either digital npn or pnp. 2 inputs have added functionality. Both may be wired in a group as npn, pnp, or analog (voltage) inputs. Note that it is also possible to individually wire 1 input as a pnp input, and the other as an analog input. The two remaining inputs are analog (current).

² In order to download applications and enable communications, install Jazz[®] with the appropriate Add-on Module.

³ Certain inputs can function as high-speed counters, or as normal digital inputs.

Add-on modules and accessories²

New!

| 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

M91™

An affordable All-in-One: a smart PLC with a textual HMI and keyboard, plus an onboard I/O configuration; expand up to 150 I/Os

Features:

HMI

- Up to 80 user-designed screens
- Multilingual: supports over 15 languages and 20 graphic symbols
- Scroll between pre-programmed recipes/menus
- Memory and communication monitoring via HMI - No PC needed

PLC

- Shaft-encoder inputs and PWM outputs
- Direct temperature inputs
- Auto-tune PID, up to 4 loops
- Date & Time-based control
- Database
- Print utilities
- Full source upload

Communication

- SMS messaging via GSM
- Remote access utilities
- PC access via MODBUS or OPC server
- Supports MODBUS protocol
- CANBus (in C models only)
- User-defined ASCII strings, enable communication with external devices
- RS232/RS485 built-in port



M91

| <h1>M91</h1> | | | | | | | | | | |
|---|--|--|---|--|--|---|---|---|---|---|
| Article Number | M91-2-R1 | M91-2-R2C | M91-2-R6C | M91-2-R34 | M91-2-T1 | M91-2-T38 | M91-2-T2C | M91-2-UN2 | M91-2-UA2 | M91-2-RA22 |
| | 10 Digital 1 Analog Inputs 6 Relay Outputs | 10 Digital 2 Analog Inputs 6 Relay Outputs | 6 Digital 6 Analog Inputs 6 Relay Outputs | 20 Digital 2 D/A ¹ Inputs 12 Relay Outputs | 12 Digital Inputs 12 Transistor Outputs | 22 Digital Inputs 16 Transistor Outputs | 10 Digital 2 D/A ¹ Inputs 12 Transistor Outputs | 10 Digital 2 D/A/PT100/TC ¹ Inputs 12 Transistor Outputs | 10 Digital 2 D/A/TC ¹ Inputs 10 Transistor 2 Analog Outputs | 8 Digital, 2 D/A 2 PT100/TC/ Digital ¹ Inputs 8 Relay 2 Analog Outputs |
| Inputs | | | | | | | | | | |
| Digital pnp/npn | 10 | 10 | 6 | 22 | 12 | 22 | 12 | 12 | 12 | 12 |
| HSC/Shaft-Encoder/ Max. Freq. Measurer ² | 3 10kHz 16-bit | 3 10kHz 16-bit | 1 10kHz 16-bit | 3 30kHz ³ 16-bit | 2 10kHz 16-bit | 2 30kHz ³ 16-bit | 3 10kHz 16-bit | 2 10kHz 16-bit | 1 30kHz ³ 16-bit | 1 30kHz ³ 16-bit |
| Analog | 1 10-bit 0-10V, 0-20mA 4-20mA | 2 10-bit 0-10V, 0-20mA 4-20mA | 6 10-bit 2 0-10V 0-20mA, 4-20mA and 4 0-20mA 4-20mA | 2 10-bit 0-10V, 0-20mA 4-20mA | None | None | 2 10-bit 0-10V, 0-20mA 4-20mA | 2 14-bit 0-10V, 0-20mA 4-20mA 2 PT100/TC | 2 14-bit 0-10V, 0-20mA 4-20mA 2 TC | 2 14-bit 0-10V, 0-20mA 4-20mA |
| Temperature Measurement | None | None | None | None | None | None | None | None | None | 2 PT100/TC |
| Outputs | | | | | | | | | | |
| Digital | 6 relay | 6 relay | 6 relay | 12 relay | 12 pnp | 16 pnp | 12 pnp | 12 pnp | 10 pnp | 8 relay |
| High-Speed Outputs/ PWM ⁴ | None | None | None | None | 2, first 2 outputs can function as HSO, 0.5kHz maximum | | | | | None |
| Analog | None | None | None | None | None | None | None | None | 2 12-bit: 0-10V, 4-20mA | 2 12-bit: 0-10V, 4-20mA |
| I/O Expansion | I/Os may be added via expansion port. Expand up to 150 I/Os | | | | | | | | | |
| Program | | | | | | | | | | |
| Application Memory | 36K (virtual) Ladder code capacity | | | | | | | | | |
| Memory Operands | 256 coils, 256 registers, 64 timers | | | | | | | | | |
| Database | 1024 integers, (indirect access) | | | | | | | | | |
| Operator Panel | | | | | | | | | | |
| Type | STN LCD | | | | | | | | | |
| Display Size | 2 lines x 16 characters | | | | | | | | | |
| Keys | 15 keys | | | | | | | | | |
| General | | | | | | | | | | |
| Power Supply | 12/24VDC | 12/24VDC | 24VDC | 24VDC | 12/24VDC | 24VDC | 12/24VDC | 12/24VDC | 24VDC | 24VDC |
| Battery | 7 years typical at 77°F, battery back-up for all memory sections and RTC | | | | | | | | | |
| Clock (RTC) | Real-time clock functions (date and time) | | | | | | | | | |
| Environment | NEMA4X/IP65 (when panel mounted) | | | | | | | | | |
| Standard | CE, UL | | | | | | | | | |
| Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics | | | | | | | | | | |

¹ In these models certain inputs are adaptable, and can function as either digital, analog, and in certain models also as thermocouple or PT100. Using adaptable inputs reduces the amount of free digital inputs. For example, M91-2-UA2 offers 12 digital inputs. Implementing 2 TC inputs requires 4 digital inputs, leaving 8 free.

² Certain inputs can function as high-speed counters, shaft-encoder inputs, or normal digital inputs.

³ This specification depends on cable length.

⁴ Certain outputs can function as high-speed or PWM outputs.

* Additional models (M90 models) are listed on the Unitronics web site.

I/O Expansion Modules

CE/UL

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

Vision series support both local & remote I/O modules. M91 supports local modules only.

Digital Modules

| IO-DI8-T08 | IO-DI8-R04 | IO-DI8-R08 | EX90-DI8-R08 ³ | IO-DI16 |
|--|---|---|--|---|
| 24VDC* 8 Digital Inputs , pnp/npn, including one High-speed Counter 8 pnp Transistor Outputs | 24VDC* 8 Digital Inputs , pnp/npn, including one High-speed Counter 4 Relay Outputs | 24VDC* 8 Digital Inputs , pnp/npn, including one High-speed Counter 8 Relay Outputs | 24VDC 8 Digital Inputs , pnp, including one High-speed Counter 8 Relay Outputs | 24VDC* 16 Digital Inputs , pnp/npn, including one High-speed Counter |
| IO-T016 | IO-R08 | IO-R016 | IO-DI8ACH | |
| 24VDC 16 pnp Transistor Outputs | 24VDC* (power supply) 8 Relay Outputs | 24VDC* (power supply) 16 Relay Outputs | 110/220 VAC 8 AC Inputs | |

High-speed Remote I/O Module

| EXF-RC15 ^{2,5} |
|--|
| 24VDC 9 Digital Inputs pnp/npn, including 3 high-speed counter, 4 npn Transistor Outputs , may function as high-speed PWM/PTO, 2 relay outputs |

*Also available as 12VDC – contact us for part number

Analog, Temperature and Weight/Strain Measurements

| IO-AI4-A02 | IO-PT400 | IO-PT4K | | |
|---|--|---|---|---|
| 24VDC (power supply) 4 Analog Inputs 12-bit, 0-10V, 0-20mA, 4-20mA, 2 Analog Outputs , 12-bit+sign, ± 10V, 0-20mA, 4-20mA | 4 PT100/NI100/NI120 Inputs Range PT100: -58°F ÷ 860°F (-50°C ÷ 460°C) Range NI100: -58°F ÷ 449°F (-50°C ÷ 232°C) Range NI120: -58°F ÷ 341°F (-50°C ÷ 172°C) 12-bit | 4 PT1000/NI1000 Inputs Range PT1000: -58°F ÷ 860°F (-50°C ÷ 460°C) Range NI1000: -58°F ÷ 449°F (-50°C ÷ 232°C) 12-bit | | |
| IO-A06X | IO-LC1 ⁴ | IO-LC3 ⁴ | IO-ATC8 | IO-AI8 |
| 24VDC (power supply) 6 Isolated Analog Outputs 0-10V, 0-20mA, 4-20mA 12-bit | 12/24VDC (Power Supply) 1-3 Loadcell / Strain gauge Inputs Input voltage ranges: ± 20mV, ± 80mV Excitation: AC/DC 1 Digital pnp Input 2 pnp Outputs Not supported by all PLCs | | 8 Thermocouple/ Analog Inputs T/C J, K, T, B, E, N, R, S, 0.1° Resolution, 0-10V, 0-20mA, 4-20mA, 12/14-bit | 8 Analog Inputs 0 ÷ 10V / 0 ÷ 20mA 14-bit 0-10V, 0-20mA, 4-20mA 12/14-bit |

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 ^{1,5} |
| Remote I/O module adapter, via CANbus. Connect multiple adapters to a single PLC; connect up to 8 modules per adapter. Supports both 12/24 VDC. |

- Number of supported I/Os & I/O modules varies according to PLC model.
- The EXF-RC15 functions as a CANbus node in a Vision UniCAN network. The EXF-RC15 is stand-alone and does not support I/O Expansion Modules.
- 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.
- IO-LCx models are supported by the M91 & Vision series. Not supported by the M90 series.
- Supported by Vision series. Not supported by M91 series.

XL Digital/Analog Modules

| Functions as both I/O module and adapter* | | | |
|--|--|---|---|
| IO-D16A3-R016 | IO-D16A3-T016 | EX-D16A3-R08 | EX-D16A3-T016 |
| 24VDC, 16 Digital Inputs pnp/npn, including two High-speed Counters, 3 Analog Inputs , 10-bit, 0-20mA, 4-20mA, 16 Relay Outputs | 24VDC, 16 Digital Inputs pnp/npn, including one High-speed Counter, 3 Analog Inputs , 10-bit, 0-20mA, 4-20mA, 15 pnp + 1 pnp/npn Transistor Outputs including 1 HSO | 24VDC, built-in Expansion Module Adapter, 16 Digital Inputs , pnp/npn, including two High-speed Counters, 3 Analog Inputs 10-bit, 0-20mA, 4-20mA, 8 Relay Outputs | 24VDC, built-in Expansion Module Adapter, 16 Digital Inputs , pnp/npn, including one High-speed Counter, 3 Analog Inputs 10-bit, 0-20mA, 4-20mA, 15 pnp + 1 pnp/npn Transistor Outputs including 1 HSO |

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

Snap-in I/O Modules

CE/UL



Plug a Snap-in module directly into the back of a Vision PLC.
Compatible with all V200, V500, V1040 and V1210 Vision series models.

| Article No. | V200-18-E1B | V200-18-E2B | V200-18-E3XB | V200-18-E4XB | V200-18-E5B | V200-18-E6B | V200-18-E46B ¹ | V200-18-E62B ¹ |
|----------------------------|---|---|--|--|---|---|--|---|
| Digital Inputs (isolated) | 16 npn/pnp (including 2 Shaft-encoder inputs) | 16 npn/pnp (including 2 Shaft-encoder inputs) | 18 npn/pnp (including 2 Shaft-encoder inputs) | 18 npn/pnp (including 2 Shaft-encoder inputs) | 18 npn/pnp (including 2 Shaft-encoder inputs) | 18 npn/pnp (including 2 Shaft-encoder inputs) | 18 npn/pnp (including 2 Shaft-encoder inputs) | 30 npn/pnp (including 2 Shaft-encoder inputs) |
| Analog Inputs | 3 10-bit 0-10V, 0-20mA 4-20mA | 2 10-bit 0-10V, 0-20mA 4-20mA | 4 isolated 12-14-bit (software dependent) 0-10V, 0-20mA 4-20mA and/or TC/PT100 | 4 isolated 12-14-bit (software dependent) 0-10V, 0-20mA 4-20mA and/or TC/PT100 | 3 10-bit 0-10V, 0-20mA 4-20mA | 3 10-bit 0-10V, 0-20mA 4-20mA & 2 14-bit 0-10V, 0-20mA 4-20mA and/or TC/PT100 | 9 3 10-bit, 0-10V 0-20mA, 4-20mA 6 14-bit 0-10V, 0-20mA 4-20mA | 2 10-bit 0-10V, 0-20mA 4-20mA |
| Temperature Measurement | None | None | and/or TC/PT100 | and/or TC/PT100 | None | and/or TC/PT100 | None | None |
| Digital Outputs (isolated) | 4 npn/pnp (including 2 High-speed outputs) | 4 npn/pnp (including 2 High-speed outputs) | 2 npn/pnp High-speed | 15 pnp 2 npn/pnp (including 2 High-speed) | 15 pnp 2 npn/pnp (including 2 High-speed) | 2 npn/pnp High-speed | 2 (including 2 High-speed) | 28 pnp 2 npn/pnp High-speed |
| Relay Outputs (isolated) | 10 | 10 | 15 | None | None | 15 | 15 | None |
| Analog Outputs | None | 2 12-bit 0-10V, 0-20mA 4-20mA | 4 12-bit 0-10V, 4-20mA isolated | 4 12-bit 0-10V, 4-20mA isolated | None | 2 12-bit 0-10V, 4-20mA isolated | 2 12-bit 0-10V, 4-20mA isolated | None |

¹V200-18-E46B, V200-18-E62B are not yet UL certified

Additional COM Modules

Enhance Vision's communication capabilities¹

| Vision Model | Ethernet | RS232/RS485 | Isolated RS232/RS485 | CANbus | Profibus |
|--------------------------------|--|-------------|----------------------|--|--------------------------|
| SAMBA | V100-17-ET2 | V100-17-RS4 | V100-17-RS4X | V100-17-CAN | None |
| V130, V350, V430 | V100-17-ET2 V100-S-ET2 ² | V100-17-RS4 | V100-17-RS4X | V100-17-CAN V100-S-CAN ² | V100-17-PB1 |
| V200, V500, V700, V1040, V1210 | V200-19-ET2 | V200-19-RS4 | V200-19-RS4-X | None | V100-17-PB1 ³ |

| GSM-KIT-41J |
|--|
| Kit Including Enfora GSM1318 Q. Band Modem |

| GSM-KIT-16J |
|-----------------------------------|
| KIT, MODEM GPRS, CINTERION, BGS2T |

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

DIN-rail Power Supplies

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



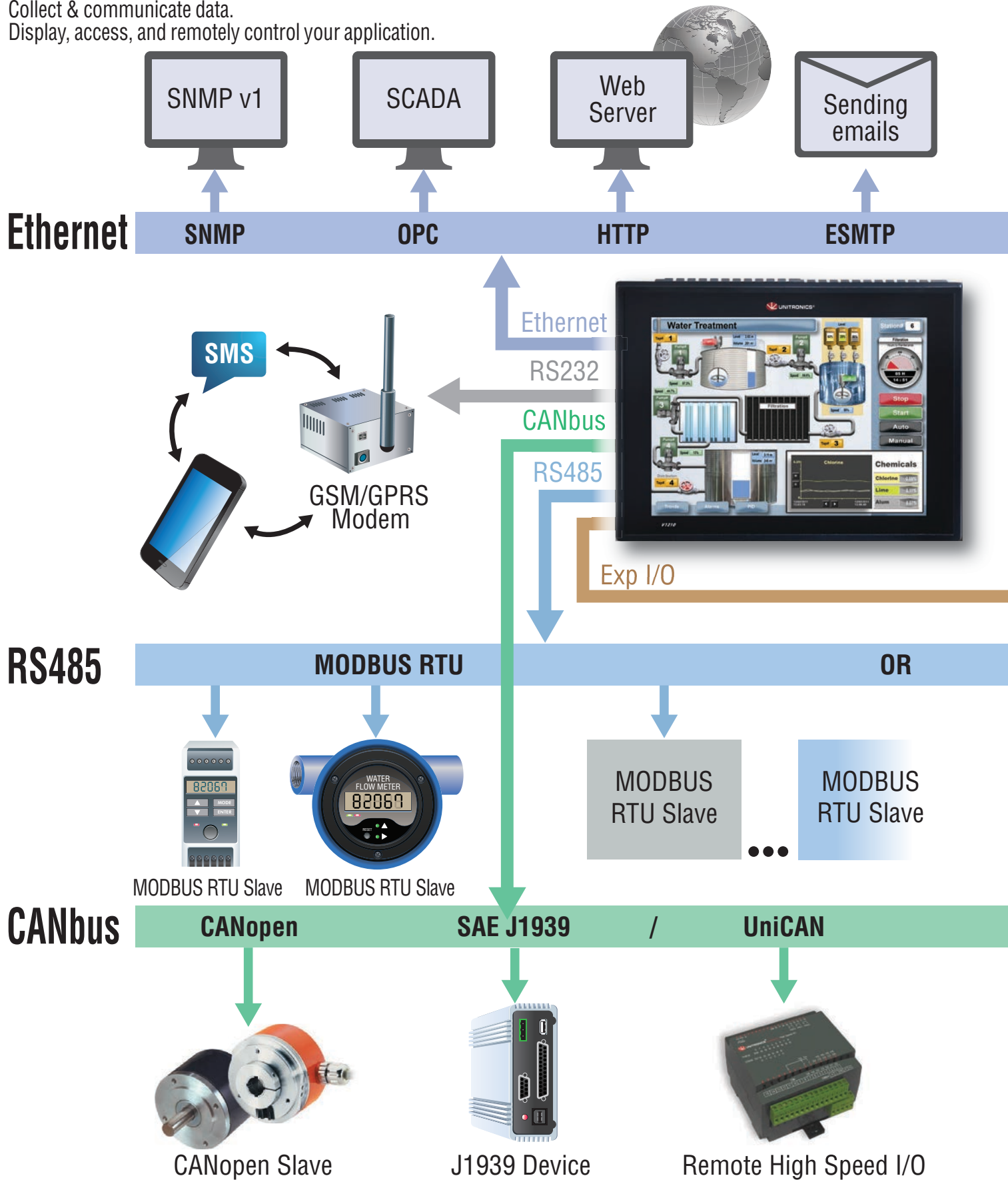
¹ V200/V500/V1040/V1210: 1 optional port for serial or Ethernet
V130/V350: 1 optional port for serial or Ethernet & 1 optional port for CANbus/Profibus

² Extended temperature cards, operational temperature: -30°C to 60°C

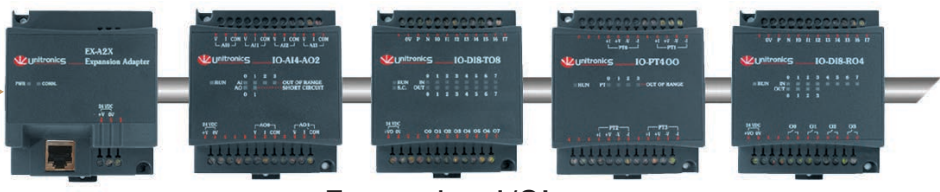
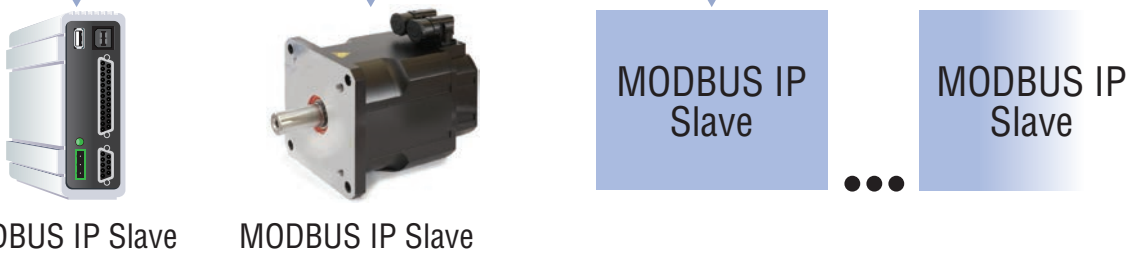
³ Only for V700

Configure your Network

Collect & communicate data.
Display, access, and remotely control your application.



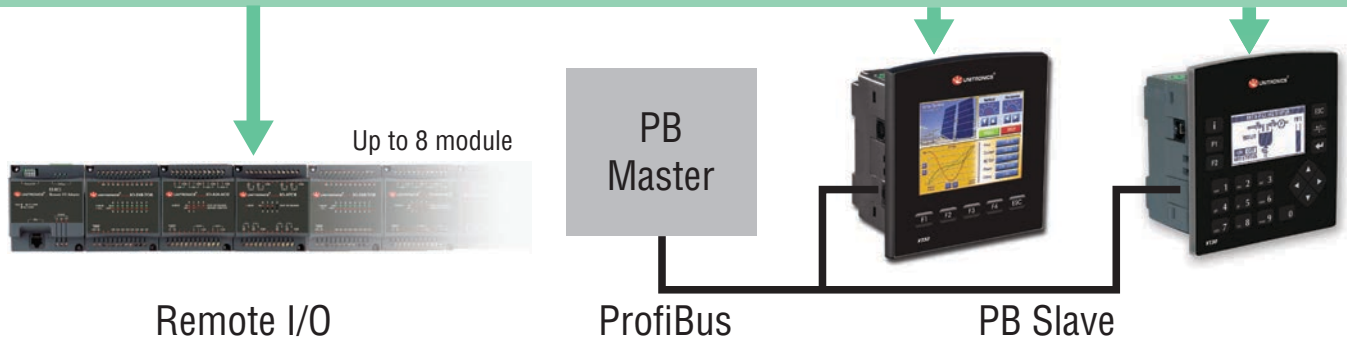
This image is for illustrative purposes only. Features and capabilities vary according to model.



FB Protocol



UniCAN



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