Color your Vision™

Vision570™ PLC & Color HMI

UNITRONICS®

Vision570™ PLC & Color touchpanel HMI

Add a splash of color to your automated system. A drop of paint to your process. Watch the operator interface spring to life, & the operator instructions become bright & clear.
The new Vision570™ integrated PLC & HMI enables you to add color into your system while cutting programming time, hardware, wiring, & space requirements.

Red-hot PLC Features

- I/O options: via snap-in & expansion modules including HS I/Os, temperature & weight measurement
- Application memory: 2MB · Fonts: 1MB · Images: 6MB
- Scan time: 9µsec per 1K of typical application
- Auto-tune PID, up to 20 independent loops
- Recipe programs & datalogging via Data Tables

Cool-blue HMI Features

- 5.7" Color Touchpanel, QVGA
- 256 colors, TFT LCD display
- Up to 1024 displays & 500 images per application
- HMI graphs - color-code application trends
- Image library containing hundreds of images
- Virtual alpha-numeric keypad

Green-light Communication

- Ethernet via TCP/IP (optional)
- GPRS/GSM/SMS support
- MODBUS (Master/Slave)
- CANopen (Master) & UniCAN
- Remote access utilities
- 2 isolated RS232/RS485 ports

The Vision570™ package includes:

PLC with embedded HMI Color touchscreen, programming software CD, connectors, mounting hardware, and communication cable.

Ethernet via TCP/IP

Vision's optional Ethernet port enables you to use existing LAN wiring to communicate with remote devices via MODBUS, or any other TCP/IP device protocol.

Use the Ladder Function Blocks to easily implement:

- PLC to PLC data exchange
- Access to external slave devices that support TCP/IP
- SCADA control (PC access) via MODBUS IP or OPC

Cellular Remote Control

The Vision570™ can send & receive SMS messages to/from any GPRS/GSM cellular phone. The controller can send an SMS to report events. You can send an SMS to the controller in order to modify parameters in your system, or to request information.

The GPRS/GSM-enabled Vision570™:

- Sends & receives SMS messages containing both fixed text and variable data
- Sends messages to any number of phone numbers, & routes different messages to different numbers
- Protects your system: prevents unauthorized callers
- Auto-acknowledges received messages
- Answers data requests from your cell phone
- Contains up to 1K of user-defined messages

Remote Access

Use your PC to access remote Vision570™ units, via network connections, Ethernet or GPRS/GSM/Landline modem.

Powerful Remote Access utilities enable you to operate the controllers (via Ladder software, or independently), download or debug PLC programs, read/write/store online operands and database values, & send application data to Excel according to a user-defined schedule.

MODBUS

Create a stable multi-device network over TCP/IP or serial wiring.
Establish master-slave communications between Vision570™ and any connected device that supports MODBUS protocol.
Any Vision570™ in the network can function as either master or slave.

CANbus

CANopen

Communicate with remote devices, ranging from simple, fast I/O-related devices such as encoders, to complex frequency converters. Compliant with CiA DS 301.

UniCAN

Use Unitronics' protocol to integrate up to 60 PLCs into a high-speed network, and to transfer up to 512 MI register values during a single program scan.

Additional Communication Protocols

The "Protocol" Function Block enables Vision570™ to communication with a broad variety of external devices, such as bar-code readers and servos, over serial or TCP/IP networks.

OPC Server/DDE Server

Use RS232 to gain PC access to your Vision OPLC™ network.
Unitronics' OPC/DDE server enables the Vision570™ to exchange data with any Windows-based application.

A Broad Spectrum of Features

Recipes & Menus

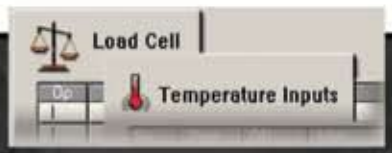
- Up to 20 PID loops, including auto-tune, ramp-soak programmer and bumpless transfer
- Info Mode: Troubleshoot via the HMI panel — no PC needed
- Scroll between pre-programmed recipes, and switch between operating modes
- Shaft encoder inputs and PWM outputs
- Temperature, weight and strain measurement
- Rich Image Library: design your HMI application in a snap
- Application requires data entry? The V570™ virtual keypad pops up automatically

PID

HS I/Os

Image Library

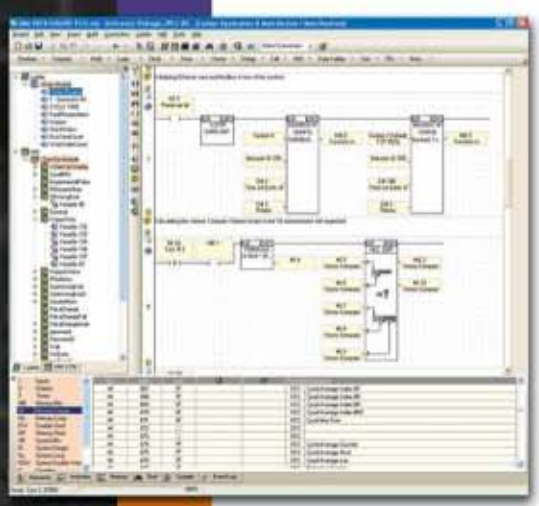
Virtual Keypad



Temp & Weight

Info Mode

Color your Control Application



VisiLogic Ladder software - one program for both PLC and HMI applications

PLC Editor:

- Click and drop Ladder elements
- Modular program function; create subroutines and call them into your program
- Built-in Function Blocks and utilities save application code and simplify complex tasks
- Embedded modem support for remote access and SMS messaging

HMI Editor:

- Assign "Touch" properties to any screen element
- Create and conditionally display operator messages that contain text and images
- Use color images and graphs to reflect current variable values and historical trends
- Assign functions to softkeys and touchscreen elements

Technical Specifications

Graphic Display Screen	Display Type	CSTN LCD	TFT LCD
	Colors	256	
	Display Resolution & Size	320x240 pixels (QVGA), 5.7" active area	
	Touchscreen	Resistive, analog	
	Brightness	Adjustable via touchpanel or software	
	HMI Displays	1024 displays, 500 images per application	
Program	Application Memory	Application Logic: 2MB • Images: 6MB • Fonts: 1MB	
	Scan Time	9µsec per 1K of typical application	
	Memory Bits (coils)	4096	
	Memory Integers (registers)	2048	
	Long Integers (32 bit)	256	
	Double Word (32 bit unsigned)	64	
	Memory Floats	24	
	Timers	192	
	Counters	24	
	Data Tables	120K dynamic data (recipe parameters, datalogs, etc.), 192K fixed data (read-only data, ingredient names, etc.)	
Communication	RS232/RS485	2 isolated ports. Select RS232 or RS485 via DIP switch	
	Ethernet	1 optional port (sold separately, article No. V200-19-ET1). TCP/IP supports: PC to PLC remote access and programming • MODBUS: PLC to PLC, and PLC to external device • Protocol FB: PLC to any external device	
	CANbus	1 isolated port	
	CANopen	CANopen Master, supports PDO, SDO, NMT. CiA DS 301	
	UniCAN	Multi-master CANbus. Network up to 60 Visions and transfer up to 1024 bytes per program scan	
	MODBUS	Supports MODBUS protocol, Master/Slave	
	GSM	SMS messages to/from any quantity of phone numbers. Supports programming and data acquisition	
	GPRS	Use a GPRS modem to establish a Vision-PC data connection via Internet, and transmit IP packets of data over the cellular network, SMS-enabled	
General	PID	Up to 20 independent PID loops, including internal auto-tune, ramp-soak programmer and bumpless transfer	
	Info Mode	Troubleshoot, view, and edit system data in real-time — directly from the HMI panel via built-in Info Mode screens. Supported by Remote Access	
	Power Supply	24VDC	
	Battery back-up	7 years typical at 25°C, back-up for all memory sections & real-time clock (RTC). External battery replacement.	
	Environment	IP65/NEMA4X (for panel, when mounted)	
	Expansion option	Up to 128 additional I/Os, via plug-in expansion modules (number may vary according to expansion model)	
	Dimensions	197 x 146.6 x 68.5 mm (7.75" x 5.77" x 2.7")	
	Article Number	V570-57-C30B	V570-57-T40B

Snap-in I/O Modules

Article Number	V200-18-E1B	V200-18-E2B	V200-18-E3XB	V200-18-E4XB	V200-18-E5B
Digital Inputs (Isolated)	16 pnp/npn Inputs (24VDC)	16 pnp/npn Inputs (24VDC)	18 pnp/npn Inputs (24VDC)	18 pnp/npn Inputs (24VDC)	18 pnp/npn Inputs (24VDC)
High-speed Counter/Shaft Encoder/Frequency Measurer*	Two 10 kHz pnp/npn Inputs	Two 10 kHz pnp/npn Inputs	Two 10 kHz pnp/npn Inputs	Two 10 kHz pnp/npn Inputs	Two 10 kHz pnp/npn Inputs
Analog Inputs	Three 10 bit Inputs, 0-10V, 0-20mA, 4-20mA	Two 10 bit Inputs, 0-10V, 0-20mA, 4-20mA	Four Isolated 14 bit Inputs, 0-10V, 0-20mA, 4-20mA. May also be set to Thermocouple or PT100 (Res. 0.1°)	Four Isolated 14 bit Inputs, 0-10V, 0-20mA, 4-20mA. May also be set to Thermocouple or PT100 (Res. 0.1°)	Three 10 bit Inputs, 0-10V, 0-20mA, 4-20mA
Temperature Measurement	None	None			None
Digital Outputs (Isolated)	4 pnp/npn Outputs (24VDC)	4 pnp/npn Outputs (24VDC)	2 pnp/npn Outputs (24VDC)	2 pnp/npn Outputs (24VDC)	2 pnp/npn Outputs (24VDC)
	10 Relay Outputs	10 Relay Outputs	15 Relay Outputs	15 pnp Outputs (24VDC)	15 pnp Outputs (24VDC)
High-speed Output/ PWM	2 Transistor Outputs are high-speed outputs, 50 kHz for npn / 2 kHz for pnp				
Analog Outputs	None	Two 12 bit Outputs, 0-10V, 0-20mA, 4-20mA	Four Isolated 12 bit Outputs: 0-10V, 4-20mA	Four Isolated 12 bit Outputs: 0-10V, 4-20mA	None

* Certain digital inputs can function as high-speed counters, shaft-encoder inputs, frequency measurers

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