PLC
+HMI
ALL IN ONE™

www.unitronics.com

SAMBA™

Full-function PLC with built-in high resolution 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" - 480 x 272, 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

> “It really enhanced our product’s look and flexibility.”
>
> **Ralph Hannmann,**
> President of Alyan Pump Company

CE/UL

Article Number	SAMBA			
	SM35-J-R20	SM35-J-RA22	SM35-J-T20	SM35-J-TA22
	SM43-J-R20	SM43-J-RA22	SM43-J-T20	SM43-J-TA22
	SM70-J-R20 New	SM70-J-RA22 New	SM70-J-T20 New	SM70-J-TA22 New
	10 Digital Inputs **2** Digital /Analog[1] **8** Relay Outputs	**8** Digital Inputs **2** Digital /Analog **2** pt100/TC/Digital Inputs **8** Relay **2** Analog Outputs	**10** Digital Inputs **2** Digital /Analog **8** Transistor Outputs	**8** Digital Inputs **2** Digital /Analog **2** pt100/TC/Digital Inputs **8** Transistor Outputs **2** Analog Outputs
Inputs				
Digital	**12**	**12**	**12**	**12**
HSC/Shaft-Encoder/Max. Freq. Measurer[2,3]	**1** 32-bit 30 kHz	**1** 32-bit 30 kHz	**3** 32-bit 30 kHz	**1** 32-bit 30 kHz
Analog	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 (2modes) Normal: 14-bit Fast: 12-bit, 0-10v 0-20mA, 4-20mA
Temperature Measurement	None	And as 2 PT100/TC	None	And as 2 PT100/TC
Outputs				
Digital	**8** relay	**8** relay	**8** pnp	**8** pnp
High-Speed Outputs/PWM	None	None	Outputs 0 to 6 can be used as PWM outputs 0.5 kHz	Outputs 0 to 4 can be used as PWM outputs 0.5 kHz
Analog	None	2 12bit, 0-10v, 4-20mA	None	2 12bit, 0-10v, 4-20mA
I/O Expansion				
	Remote I/Os via CANbus			
Program				
Application Memory SM35	Application Logic: 112kb • Images: **1 MB** • Fonts: 512 k			
Application Memory SM43	Application Logic: 176kb • Images: **2 MB** • Fonts: 512 k			
New SM70	Application Logic: 176kb • 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	Resolution: 320 x 240 pixels • Size: 3.5” (QVGA)			
Display SM43	Resolution: 480 x 272 pixels • Size: 4.3”			
New SM70	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 25°C, 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.