

Siro SR07S System

PLC SYSTEM WITH CANBUS INTERFACE

The Siro model SR07S is an operator panel with a 7" (800x480) color LCD with resistive touch screen. The CTXA9 board, designed and manufactured by Mitrol performs all the PLC, and HMI functions, and delivers 2 independent CanBUS lines.

The system, in its base configuration, has only connections for the 24V power supply, and the CanBus output ports. Interface modules, for input and output signals, and actuators connect to the CanBus.

The following connectors are available:

- 2 clamps for 24V power supply
- 2 removable, 3 way clamps for CanBus lines
- 2 High Speed 2.0 USB connectors
- 1 10/100 Mbit ethernet connection.

The keyboard is not present, and all the operator functions are made available on the touch screen. A virtual keyboard is shown on screen automatically in numerical, or alphanumeric form, according to requirements.

The system is based on the CTXA9 board, specifically designed to run both the real time controls for an industrial plant, and the operator interface management software.

The processor directly handles CanBus communications on the field bus with a CanOpen protocol complete master software.

The real time processor software is stored on a flash disk, and uploaded to RAM at every boot so updating it is possible over the network, and even in remote assistance.

The following features are available in respect to the real time control:

- Linux operating system with realtime Xenomai extensions
- Loader for the main CPU firmware
- Software for multitasking execution of PLC programs developed according to IEC 61131-3
- Basic CanOpen protocol with standard DS301 profile implementation that, besides supporting product specific standard profiles, allows direct, and easy interfacing with any CanBus device
- CanOpen protocol for the following product standards: DS401, DS402, DS404 e DS406

For developing, and debugging of PLC programs the integrated environment LogicLab is available. This tool allows development of software in all the 5 levels of the IEC 61131-3 standard. The main features follow:

- Integrated text editor for IL (Instruction List), and ST (Structured Text) languages
- Integrated graphical editor for LD (Ladder Diagram), FB (Function Bloc), and SFC (Sequential Function Chart)
- Optimized compiler that directly generates executable machine code
- Debug via graphical, or textual watch windows
- Real-time debugging via triggers, and oscilloscope, that allow sampling of the variable's values in different points



of the program

- Library management (creation, use, single block import, etc.)
- Network communication with the target even with remote assistance
- Basic axis movement library

For the operator interface the integrated environment PageLab is available, which makes it possible to design, and build pages, and subpages, according to the user needs. The main features follow:

- Basic controls: edit boxes, buttons, and base graphics (line, and rectangles)
- Graphical controls: bitmaps, animations, cartesian plots, trends, and histograms
- Character font management
- Dynamic multitasking management
- Support for ST language IEC scripts to handle events associated to controls, and pages in general
- Handling of global, local, and CNC/PLC provided variables
- Diagnostic pages prebuilt by Mitrol

In both environments, the user interface, and the available tools, ease the programmer's work, and minimize development times.

Technical specifications

Dimensions (H x W x D)	152 x 212 x 45 mm	
Power supply	24 V (18 – 36 V)	
Current absorption	0.7 A Max	
CPU	Type	iMX6 Freescale 32bit 1Ghz
	DDR3 memory	512 MByte
	FLASH NAND memory	256 MByte
	Ethernet port	10/100 Mbit
	USB ports	2 Full Speed 2.0
	CanBus controller	2 integrated
	Solid state disk	uSD
LCD	7" color TFT	
Touch Screen	Resistive, 4 wires	
CanBus Baud Rate	125 kbps / 250 kbps / 500 kbps / 1 Mbps	
Marking	CE	
Operating temperature	0...50 °C	
Storage temperature	-20...85 °C	
Warehousing humidity	Max 95% non-condensing	
Front panel protection grade	IP54	