Procontrol P13 Processor Modules
Programmable Processor
70PR07A

The 70PR07a is an updated Procontrol P13 local bus based programmable processor. While maintaining full compatibility with existing command sets and interfaces, the new 70PR07a offers an additional high speed Ethernet engineering interface, accelerated instruction execution, a reduced footprint and streamlined redundancy operation. The 70PR07a utilizes the latest DSP, CPU and memory technology. In some cases the 70PR07a can execute three times more instructions in the same cycle than earlier processors.

The 70PR07a may be employed for a variety of control and automation duties. It is operated individually or in conjunction with other processing module in a local bus station. The module operates with the bus traffic director 70BV05 and controls I/O based on stored user programs (AWL), communications with the P13 local bus. The 70PR07 mounts into a local bus sub rack and receives communications and power from the local bus back plane.

The Ethernet port on the front of the 70PR07a employs a custom application protocol. Communications settings and I/O access for the 70PR07a can be managed using P13 engineering tools through this facility or via the local bus. Each unit is configurable for code switch address, and TCP/IP address in software. Additionally, any of the standard service commands may be executed through the service interface. All of the memory regions of the 70PR07a are viewable and, where allowed, modifiable. Internal and external signals of an AWL can be simulated from the P13 engineering tools.

The 70PR07a card is primarily composed of a custom local bus UART chip, various volatile and non-volatile memories, two digital signal processors and a 32-bit communications processor.

Feature Highlights
- New state-of-the art DSP technology for application processing
- Flash-based configuration memory (on-board)
- High speed Ethernet interface (100 Mbit/s)
- Configuration download via Ethernet or local bus-service access
- Seamlessly integrated into all P13 engineering tools
- Simulation of all external (local bus) and internal (AWL) signals
- Designed for high-performance, low-maintenance, and outmost reliability
- Backward-compatible to all earlier P13 processor modules
- Certified to be used in a SIL3 rated safety application (according IEC 61508)

Technical Data

Type	70PR07a
Identification number	2VAA007611R0001
Ethernet Port	10/100 Mbit/s
Transport Protocol	TCP/IP
Application Protocol	Custom (Engineering)
AWL Memory Size	32K Words
KWL Memory Size	64K Words
Past State Value Memory	4K Words
Internal Memory Size	2K Words
Permanent Parameter Memory	256 Words
AWL and KWL Commands	Same as 70PR05b-ES
Program Cycle Time	5, 10, 20 or 40ms
Local Bus Scan	5, 10, 20 or 40ms
Process I/O	256 Words
Service I/O	16 Words
Special Signals	240 Words
Safety Rating	Designed to comply with SIL3 according IEC 61508
Redundant Operation	Yes, Hot Standby
Past State Value Channel	Single Back Plane connection
Module Operating Temp	0 to 60 °C
Relative Humidity	0 – 95% (Non-Condensing)
Min Operating Voltage	+19.5Vdc
Max Operating Voltage	+30Vdc
Power Consumption	12 W typ.
Dimensions	P13 Standard Card; 2T wide

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