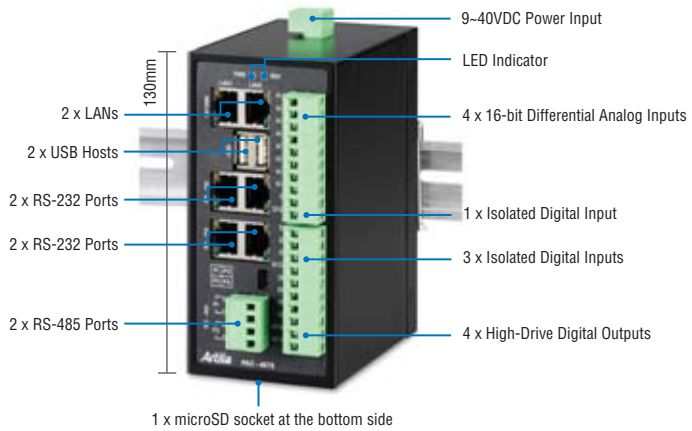
PAC-4070 Linux-based ARM9 Programmable Automation Controller



Features

- ATMEL 400MHz AT91SAM9G20 CPU w/ MMU
- Linux kernel 2.6.29 with file system
- 64MB SDRAM and 256MB NAND Flash
- GNU C / C++ toolchain is included
- 4 x 16-bit multiplexed differential analog inputs
- 4 x 2500Vrms 500mA High-Drive digital outputs
- 4 x 2500Vrms Opto-isolated bipolar digital inputs
- 2 x 10/100Mbps Ethernet ports
- Up to 4 x RS-232 ports, 921.6Kbps max.
- 2 x 2500Vrms isolated RS-485 ports, with auto direction control

H/W Specifications

CPU / Memory

- CPU: ATMEL 400MHz AT91SAM9G20 w/ MMU
- Memory: 64MB SDRAM, 256MB NAND Flash
- DataFlash®: 2MB, for system backup

Network Interface

- No. of Ports: 2
- Type: 10/100Mbps Ethernet, RJ45 connector
- Protection: 1.5KV magnetic isolation

TTY (Serial) Ports

- Port 1: Can be set as RS-232 or RS-485, software selectable
  RS-232: TX, RX, RTS, CTS, GND
  RS-485: D+, D- (must wiring to terminal block)
- Port 2: Can be set as RS-232 or RS-485, software selectable
  RS-232: TX, RX, RTS, CTS, DSR, DTR, DCD, GND
  RS-485: D+, D- (must wiring to terminal block)
- Port 3, 4: RS-232 only
  RS-232: TX, RX, RTS, CTS, GND

Common UART Parameters

- Baud Rate: Up to 921.6Kbps
- Parity: None, Even, Odd, Mark, Space
- Data Bits: 5, 6, 7, 8
- Stop Bits: 1, 1.5, 2
- Flow Control: RTS / CTS, XON / XOFF, None

USB Ports

- Host Ports: 2, USB 2.0 compliant
- Client Port: 1, USB 2.0 compliant
- Speed: Supports 12Mbps full-speed mode

SD Socket (Secure Digital Card)

- Type: microSD
- No. of Sockets: 1, at the bottom side
- Storage Capacity: Up to 32GB
- Compatibility: SD memory card specification 1.0

Real Time Clock

- Chip: ST M41T81
- Backup Battery: Lithium, 48mAh, on-board

Watchdog Timer

- CPU built-in watchdog timer, used by Linux kernel

Debug Port

- Type: RS-232 serial console, inside the box
- Signals: Tx, Rx, GND

High-precision Analog Input

- A/D Converter: AD7712 (Analog Devices)
- No. of Channels: 4, multiplexed, differential
- Sampling Speed: 10 readings per second
- Input Range (selected by software):
  0~150mV, 0~500mV, +/-150mV, +/-500mV
  0~1V, 0~5V, 0~10V, +/-1V, +/-5V, +/-10V
  0~20mA
- Resolution: 16-bit
- Accuracy: +/-0.1%
- Voltage Input Mode: Differential, 100db CMR
- Voltage Input Impedance: 20M Ohms
- Current Input Impedance: 120 Ohms
- Isolation Protection: 1500VDC

Isolated Digital Input

- No. of Channels: 4, supporting bipolar input
- Opto-isolation: 2500Vrms
- Logical High: 5~24VDC
- Logical Low: 0~1.5VDC
- Response Time: 20μs
- Input Resistance: 1.2k ohms@0.5W

High-Drive Digital Output

- No. of Channels: 4
- Source Driver: UDN2981A (Allegro MicroSystems)
- Source Voltage (VDD): 5~50VDC
- Output Current: 500mA max.
- Isolation: 2500Vrms

General

- Power Input Range: 9~40VDC
- Power Consumption: 500mA@12VDC, 6 Watts max.
- Operating Temperature: 0~70°C (32~158°F)
- EMC Regulation: CE Class A, FCC Class A
- Dimensions (W x H x D): 65 x 130 x 102.5mm
- Mounting: DIN RAIL mountable

Ordering Information

- **PAC-4070**
  Linux-based ARM9 Programmable Automation Controller
- **CB-RJ45F9-150 (91-R45F9-150)**
  Serial Cable (RJ45 to DB9 Female, 150cm)
- **CB-PHDF9-050 (91-PHDF9-050)**
  Console Cable (Wafer Box to DB9 Female, 50cm)
- **PWR-12V-1A (31-62100-000)**
  110~240VAC to 12VDC 1A Power Adapter