

Linux-Ready Arm Cortex-A7 Industrial Automation Controller

PAC-6070



Features

- Rugged Design for Industrial Automation Application
- Cost-Effective Linux Computing Platform
- NXP i.MX6ULL Arm Cortex-A7 CPU, Up to 800MHz
- 1GB LvDDR3 SDRAM, 16GB eMMC
- 8 x Opto-Isolated Digital Inputs
- 8 x Relay Outputs
- 5 x 24-bits A/D Channels
- 1 x Full Size miniPCIe Socket & 1 x Micro-SIM Slot
- 1 x Micro-SD Card Socket
- 2 x 10/100Mbps Ethernet Interface
- 1 x USB port
- 1 x RS-485 Serial Port
- +9~+48 VDC Wide-Range Power Input
- Dimension: 121.8mm x 204mm x 50mm (4.8" x 8" x 1.96")
- Easy for DIN-Rail Mounting

■ Introduction

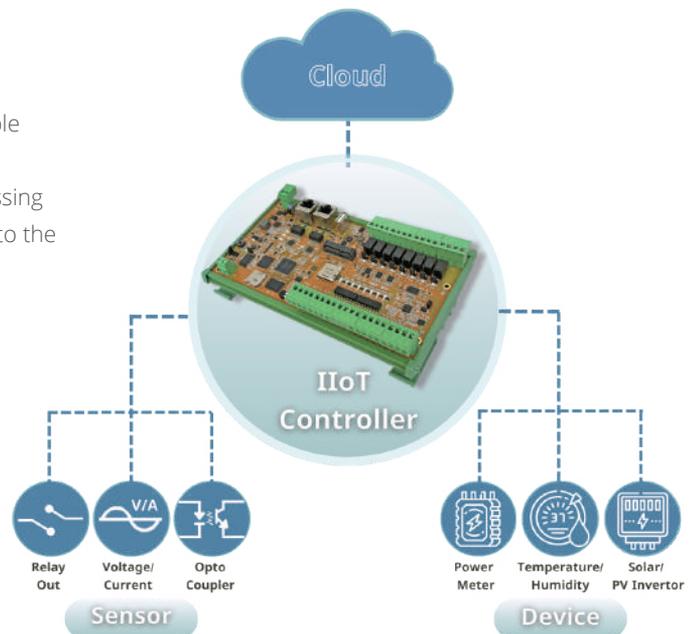
The PAC-6070 is a cost-effective Linux computing platform powered by Cortex-A7 MPU. It offers a versatile range of on-board IOs, including voltage/current measurement, opto-isolated digital inputs, and high-power relay outputs. With its comprehensive IO capabilities, the PAC-6070 enables efficient monitoring and control, making it the perfect choice for advanced Industrial IoT applications.

PAC-6070 is powered by NXP i.MX6ULL Cortex-A7 Processor with 1GB SDRAM and 16GB MMC. PAC-6070 features 4 A/D differential channels, 8 channels digital inputs, and 8 x relay outputs. In addition, PAC-6070 integrates two 10/100Mbps Ethernet, one isolated RS-485 ports, one USB hosts, and one MicroSD socket, one miniPCIe slot. The DIN-Rail also makes PAC-6070's onsite installation flexible.

■ Applications

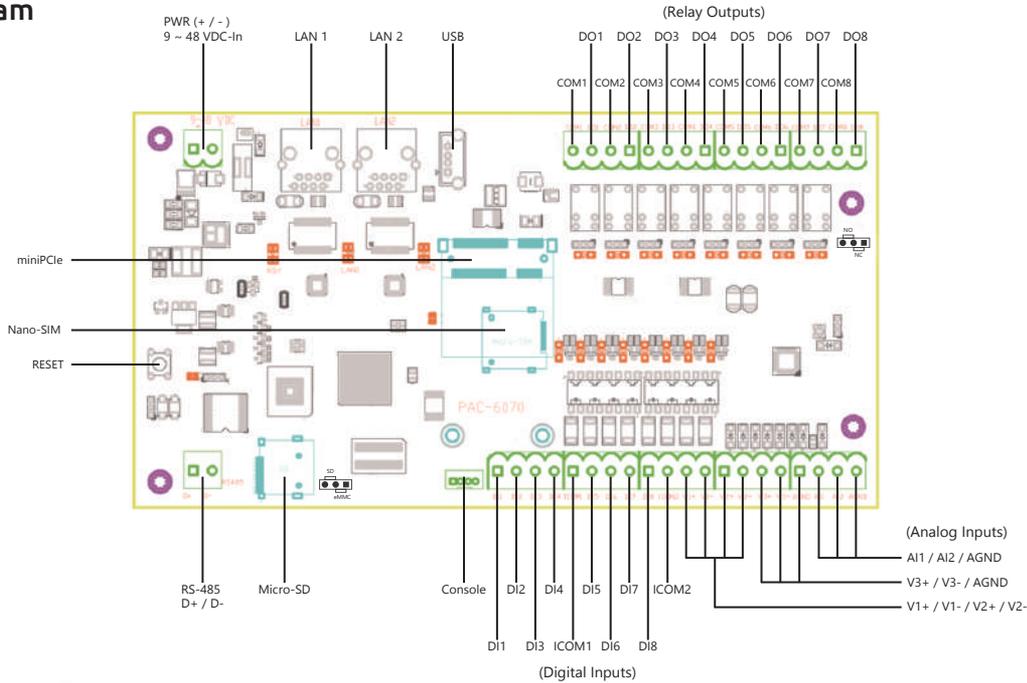
PAC-6070 is a versatile Linux automation controller suitable for a wide-range of applications. With its support for the Industrial Internet of Things (IIoT) by collecting and processing data from various sources and sending instructions back to the devices or systems to optimize the process.

- Energy Management
- Intelligent Transportation
- Healthcare
- Industrial Automation
- Smart Cities



PAC-6070

■ Diagram



■ H/W Specification

CPU / Memory

- CPU: NXP i.MX6ULL Cortex-A7 MPCore, Up to 800MHz
- SDRAM: 1GB LvDDR3
- Flash: 16GB eMMC

Network Interface

- Type: 2 x 10/100Mbps Ethernet
- Connector Type: RJ45

Serial Port

- 1 x RS-485 (1500Vrms isolation)
- Termination Resistor: 120ohm (Disable as default)
- Signal: RS-485 (Data+, Data-)
- Connector: Terminal block
- LED Indicator: YES

Digital Input

- 8 x digital input channels
- Isolation Protection: 5000Vrms (photo-coupler)
- Logical High: 5~24VDC
- Logical Low: 0~1.5VDC

Relay Output

- 8 x relay output channels
- Contact Rating: 125VAC@0.5A / 30VDC@1.0A
- Max. Switching Voltage: 125VAC / 60VDC
- Max. Switching Current: 2A

Analog Input

- 5 x 24-bits A/D channels
- Input Mode (Voltage): 3 channels (differential input)
Input Range (Voltage): +/- 10VDC
(Optional) 6 x Single-end channels, call for driver support
- Input Mode (Current): 2 channels (single-end)
Input Current: 0~20mA

General

- WatchDog (WDT): YES
- Real-Time Clock(RTC): YES, backup by super capacitor
- Power Input: +9~+48 VDC (terminal block)
- Reset: Multi-function reset button
- Indicator: READY, LAN, RS-485, DI, Relay-Out, A/D
- Dimensions (WxLxH): 121.8 x 204 x 50mm (4.8 x 8 x 1.96in)
- Net Weight: 360g (0.791b)
- Operating Temperature: 0~70°C (32~158°F)
- Regulation: CE Class A, FCC Class A
- Installation: DIN-rail mounting

Console / Debug Port

- 1 x 4-Pin box connector

SD Slot

- 1x Micro-SD socket, SD 2.0 compliant, supports SDHC

Expansion

- 1 x miniPCIe slot, 1 x Micro-SIM socket

USB Interface

- 1 x USB 2.0 Port, USB Type-A connector

■ S/W Specifications

Operation System

- Support Ubuntu and Embedded Linux, kernel 5.10.x (or up)
- Supports bootup from eMMC or SD card
- Supports backup from SD card or USB device

Software Development

- Toolchain: gcc 9.3.0 + glibc 2.31
- Supports in-place C/C++ code compilation

■ Ordering Information

PAC-6070

- Linux-based Arm Cortex-A7 Industrial Automation Controller