

ECU-1370

NXP i.MX8M Quad Core Cortex A53 High-Performance IoT Gateway

NEW



Features

- NXP i.MX8M Quad Core Cortex A53 1.3G CPU
- DDR4 4GB RAM, 32GB eMMC for system storage
- 1 x RS-232/485 isolated serial ports, 1 x CAN
- 3 x 10/100/1000 Ethernet ports
- 24 DI and 6 DO (Relay)
- Operating temperature -40~80°C

Introduction

The ECU-1370 is a high-performance IoT gateway based on the i.MX8M platform. It features an open platform design with a Quad Core processor, three 100/1000 Ethernet ports, multiple communication and DIO ports, and can operate within a temperature range of -40 to 80°C. Running on the Ubuntu 22.04 operating system, the ECU-1370 empowers system integrators to develop applications tailored for solar power, electricity, and factory environments that demand extensive data collection and cloud-based functionality. As a result, it offers a best-in-class solution for energy storage systems.

Specifications

General

- **Certification** UL, CB, CE, FCC, UKCA
- **Power Input** 24V_{DC} (10~30V_{DC}), 2-pin screw terminal
- **Typical Power Consumption** 6.5W @ 10V_{DC}
6.8W @ 24V_{DC}
6.7W @ 30V_{DC}
- **Operating Temperature** -40°C to 80°C
- **Storage Temperature** -40°C to 85°C
- **Operating Humidity rating** 95% non-condensing
- **Protection Class** IP30
- **Dimensions (D x W x H)** 93 x 65.3 x 140 mm
- **Mounting** DIN Rail

System

- **CPU** NXP i.MX8M Quad Core Cortex A53 1.3G
- **Memory** 4GB LPDDR4
- **Storage** 32GB eMMC (64GB Optional)
- **SD Slot** 1 x Micro-SD slot
- **USB** 2 x USB2.0
- **LED Indicators** Power, LAN (LINK, ACT), Serial (Tx, Rx), 3 x Programmable LED
- **Watch Dog Timer** YES
- **RTC** YES
- **Console Port** 1 x USB Type C, 115200bps

Digital Input

- **Channel** 24
- **Connectors Type** Terminal blocks
- **Input Filter** Programmable, default 3ms
- **Isolation** YES, 2000 V_{DC}
- **Pulse Input Frequency** 150Hz
- **Wet Contact** Logic level 0 0~3.3V
Logic level 1 9~26V

Relay Output

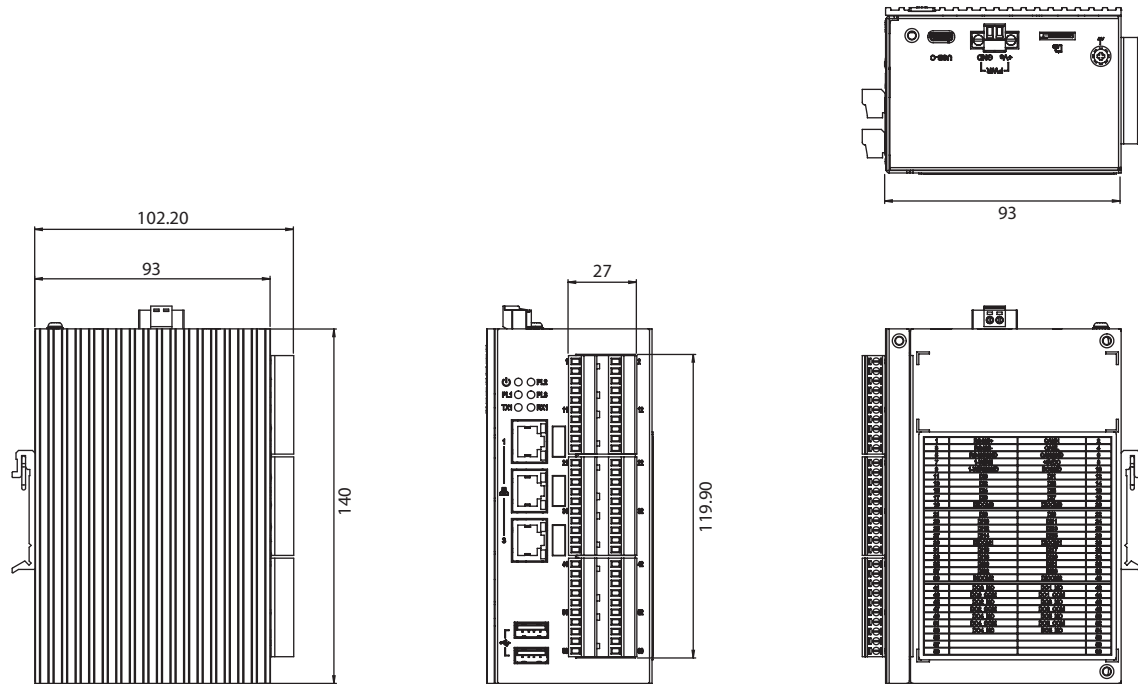
- **Channel** 6
- **Connectors Type** Terminal blocks
- **Relay Type** 4 x Form A
2 x Form C
- **Contact Rating** 30 V_{DC} @ 3A
- **Mechanical Endurance** 1 x 10⁷ operations
- **Isolation Between Open Contacts** 750 V_{AC} for 1 minute
- **Isolation Between Coil & Contacts** 4000 V_{AC} for 1 minute
- **Flyback Diode** YES
- **Relay On Time** 10 ms
- **Relay Off Time** 5 ms
- **Insulation Resistance** 100MΩ min. at 500 V_{DC}

Ethernet

- **Connectors** 3 x RJ45
- **Speed** 10/100/1000 Base-T Ethernet
- **LED State** Green (Link)/Yellow OR Green (Speed)

Dimensions

Unit: mm



RS485

- **Channel** 1
- **Connectors Type** Terminal blocks
- **Wiring** 2-wired (D+, D-, GND)
- **Isolation** 2000 V_{DC}
- **LED State** TX/RX
- **Baud rate** 300 bps to 921.6 Kbps

CAN

- **Channel** 1
- **Connectors Type** Terminal blocks
- **Wiring** 2-wired (CAN+, CAN-, GND)
- **Isolation** 2000 V_{DC}
- **Baud rate** High Speed CAN: 40 Kbps to 1 Mbps
Low Speed/Fault Tolerant CAN: 40 Kbps to 125 Kbps

1-Wire Master

- **Channel** 1 (maxim integrated, DS2482-100)
- **Connectors Type** Terminal blocks
- **Wiring** 1-wired

Output Voltage

- **Channel** 1x 5 V_{DC} @ 1W
- **Connectors Type** Terminal blocks

Software & Firmware

- **Operation System** Ubuntu 22.04

Ordering Information

Part Number	CPU	RAM	Storage for OS	OS	TPM 2.0	LAN	COM	DI	RO	CAN	1-Wire	USB	Console	Power Requirement
ECU-1370-531A	NXP 1.3G	4G	32G	Ubuntu 22.04	N/A (Optional by project)	3	1 (RS485)	24	6	1	1	2	1 (USB Type C)	10-30V _{DC}