

ECU-1251 V2

Industrial Communication Gateway

NEW



CE FCC RoHS

Features

- Cortex A9 600MHz processor with 2G RAM
- 16GB eMMC system storage and 1 x Micro-SD Slot
- 4 x RS-232/485 isolated serial ports
- 2 x 10/100 Ethernet ports and 1x mPCIe for wireless communication expansion
- Support web service for remotely on-line monitoring
- Supports SD cards and OTA firmware updates
- EdgeLink IoT software for data acquisition and cloud communication
- Wide Operating temperature: -40 ~ 70°C

Introduction

For solar power, electricity and factory related applications which require a total wireless and Ethernet communication solutions, Advantech has released the ECU-1251 ARM-based industrial communication gateway. ECU-1251 has an open platform design with Cortex A9 processor, up to 4 x RS-232/485 isolated serial ports, 2 x 100/1000 Ethernet ports and operating temperature range of -40~70°C. With Linux operating system and open Edgeline configure tool, which enable system integrators to develop applications precisely fit their need.

Specifications

General

- **Certification** CE, FCC
- **Mounting** Wall-Mount/ DIN-Rail
- **Power consumption** 3.12W @ 24V_{DC}
- **Power Requirements** 10 ~ 30 V_{DC}
- **Dimensions (W x D x H)** 140 x 96.5 x 30mm
- **Enclosure** SGCC
- **Operating System** Yocto Linux (Optional Ubuntu Linux)

System

- **CPU** TI Cortex A9, 600MHz
- **Memory** DDR3L 2GB
- **Storage** 16GB eMMC
- **Indicators** LEDs for Power, Run, Error, LAN (LINK, ACT), Serial (Tx, Rx), Programmable
- **SD Slot** 1 x Micro-SD slot
- **Watchdog** Yes
- **Real-time clock** Yes
- **Security** TPM 2.0

Communication

- **Serial Port** 4 x RS-232/485
- **Isolation** 3000 V_{DC}
- **Serial Port Speed** 300 ~ 115200bps
- **Ethernet Port** 2 x 10/100 Base-T Ethernet (RJ45)
- **USB Port** 1 x USB2.0
- **Wireless (Optional)** Interface: 1x Mini-PCIe (Full-size)
Type: WIFI/Cellular/4G
Signal: USB

Software Edgeline

Protocol Support

SouthBound

IEC 60870-5-101
IEC 60870-5-103
IEC 60870-5-104
DL/T 645-2007
DL/T 645-1997
IEC 62056-21

NorthBound

Modbus Server
IEC 60870-104 Server
WASCADA (WebAccess)
BACnet Server
OPC UA Server
Data Transfer

ODBC

JDBC

OPCUA Client

BACnet IP

BACnet MS/TP

SNMP

Modbus Client

PLC driver support

ABB/Advantech/Allen-Bradley/BECKHOFF/ DELTA/
FATEK/GE/Honeywell/Keyence/Mitsubishi/Omron/
Panasonic/Schneider/Sharp/Siemens/Toyopuc/
Wago 750/Yaskawa/Yokogawa

Programming Support

Linux C, Python

Configuration Tool

WISE-EdgeLink Studio

Data Monitoring

2000 Tags Max.

Cloud Connectivity (MQTT)

WISE-PaaS, Azure, AWS, Google Cloud IoT Core and more

Database Transmission

SQL Server, MySQL, ORACLE, FTP Server

VPN

Open VPN

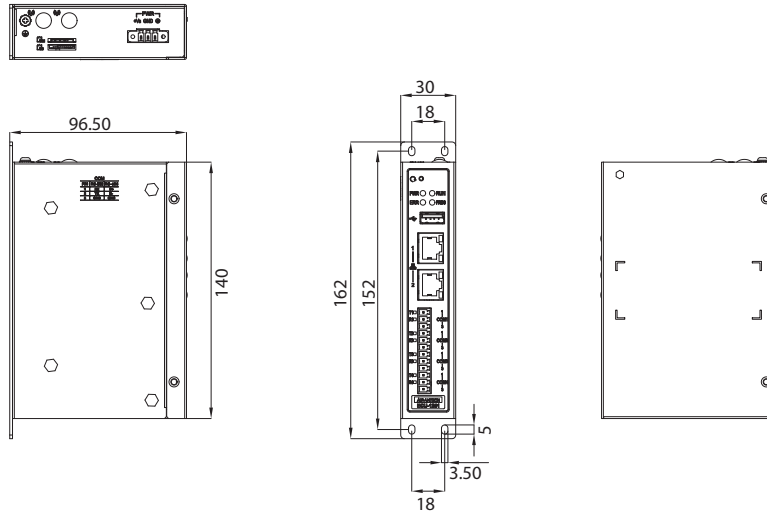
* Edgeline is bundled with Yocto Linux version. Please refer to Edgeline specification for more details.

Environment

- **Operating Temperature** -40 ~70°C
- **Storage Temperature** -40 ~85°C
- **Humidity** 95% (non-condensing)

Dimensions

Unit: mm



Ordering Information

Part Number	CPU	RAM	eMMC	OS	IoT Software	TPM 2.0	LAN	COM	USB	Console
ECU-1251TL-R23AA	Cortex A9, 600MHz	DDR3L 2GB	16GB	Yocto	EdgeLink	Yes	2	4	1	3pin COM on board

Optional Accessory

Wifi Module and Antenna

- **96PD-RYUW131A1** WiFi 4 2.4GHz mPCIe with Antenna and cable
- **EWM-W172H01E** Wi-Fi 5+BT 4.2 Module 2.4/5GHz Mini PCIe
- **1750008717-01** WiFi 2.4G+5G dipole antenna (Recommend qty: 2pcs)
- **1750006043** WiFi Coaxial Cable, 150 mm (Recommend qty: 2pcs)
- **9656EWMG00E** Half-size miniPCIe to miniPCIe bracket set
- **EWM-W180H01E** Wi-Fi 5+BT 5.0 Module 2.4/5GHz Mini PCIe
- **1750008717-01** WiFi 2.4G+5G dipole antenna (Recommend qty: 2pcs)
- **1750006043** WiFi Coaxial Cable, 150 mm (Recommend qty: 2pcs)
- **9656EWMG00E** Half-size miniPCIe to miniPCIe bracket set

Celluar Module and Antenna

- **96PD-EC25EFA** LTE Module Cat. 4, Mini-PCIe for EU, TW, IN, KR, SEA
- **96PD-EC25JFA** LTE Module Cat. 4, Mini-PCIe for JP
- **96PD-EG25GGB** LTE Module Cat. 4, Mini-PCIe for Global
- **1750006264** SMA(F) Cable, 15 cm
- **1751000532-01** Dipole Ant. LTE+5G 5.5dB SMA/M 135.7mm
- **96PD-MDG200AU0** AMIC 4G.Cat4 Socket Modem(US)
- **1750006264** SMA(F) Cable, 15 cm
- **1750008303-01** Antenna, 13cm

Micro SD Card

- **96FMMSDI-4G-ET-AT1** ATP 4G MICRO SD CARD I-GRD SLC(G)
- **96FMMSDI-8G-ET-AT1** ATP 8G MICRO SD CARD I-GRD SLC(G)

DIN-Rail Power Supply

- **96PSD-A20W24-MM** A/D 100-240V 20W 24V Power Supply
- **PSD-A40W24** DIN RAIL A/D 100-240V 40W 24V Power Supply

Adapters and Power Cables

- **96PSA-A60W24T2-3** AC100-240V to DC24V, 60W Adapter, C14 CORD END 2PIN
- **1702002600** Power cable (US) 1.8 M
- **1702002605** Power cable (EU) 1.8 M
- **1702031801** Power cable (UK) 1.8 M
- **1700000596** Power cable (China/Australia) 1.8 M