

# ECU-1051

## Cloud enabled Intelligent Communication Gateway for IIOT application

**NEW**



### Features

- TI Cortex A8 processor
- 2 x RS-232/485 serial ports
- 2 x 10/100 Ethernet ports
- 1 x Mini-PCle for WIFI/Cellular/4G
- 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 facility monitoring, distributed solar power, smart factory sector, especially cloud based applications which require a total wireless and Ethernet communication solutions, Advantech has released the ECU-1051 RISC-based industrial communication gateway. ECU-1051 has an open platform design with Cortex A8 processor, two 10/100 Ethernet ports and operating temperature range of -40~70°C. With Linux operating system and EdgeLink IoT software, ECU-1051 enable system integrators to develop applications which precisely fit their need.

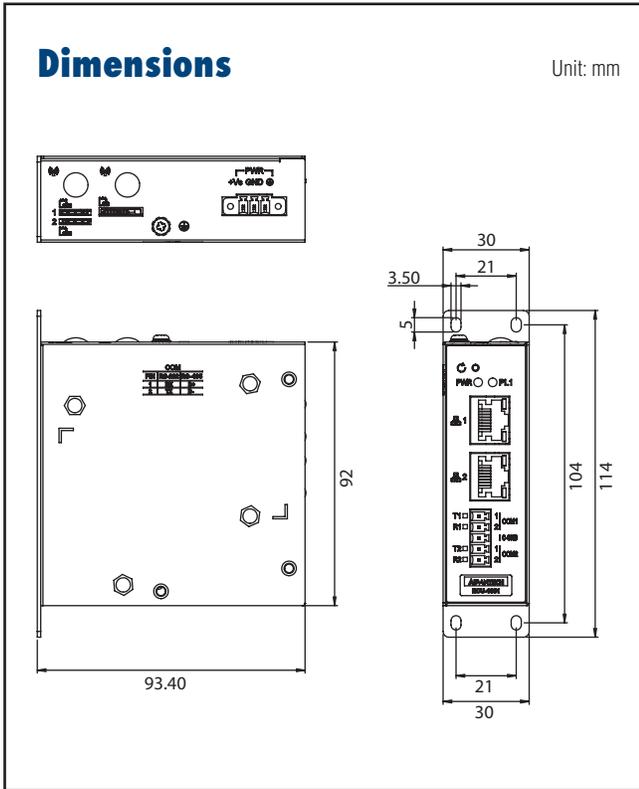
### Specifications

	ECU-1051TL-R10AAE	ECU-1051TL-R10AB	ECU-1051TL-R10ABU	ECU-1051E-R10AAE
<b>System</b>	CPU	TI Cortex A8, 600MHz		TI Cortex A8, 600MHz
	RAM	DDR3L 256MB		DDR3L 128MB
	Storage	512MB NAND		
	SD Slot	1 x Micro-SD		
	SIM Slot	2 x Nano SIM		1 x Nano SIM
	LED Indicators	Power, LAN (LINK, ACT), Programmable		
	Real Time Clock	Yes		
	Watchdog Timer	Yes		
TPM	NA			
<b>I/O Interfaces</b>	Serial Ports	2 x RS-232/485 (isolation optional), 5-Pin Terminal Block, 50 - 115.2kbps	2 x RS-232/485 (isolation 3000V <sub>ac</sub> ) 5-Pin Terminal Block, 50 - 115.2kbps	2 x RS-232/485 (isolation optional) 5-Pin Terminal Block, 50 - 115.2kbps
	LAN Ports	2 x 10/100 Base-T Ethernet (RJ45)		
	USB Ports	NA	1 x USB 2.0	NA
	Displays	NA		
	Mini-PCIE	1x Mini-PCle (Full-size) for Wireless Module Signal: USB 2.0		
<b>EdgeLink</b>	Protocol Support	<b>SouthBound</b>	<b>NorthBound</b>	
		IEC 61850 MMS Client*	IEC 61850 MMS Server*	
		IEC 61850 GOOSE Client*	IEC 61850 GOOSE Server*	
		IEC 60870-5-101	Modbus Server	
		IEC 60870-5-103	IEC 60870-104 Server	
		IEC 60870-5-104	WASCADA (WebAccess)	
		DL/T 645-2007	BACnet Server	
		DL/T 645-1997	OPC UA Server	
		IEC 62056-21	Data Transfer	
		ODBC		
		JDBC		
		OPCUA Client		
		BACnet IP		
	BACnet MS/TP			
SNMP				
Modbus Client				
PLC driver support	200+ PLC drivers ABB/Advantech/Allen-Bradley/BECKHOFF/ DELTA/FATEK/GE/Honeywell/Keyence/Mitsubishi/Omron/Panasonic/Schneider/Sharp/Siemens/Toyopuc/Wago 750/Yaskawa/Yokogawa			
Programming Support	IEC 61131-3, Linux C, Python			
Configuration Tool	EdgeLink Studio			
Data Monitoring	2000 Tags MAX.		500 Tags MAX.	
Cloud Connectivity(MQTT)	EdgeHub, IoTSuite, Azure, AWS, Google Cloud IoT Core and more			
Database Transmission	SQL Server, MySQL, ORACLE, FTP Server			
VPN	Open VPN			
<b>General</b>	Certification	CE, FCC, UKCA		
	Dimensions (W x D x H)	93.7 x 92 x 30mm		
	Form Factor	Small Size		
	Enclosure	SGCC		
	Mounting	Wall-Mount/DIN-Rail		
	Weight(Net)	0.6kg		
	Power Requirement	10 - 30 V <sub>dc</sub>		
	Power Consumption	1.2W @ 24V <sub>dc</sub>		
	Power Connector	1 x 3-Pin Terminal Block		
	Operating Temperature	-40~70°C		
<b>Environment</b>	Storage Temperature	-40~85°C		
	Relative Humidity	95% (non-condensing)		
	Ingress Protection	IP30		
	Vibration Protection	2Grms, Random/Sine, 5 - 500Hz		

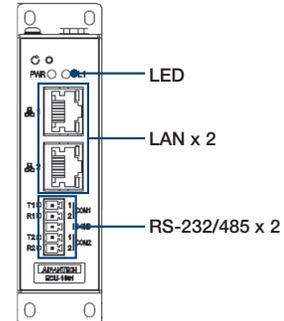
\* Please refer to the EdgeLink specification for further details. Activation of the IEC-61850 protocol requires an additional fee.

## Dimensions

Unit: mm

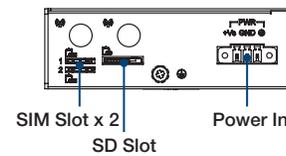


## Front View

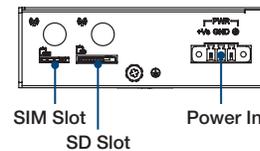


## Top View

ECU-1051



ECU-1051E



## Ordering Information

Part Number	CPU	RAM	NAND	OS	IoT Software	TPM 2.0	LAN	COM	USB	Console	Country of Origin
ECU-1051TL-R10AAE	TI Cortex A8, 600MHz	DDR3L 256MB	512MB	Yocto	EdgeLink	N/A	2	2	0	3pin COM on board	China
ECU-1051TL-R10AB									1		China
ECU-1051TL-R10ABU									1		Taiwan
ECU-1051E-R10AAE	TI Cortex A8, 600MHz	DDR3L 128MB						0		China	

## Optional Accessory

### Cellular 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

### 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

### 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