

# UNO-1251G

TI Cortex® A8 Micro DIN-rail Gateway w/  
2 x LAN, 1 x USB, 1 x CAN, 3 x COM,  
2 x microSD, 1 x micro SIM

NEW



## Introduction

The UNO-1251G is an Industrial IoT DIN-rail gateway. This gateway features dual LAN ports & expandable Wi-Fi/3G connectivity. There are also some user friendly design elements such as: a programmable OLED display to indicate the system status, and a front-accessible microSD card/micro SIM slot. With WebAccess/HMI support, it is compatible with 450 types of PLC, controllers & I/O devices. User can easily access UNO-1251G through mobile devices by VNC. It is the ideal solution for automation control as a cloud enabled HMI platform.

## Specifications

### General

▪ Certification	CE, FCC, CCC, BSMI, UL
▪ Dimensions ( W x D x H )	50 x 90 x 100 mm (1.97" x 3.54" x 3.94")
▪ Form Factor	Micro Size
▪ Enclosure	Aluminum Housing
▪ Mounting	DIN-rail
▪ Weight (Net)	0.4 kg (0.88 lbs)
▪ Power Requirements	10~36 V <sub>DC</sub>
▪ Power Consumption	5W(Typical), 9W (Max)
▪ OS Support	Windows Embedded Compact7 (WEC7)/Embedded Linux (kernel v2.6.37)

### System Hardware

▪ Processor	RISC 32 bit, 600 MHz (ARM® Cortex™-A8)
▪ Backup Memory	FRAM 128KB
▪ Memory	Onboard DDR2 256MB 166MHz (Optional 512MB)
▪ LED Indicators	LEDs for Power(PWR), COM1~3(Tx/Rx) and CAN(Tx/Rx)
▪ Storage	Bootloader and image: 1 x microSD 1G (Built-in) External storage: 1 x microSD card slot 1 x Full-size mPCIe slot (USB2.0 signal only)

### I/O Interfaces

▪ Serial Ports	1 x RS485, terminal block, auto direction control, 300~115.2k bps 1 x RS422/485, terminal block, auto direction control (RS-485), 300~115.2k bps 1 x RS232, DB9, auto flow control 300~115.2k bps CANbus, version 2.0A/B compliant (terminal block, 10k~500k bps)
▪ CAN	2 x RJ45, 10/100 Mbps
▪ LAN Ports	1 x USB 2.0
▪ USB Ports	1 x 4 Pin, terminal block supports dual power input
▪ Power Connector	Chassis Grounding
▪ Grounding Protection	1 x Micro SIM card slot
▪ SIM	

### Environment

▪ Operating Temperature	-20 ~ 60°C (-4 ~ 140°F) @ 5 ~ 85% RH
▪ Storage Temperature	-40 ~ 85°C (-40 ~ 185°F)
▪ Relative Humidity	10 ~ 95% RH @ 40°C, non-condensing
▪ Shock Protection	Operating, IEC 60068-2-27, 50G, half sine, 11ms
▪ Vibration Protection	Operating, IEC 60068-2-64, 3 Grms, random, 5 ~ 500Hz, 1 hr/axis

## Features

- RISC 32-bit TI ARM® Cortex™-A8 processor
- Programmable OLED display for status & error indication
- 1 x CAN, 3 x COM, 2 x LAN, 1 x USB ports
- Backup Memory FRAM in 128KB for retaining critical data
- Easily accessible Micro SD slot & Micro SIM slot
- Expandable with Wi-Fi/3G/4G connectivity
- Supports WEC7 & Linux operating systems
- Supports WebAccess/HMI software for compatibility with 450 types of PLC, controllers & I/O devices protocols

## Application Software / SDK

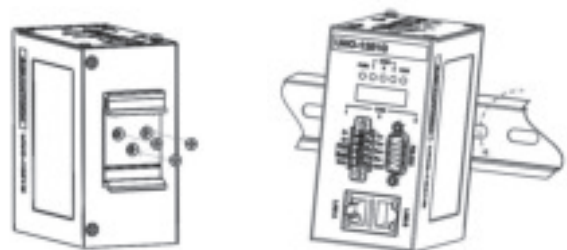
- Modbus TCP Client/Server API (WEC7 only)
- Modbus RTU Master/Slave API (WEC7 only)
- CAN SDK
- Advantech CANopen protocol library (WEC7 only)
- FRAM API
- Watchdog SDK
- OLED programmable display API
- Supports WebAccess/HMI

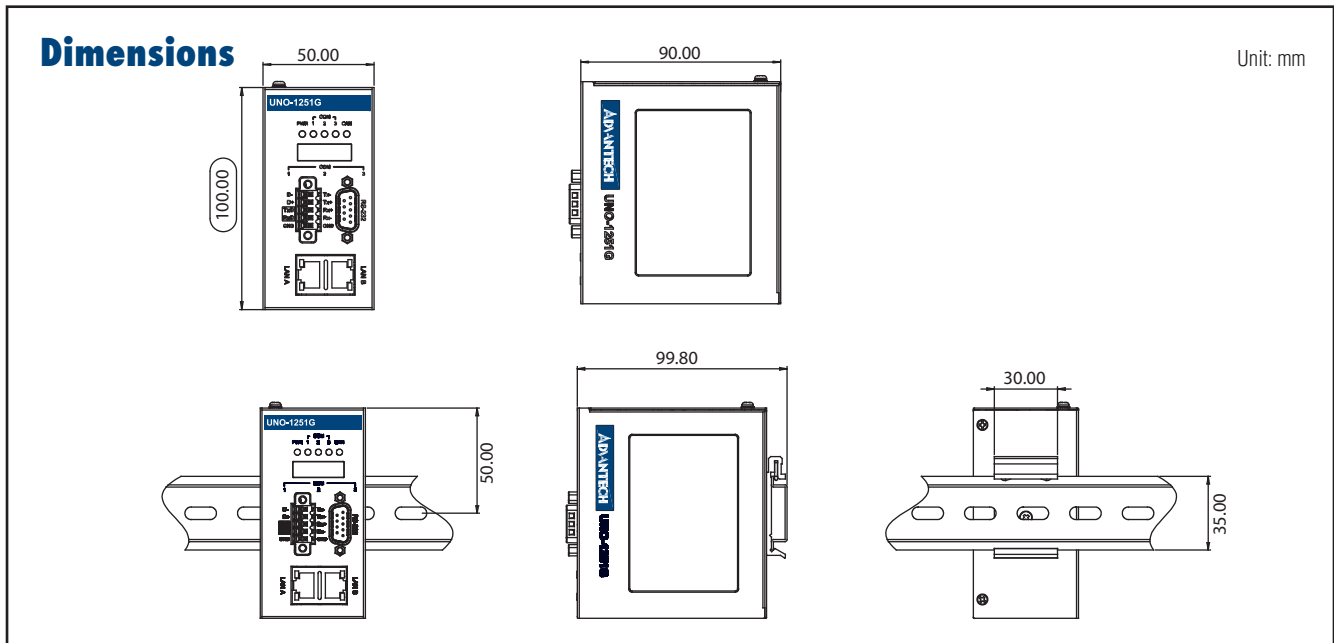
## Software Features

- FTP/Telnet service
- Remote display technology
- VPN (WEC7 only)
- OpenGL
- Remote Access: DigAnywhere & VNC

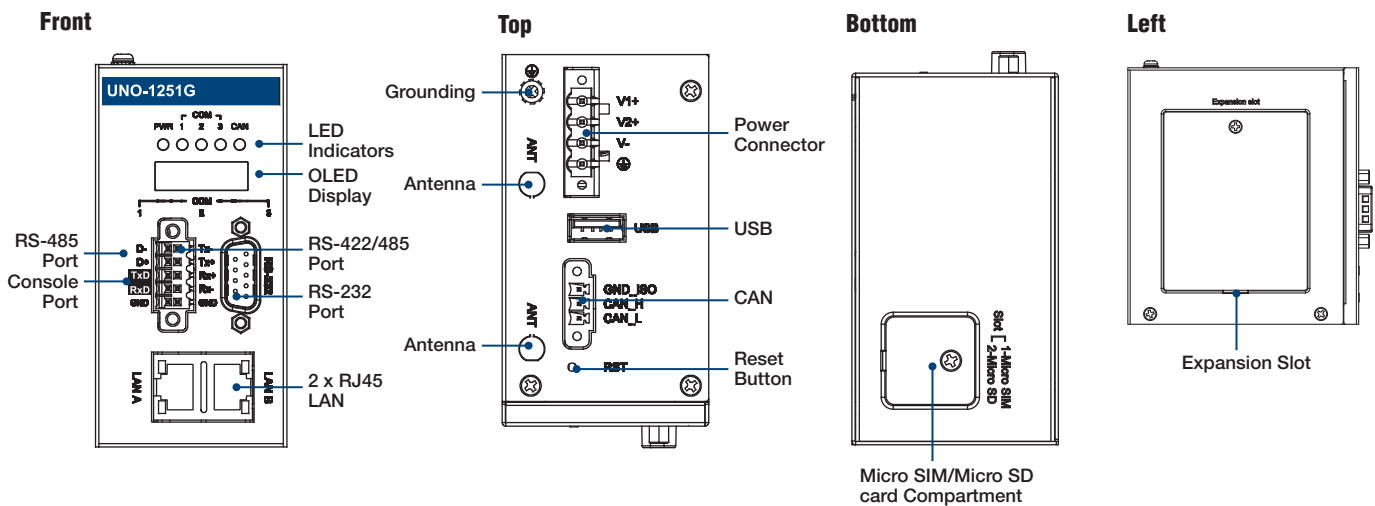
## Installation Scenario

### DIN-rail Mount Illustration





## I/O Views



## Ordering Information

- **UNO-1251G-A0AE** ARM Cortex A8, built-in 256MB Memory, 1G SLC MicroSD, WEC7
- **UNO-1251G-WA0AE** UNO-1251G-A0AE with WebAccess/HMI 1500 tags

## Optional Accessories

### Adapters & Power cords:

- **PWR-247-CE** ADP A/D 100-240V 60W
- **1702002600** Power Cable US Plug 1.8 M
- **1702002605** Power Cable EU Plug 1.8 M
- **1702031801** Power Cable UK Plug 1.8 M
- **1700000596** Power Cable China/Australia Plug 1.8 M

### DIN-Rail Power Supply:

- **UNO-IPS2440-AE** 24 V<sub>DC</sub>/ 40 Watts DIN-Rail Power Supply

### 3G module & antenna:

- **EWM-C109F601E** Wide-Temp 3.75G HSPA, Mini PCIe Card (For WEC7 OS)
- **EWM-C109F6GBR** 3.75G UMTS/HSPA mini PCIe card (For Linux OS)
- **1750006264** Coaxial cable for antenna
- **1750005865** Antenna L=10.9 cm 50 Ohm

### Wi-Fi module & antenna:

- **EWM-W150H02E** 802.11bgn / RT5390 1T1R (For WEC7 OS)
- **9656EWMG00E** Half-size miniPCIe to Full-size miniPCIe bracket set
- **1750006043** 150 mm Coaxial cable for antenna
- **1750000318** Antenna

### 4G module & antenna:

- **968EMC0061** AirPrime MC7304 PCI Express Mini Card (For WEC7/ Linux OS)
- **1750006009** 25 cm cable for antenna
- **1750008303-01** Antenna
- **1750006432** GPS antenna