

# 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



## 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

## 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)
- **Expansion**

### 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**
- **LAN Ports** 2 x RJ45, 10/100 Mbps
- **USB Ports** 1 x USB 2.0
- **Power Connector** 1 x 4 Pin, terminal block supports dual power input
- **Grounding Protection** Chassis Grounding
- **SIM** 1 x Micro SIM card slot

### 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

## Application Software / SDK

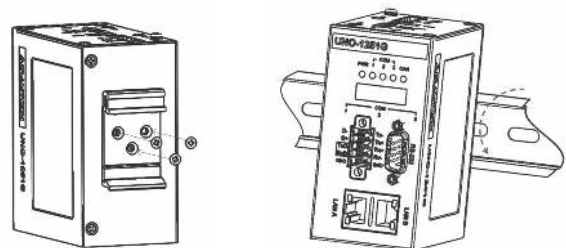
- **Modbus TCP Client/Server API (WEC7 only)**
- **Modbus RTU Master/Slave API (WEC7 only)**
- **CAN SDK**
- **Advantech CANopen protocol library (WEC7 only)**
- **FRAM API**
- **Watchdog SDK**
- **OLED programmable display API**
- **Supports WebAccess/HMI**

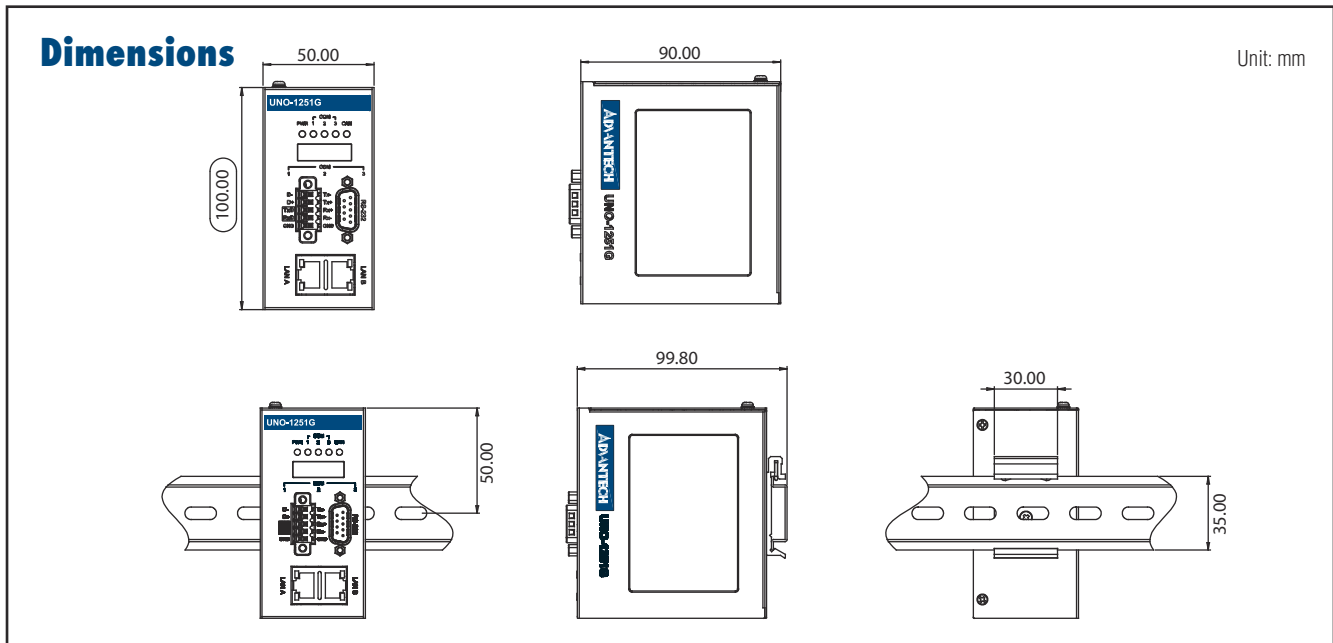
## Software Features

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

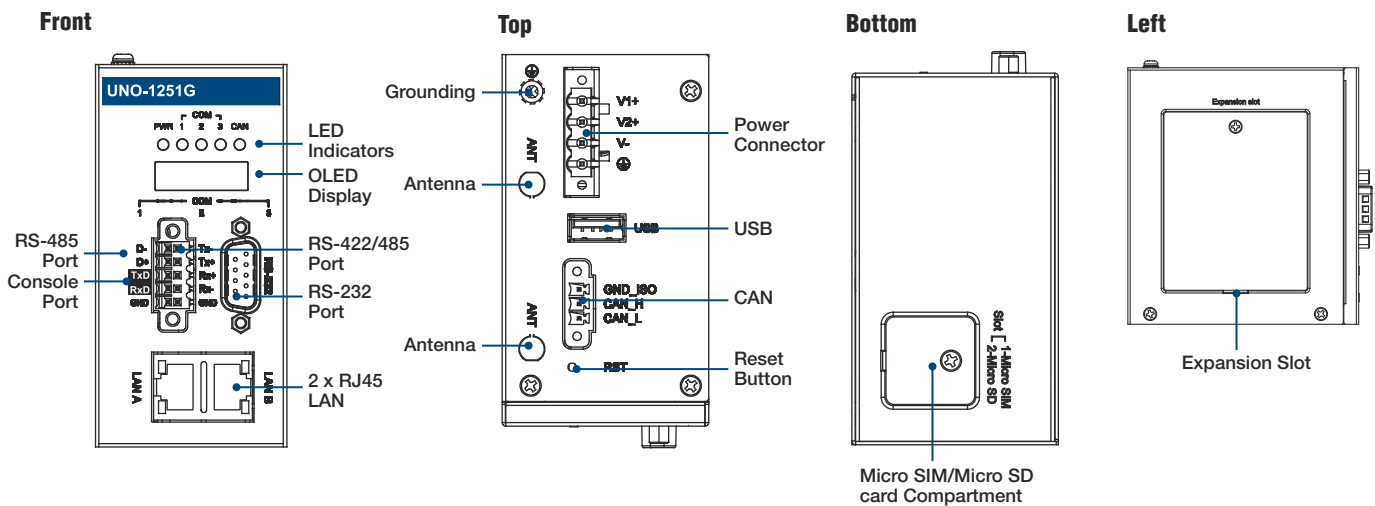
## Installation Scenario

### 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