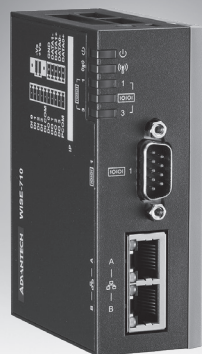


WISE-710

ARM Cortex™-A9 Industrial Gateway with 2 x LAN, 3 x COM Ports, 4 x DI/DO

NEW



Features

- NXP® ARM® Cortex™-A9 i.MX6 processor
- 1 GB DDR3L RAM and 8 GB eMMC storage onboard
- 10/100/1000 Mbps Ethernet ports
- CANBus with programmable bit rate of up to 1 Mb/sec
- Embedded security chip for data security
- DIO wet contact & dry contact by switch support
- Isolated protection of digital input/output
- Optional mPCIe expansion slot for wireless modules
- Operating system Linux Ubuntu 16.04 (Default) and Yocto 2.1 support
- Wide operating temperature range (-20~55°C/-4~131°F)
- Advantech WISE-PaaS/Edgelinek support with more than 200 I/O drivers

Introduction

The WISE-710 industrial IoT gateway is an open platform with Cortex A9 processor, equipped with 3 x serial ports, 2 x 10/100/1000 Ethernet ports, and 4 x DI/DO which is great solution to connect your legacy equipments to the new mesh networks. All collected data to the cloud is secured by key encryption technology from embedded security chip. With its rich I/O, and wide operating temperature design, the gateway plays a role as PLC-side protocol converter, and also data logger for multiple industrial applications.

Specifications

General

- **Certification** CE, FCC
- **Mounting** Wall-Mount/ DIN-Rail
- **Power Consumption** 5W @ 24V_{DC}
- **Power Requirements** 24V_{DC} ± 20%, 0.5A
- **Dimension (W x H x D)** 115.58 x 73 x 36 mm (4.55 x 2.87 x 1.42 in)
- **OS Support** Linux Ubuntu 16.04 (Default) and Linux Yocto 2.1
- **Weight (Net)** 0.17 kg (0.375 lb)

System

- **CPU** NXP® ARM® Cortex™-A9 i.MX6 dual-core 1.0 GHz processor
- **Indicators** LEDs for Power, Wireless, LAN, Serial
- **Storage** 8GB eMMC
- **Working Memory** 1GB DDR3 RAM
- **SD Slot** 1 x Micro-SD slot
- **Real-time Clock** Yes

Communication

- **Serial Port**
 - COM1 1x RS232/485, DB9, 0.15~115.2kbps
 - COM2 1x RS485/CANBus (by switch), 2pin, 50~921.6kbps; CANBus, 20~1000k
 - COM3 1x RS485, 2pin, 0.15~115.2kbps
- **Ethernet Port** 2 x 10/100/1000 Base-T RJ-45 ports
- **USB Port** 1 x Micro USB Host (Support flash storage)
- **Isolated DI/DO** 4-ch digital input, 4-ch digital output, isolation protection voltage 2000 V_{DC}
- **Expansion slot** 1x Full size mPCIe with USB signal

Gateway Software

- **Application Software** WISE-PaaS/Edgelinek
- **Number of IO Tag** 3000 Tags
- **Protocol Support** more than 200 drivers

Environment

- **Operating Temperature** -20 ~ 55 °C (-4 ~ 131 °F) with 0.7 m/s air flow
- **Storage Temperature** -40 ~ 75 °C (-40 ~ 167 °F)
- **Humidity** 10 ~ 95% RH @ 40 °C, non-condensing
- **Vibration During Operation** 2 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis.
- **Shock During Operation** 10G, IEC 60068-2-27, half sine, 11 ms duration

Ordering Information

- **WISE-710-N600A** Cortex™-A9 Processor, Linux Ubuntu 16.04, 2 x LAN, 3 x COM, 4 x Di/DO, 1 x mPCIe
- **ESRP-PCS-WISE710** WISE-710-N600A with Linux Yocto, EdgeLink 3000 Tags

Expansion Kits

WISE-710-0010A

Analog Input

- **Channels** 4
- **Resolution** 16bits Bipolar; 15bits Unipolar
- **Sampling Rate** 10Hz (Total) with 50/60Hz Rejection
- **Accuracy** ±0.1% for Voltage Input; ±0.2% for Current Input
- **Input Range** 0~150mV, 0~500mV, 0~1V, 0~5V, 0~10V, ±150mV, ±500mV, ±1V±5V, ±10V, 0~20mA, ±20mA, 4~20mA
- **Input Impedance** >1MΩ (Voltage), 240 Ω (External resistor for current)
- **Support Data** Scaling and Averaging

Digital Input

- **Channels** 4 (Dry Contact)
- **Supports 200Hz Counter Input (32-bit + 1-bit overflow)**
- **Supports keep/discard counter value on power-off**
- **Support inverted digital input status**

WISE-710-0020A

Digital Input

- **Channels** 6 (Dry Contact)
- **Supports 3kHz Frequency Input**

Digital Output (Sink Type)

- **Channel** 2
- **Output Current** 100 mA, At 0 -> 1: 100 us, At 1 -> 0: 100 us (for Resistive Load)
- **Supports Pules Output 5 kHz**
- **Max. Load Voltage** 30V

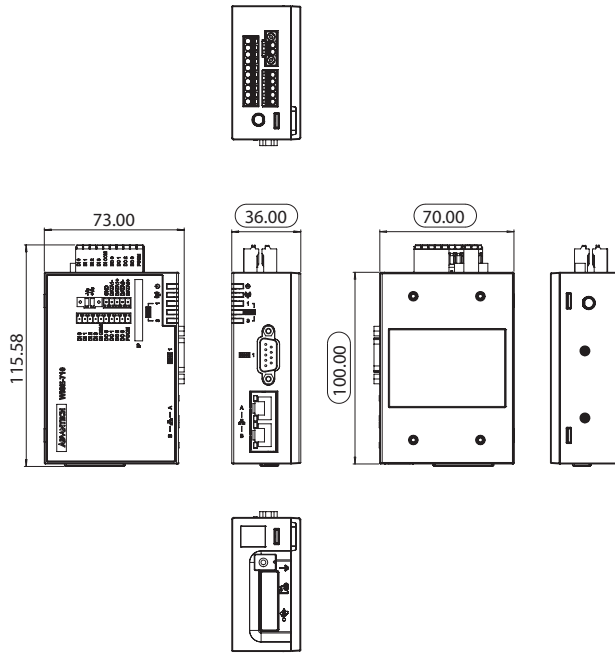
Serial Port

- **Port Number** 1
- **Type** RS-485
- **Data Bits** 7, 8
- **Stop Bits** 1, 2
- **Parity** None, Odd, Even
- **Baud Rate (bps)** 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
- **Protocol** Modbus/RTU (Total 32 addresses by 8 max. instructions)

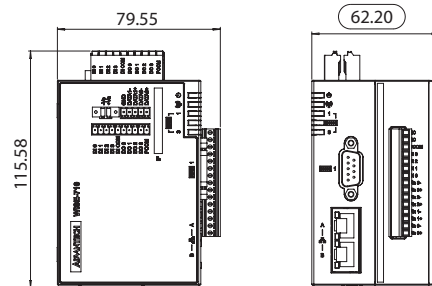
Dimensions

Unit: mm

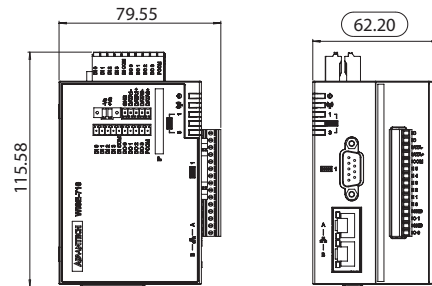
WISE-710-N600A



WISE-710-N600A + WISE-710-0010A



WISE-710-N600A + WISE-710-0020A



Optional Accessories

WiFi Solution

- 968AD00605 WiFi Module, 802.11 a/b/g/n (2.4&5GHz), BT5, 1T1R
- 9656EWMG00E Half-size to Full-size Mini PCIe Bracket Pack
- 1750009036-01 Cable Ant. SMA/F-R-BH MHF1/113 BLK L100mm
- 1750008717-01 Support 5G Band, Dipole Ant. D.B 2.4/5G WIFI 3dBi SMA/M-R BLK
- 96PD-RYWDB002A 968AD00605 Wifi Module with TELEC antenna and SMA cable for Japan region

LTE Solution

- 968AD00589 LTE Module, Global Band
- 1750009067-01 Dipole Ant. LTE 1.5/2dBi SMA/M BLK 144
- 1750009035-01 Cable Ant. SMA/F-BH MHF1/113 BLK L100mm

* Please contact regional distributor to purchase TELEC antenna locally.

Others

- 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)

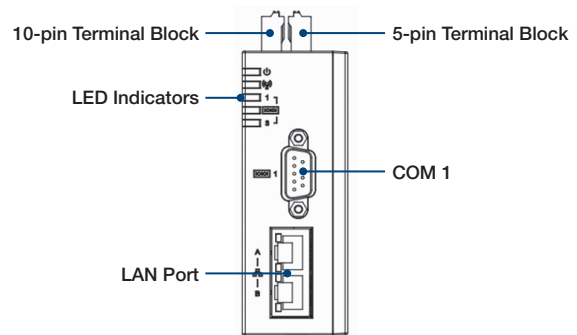
Power Supply

- 96PSD-A20W24-MM A/D 100-240V 20W 24V MDR DIN RAIL
- 1700029720-01 PSU power cord (USA), AC Conn., 3-pin, UL/CSA, 1.83M
- 1700030520-01 PSU power cord (CN), AC Conn., 3-pin, CCC, 1.5M
- 1700031408-01 PSU power cord (EU), AC Conn., 3-pin, 80CM (EU)

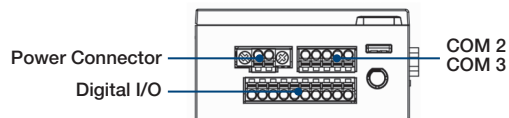
Power Adaptor

- XWISE-IPU15-108 110-220V AC Adaptor, US AC Plug
- XWISE-AUPLUG AU Type Plug for XWISE-IPU15-108
- XWISE-EUPLUG EU Type Plug for XWISE-IPU15-108
- XWISE-UKPLUG UK Type Plug for XWISE-IPU15-108

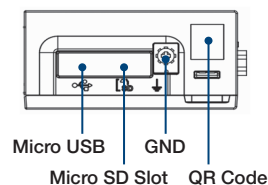
Front I/O View



Top I/O View



Underside I/O View



Please note: If some optional modules are offered with the system, additional system certificates may be required in certain regions/countries. Please contact Advantech for certificate compliance.