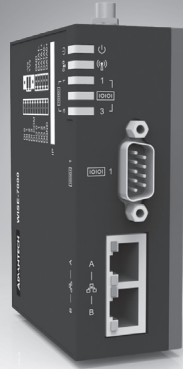# WISE-710

FreeScale i.MX 6 DualLite Industrial Protocol Gateway with 2GbE, 3 x COM, 4DI/4DO, 1 x Micro USB, 1 x Micro SD Slot

NEW

RoHS COMPLIANT 2002/95/EC CE FCC

Features

- Freescale i.MX 6 Dual Lite A9 1GHz
- Expansion slot: 1x Full size mPICe with USB signal
- Support CANBus 20~1000K
- Embedded with security chip for data security
- Support DIO wet contact & dry contact by switch
- Isolated protection of digital input/output
- Operation System: Ubuntu 16.04 (Default)/ Yocto 2.1 (Optional)
- Operation Temperature: -20~55°C
- Advantech WISE-PaaS/Edgelink support
- Edgelink support MQTT, LWM2M client for cloud communication
- EdgeLink supports more than 200 I/O Drivers
- EdgeLink supports user-defined acquisition period

Introduction

The WISE-710 industrial IoT gateway was 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 could be 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/ Pole-Mount (Optional)
- **Power Consumption** — 5W @ 24V$_{DC}$
- **Power Requirements** — 24 V$_{DC}$

System

- **CPU** — i.MX 6 ARM Cortex-A9 (Up to 1GHz)
- **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), 5pin, 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 (2000 V$_{DC}$)
- **Expansion slot** — 1x Full size mPICe with USB signal

Software

- **OS Support** — Ubuntu 16.04 (Default)/ Yocto 2.1 (Optional)
- **Application Software** — WISE-PaaS/Edgelink
  Max Connection: 4 for uplink protocols
  (MQTT x 4, Modbus x 4...etc.)
  Max Tag: Default 3000 Tags
  (W/O upgrade option)

Environment

- **Operating Temperature** — -20 ~ 55 °C (-4 ~ 131 °F) with 0.7 m/s air flow
- **Storage Temperature** — -30 ~ 75 °C (-22 ~ 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

Part No.	CPU	RAM	Storage	GbE	RS-232/485	RS-485/CAN	RS-485	Micro USB	Micro SD Slot	4DI/4DO	8AI/4DI	4RTD/4TC	OS	Application SW
WISE-710-N600A	i.MX 6 ARM Cortex-A9	1GB	8GB eMMC	2	1	1	1	1	1	1	N/A	N/A	Ubuntu 16.04	N/A
WISE-710-N6MCA	i.MX 6 ARM Cortex-A9	1GB	8GB eMMC	2	1	1	1	1	1	1	1	N/A	Ubuntu 16.04	N/A
ESRP-PCS-WISE710	i.MX 6 ARM Cortex-A9	1GB	8GB eMMC	2	1	1	1	1	1	1	N/A	N/A	Yocto 2.1	WISE-PaaS/ Edgelink

Dimensions

Unit: mm

Wi-Fi Solution

- **968AD00259** — Half-size Mini PCIe, 802.11 ac/a/b/g/n (2.4GHz 5GHz), USB 2.0 signal
- **9656EWMG00E** — Half-size to Full-size Mini PCIe Bracket Pack
- **1750009066-01** — Dipole Ant. 2.4G WIFI 2.05dBi SMA/M-R RG178 BLK
- **1750009035-01** — Cable Ant. SMA/F-BH MHF1/113 BLK L100mm

3G/LTE Solution

- **EWM-C117FL03E** — LTE/HSPA+/GPRS module, w/ SIM Slot,TOBY-L200, for USA AT&T, T-Mobile,w/o voice function
- **EWM-C117FL04E** — LTE/HSPA+/GPRS module, w/ SIM Slot,TOBY-L210, for Europe, APAC,w/o voice function
- **EWM-C117FL05E** — LTE/HSPA+/GPRS module, w/ SIM Slot,TOBY-L210H-60S, for Japan Softbankw/o voice function
- **EWM-C117FL06E** — LTE/HSPA+/GPRS module, w/ SIM Slot,TOBY-L280H, for Taiwan. w/o voice function
- **EWM-C145FL01E** — LTE/HSPA+/GPRS (WCDMA and CDMA) for China
- **LTE: 1750009067-01** — Dipole Ant. LTE 1.5/2dBi SMA/M BLK 144
- **3G:1750005865** — Antenna L=10.9cm 50Ohm AN8921F-5701SM
- **1750009036-01** — Cable Ant. SMA/F-R-BH MHF1/113 BLK L100mm

Storage Solution

- **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)

Optional Accessories

DIN-Rail Powre Supply

- **96PSD-A20W24-MM** — A/D 100-240V 20W 24V MDR DIN RAIL
- **1700029720-01** — M cable AC CONN 3P 183cm

Front I/O View

Top I/O View

Underside I/O View