

# EKI-1652WT Series

## EN50155 Industrial M12 WiFi/LTE Router

NEW



### Features

- Supports IEEE802.11ac MIMO 2T2R
- Supports WWAN connectivity
- Provides secure access with WEP, 802.1x, WPA/WPA2-Personal, WPA/WPA2-Enterprise
- Enables web-based configuration
- Facilitates dual band 2.4/5GHz selection
- Flexible design supports LTE/WiFi
- Anti-vibration M12 design
- Wide range power input 24/48/72/96/110 V<sub>DC</sub>

### Introduction

EKI-1652WT industrial WiFi/LTE router is designed for railway applications such as rolling stock. EKI-1652WT supports AP/Bridge/Client modes and is designed with LTE Module for WWAN connectivity. This router provides IEEE 802.11 dual band a/b/g/n/ac with M12 connectors for reliable wireless connectivity in industrial environments. EKI-1652WT features high wireless connectivity performance for devices in remote locations where cable connections are impractical. Advantech's EKI-1652WT can produce ample bandwidth for a range of applications including video.

### Specifications

#### Ethernet Communications

- **Port Type** M12 D-Code or X-Code
- **No. of Ports** 2
- **Speed** 2 x 100Mbps(D-Code) or 1000Mbps(X-Code)

#### Wireless LAN Communications

- **Compatibility** IEEE 802.11a/b/g/n/ac
- **Date Rates** 11b: 11M, 5.5M, 2M, 1Mbps  
11a/g: 54M, 48M, 36M, 24M, 18M, 12M, 9M, 6Mbps  
11n: HT20 MCS0 ~ 7 / HT40 MCS0 ~ 7  
11ac: VHT20 MCS0 ~ 8 / VHT40 MCS0 ~ 9 / VHT80 MCS0 ~ 9
- **Antenna Connector** 2 x RP-SMA connectors (female)
- **No. of Antenna** 2 (supports 2T2R)
- **Free Space Range** Open space 100 m (328 ft)
- **Wireless Security** Open system, shared Key, legacy 8021X, WPA/WPA2, WPA-PSK (TKIP), WPA2-PSK (AES)

#### GNSS Specifications

- **Antenna** 50ohm - active
- **Protocols** NMEA 0183
- **GNSS Systems** GPS, GLONASS, BeiDou, Galileo, QZSS
- **Frequency** GPS/Galileo/QZSS: 1575.42 ± 1.023MHz  
GLONASS: 1597.5 – 1605.8MHz  
BeiDou: 1561.098 ± 2.046MHz
- **Sensitivity (autonomous)** Tracking: -157dBm  
Reacquisition: -157dBm  
Cold start: -146dBm
- **Acquisition time (autonomous)** Hot start: 2.5 s  
Warm start: 26 s  
Cold start: 35 s
- **Accuracy** < 1.5 m (4.9 ft)

#### Cellular Interface

- **LTE Bit rate** 150 Mbps (DL), 50 Mbps (UL)
- **LTE FDD** B1/B3/B5/B7/B8/B20
- **LTE TDD** B38/B40/B41
- **WCDMA** B1/B5/B8
- **No. of SIM Slots** 2
- **SIM Card type** Micro SIM 1.8V and 3V
- **ANT Connector** 2 x SMA female connector

#### Software

- **Operation Modes** Access Point/Bridge/Client mode
- **Management** Web UI
- **Wireless** Radio on/off, WMM/Regatta Mode, Output Power Control, Fragmentation Length, Beacon interval, RTS/CTS threshold, DTIM interval
- **Protocol** ARP, ICMP, IPv4, IPv6, TCP, UDP, DHCP Client, DNS, HTTP, SNMP, DHCP Server, NAT, DNS proxy, QoS, Load balancing, OpenVPN, IPsec, GRE

#### Mechanics

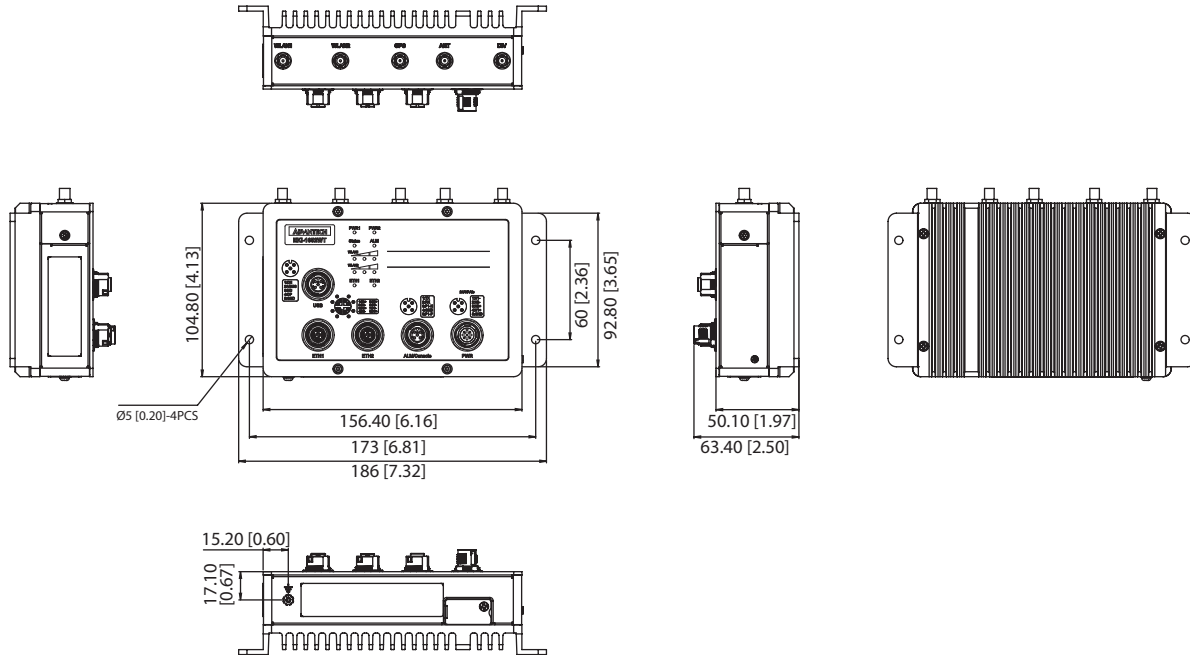
- **Enclosure** Metal shell with solid mounting kits
- **Mounting** Wall
- **Dimensions (W x H x D)** 186 x 50.1 x 104.8 mm (7.32 x 1.97 x 4.13 in)
- **Weight** 1.5 kg (3.3 lb)

#### Interface

- **Console Port** M12 A-Code female
- **USB Port** M12 A-Code female
- **Power Connector** M12 A-Code male (5-pin)

## Dimensions

Unit: mm [inch]



**Panel Cut-out Dimensions: 50.1 x 104 x 186 mm (1.97 x 4.13 x 7.32 in)**

### Channel Support

- IEEE 802.11b/g/n HT20  
FCC: CH1 ~ CH11; ETSI: CH1 ~ CH13
- IEEE 802.11gn HT40  
FCC: CH3 ~ CH9; ETSI: CH3 ~ CH11
- IEEE 802.11a/n/ac FCC: 5.15~5.25GHz; 5.725~5.85GHz  
ETSI: 5.15~5.25GHz; 5.47~5.725GHz

### Wireless Transmission Rates

- Transmitted Power
  - 802.11b 20dBm
  - 802.11a 18dBm @ 6 Mbps, 15dBm @ 54 Mbps
  - 802.11g 21dBm @ 6 Mbps, 18dBm @ 54 Mbps
  - 802.11n HT20 21dBm @ MCS0/8, 16dBm @ MCS7/15
  - 802.11n HT40 20dBm @ MCS0/8, 16dBm @ MCS7/15
  - 802.11ac VHT20 18dBm @ MCS0; 13dBm @ MCS8
  - 802.11ac VHT40 18dBm @ MCS0; 13dBm @ MCS9
  - 802.11ac VHT80 18dBm @ MCS0; 13dBm @ MCS9

### Receiver Sensitivity

- 802.11b Sensitivity -95 dBm @ 1 Mbps; -80 dBm @ 11 Mbps
- 802.11a/g Sensitivity -94 dBm @ 6 Mbps; -80 dBm @ 54 Mbps
- 802.11n HT20 -93 dBm @ MCS0; -76 dBm @ MCS7
- 802.11n HT40 -92 dBm @ MCS0; -73 dBm @ MCS7
- 802.11ac VHT20 -93 dBm @ MCS0; -71 dBm @ MCS8
- 802.11ac VHT40 -90 dBm @ MCS0; -66 dBm @ MCS9
- 802.11ac VHT80 -88 dBm @ MCS0; -65 dBm @ MCS9

### Power Requirements

- Power Input 24-48V<sub>DC</sub> (LV model), 72/96/110V<sub>DC</sub> (HV model)
- Power Consumption 14W (LV model)/ 21W (HV model)
- Power Type Dual Power

### Environment

- Operating Temperature -20 ~ 60 °C (-4 ~ 140 °F)
- Storage Temperature -40 ~ 80 °C (-40 ~ 176 °F)
- Operating Humidity 10 ~ 95% RH

### Regulatory Approvals

- EMC CE, FCC Part 15 Subpart B (Class B)

## Ordering Information

### EN50155 Industrial M12 WiFi/LTE Router

- EKI-1652WTDL-CA D-Code, LV Model with EC20 module for China
- EKI-1652WTXL-GA X-Code, LV Model with EG25 module for global band

## Accessories

- 1750008001-01 5dBi WiFi Antenna 2.4G/5GHz (not included in original package)
- OPT1-M12-CRP-8MX Phoenix Contact M12 X-code 8 pin Male crimp type connector
- OPT1-M12-CRP-4MD Phoenix Contact M12 D-code 4 pin Male crimp type connector
- OPT1-M12C-8MX-150R M12 X-code 8 pin Male to RJ45, cable length: 1.5m
- OPT1-M12C-4MD-150R M12 D-code 4 pin Male to RJ45, cable length: 1.5m
- 1700031327-01 A Cable Waterproof 5P(F) 200cm