EKI-6333AC-M12 Series

EN50155 Industrial M12 Wi-Fi AP

Features

- Supports IEEE802.11n MIMO 2T2R
- Supports WLAN transmission rates up to 867 Mbps
- Supports secure access with WEP, 802.1x, WPA/WPA2-Personal, WPA/WPA2-Enterprise
- Provides web-based configuration
- Supports dual bands 2.4G/5G concurrent
- Designed with dual radio modules
- Anti-vibration M12 design
- Wide range power input 24/48/72/96/110 V_{DC}

Introduction

EKI-6333AC-M12 Industrial Wi-Fi AP is designed for railway applications, including rolling stock. EKI-6333AC-M12 supports AP/Bridge/Client modes and is designed with dual 2.4GHz/5GHz wireless modules. It also supports IEEE 802.11 a/b/g/n/ac concurrent dual bands with M12 connector to provide a reliable wireless connectivity for Industrial environments.

EKI-6333AC-M12 has high wireless connectivity performance for devices in remote locations where cable connections are impractical. EKI-6333AC-M12 provides ample bandwidth, even for video applications.

Specifications

Ethernet Communications

- **Port Type**   M12 X-Code (EKI-6333ACX)
                     M12 D-Code (EKI-6333ACD)
- **No. of Ports**   2
- **Speed**   2 x 100/1000 Mbps EKI-6333ACX)
                     2 x 10/100 Mbps (EKI-6333ACD)

Wireless LAN Communications

- **Compatibility**   IEEE 802.11a/b/g/n/ac
- **No. of Radio**   2
- **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) for RP-SMA antenna (male)
- **Antenna Type**   Default external 5 dBi Omni antenna
- **No. of Antenna**   4 (supports 2T2R)
- **Free Space Range**   Open space 100 m
- **Wireless Security**   Open System , Shared Key, Lagacy 8021X, WPA/WPA2, WPA-PSK (TKIP), WPA2-PSK(AES)

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, SNTP

Mechanics

- **Enclosure**   Metal shell with solid mounting kits
- **Mounting**   Wall
- **Dimensions (W x H x D)**   186 x 50.1 x104.8 mm (7.32" x 1.97" x 4.13")
- **Weight**   1.5 Kg

Interface

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

Modulation Techniques

- **IEEE 802.11a/n**   OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
- **IEEE 802.11b**   DSSS (DBPSK, DQPSK, CCK)
- **IEEE 802.11g**   OFDM (BPSK, QPSK, 16-QAM, 64-QAM)

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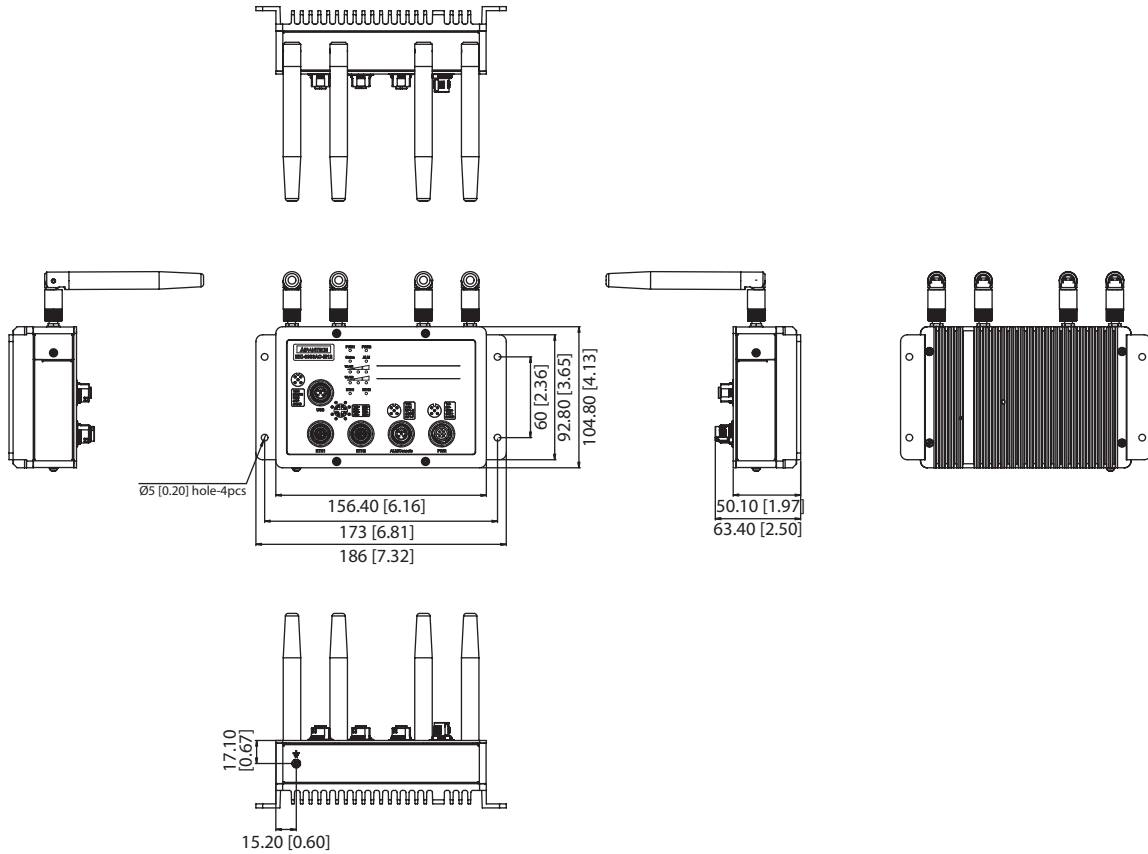
- **IEEE 802.11b/g/gn**   HT20
                          FCC: CH1 ~ CH11; ETSI: CH1 ~ CH13
- **IEEE 802.11gn**   HT40
                          FCC: CH3 ~ CH9; ETSI: CH3 ~ CH11
- **IEEE 802.11a/an/ac** FCC: 5.15~5.25GHz;5.725~5.85GHz
                          ETSI: 5.15~5.25GHz;5.47~5.725GHz

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

ADVANTECH   **Industrial Wireless and Protocol Gateway Solutions**

All product specifications are subject to change without notice.   Last updated: 28-Apr-2020

Dimensions

Unit: mm [inch]

Ø5 [0.20] hole-4pcs

60 [2.36]
92.80 [3.65]
104.80 [4.13]

156.40 [6.16]
173 [6.81]
186 [7.32]

50.10 [1.97]
63.40 [2.50]

17.10 [0.67]

15.20 [0.60]

Panel Cut-out Dimensions: 50.1 x 104.8 x 186 mm (1.97" x 4.13"x 7.32")

Power Requirements

- **Power Input**   24-48V$_{DC}$ (LV model), 72/96/110V$_{DC}$ (HV model)
- **Power Consumption**   14W (LV model)/ 21W (HV model)
- **Power Type**   Dual Power

Environment

- **Operating Temperature** -40 ~ 75°C (-40 ~ 166°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)
- **Rail Traffic** EN 50155

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

Ordering Information

- **EKI-6333ACXL-M12-A**   IEEE802.11 a/b/g/n/ac AP/Bridge/Client with 24/48V$_{DC}$, X-code Ethernet
- **EKI-6333ACXH-M12-A**   IEEE802.11 a/b/g/n/ac AP/Bridge/Client with 72/96/110V$_{DC}$, X-code Ethernet
- **EKI-6333ACDL-M12-A**   IEEE802.11 a/b/g/n/ac AP/Bridge/Client with 24/48V$_{DC}$, D-code Ethernet
- **EKI-6333ACDH-M12-A**   IEEE802.11 a/b/g/n/ac AP/Bridge/Client with 72/96/110V$_{DC}$, D-code Ethernet