EKI-6333AC-M12 Series
EN50155 Industrial M12 Wi-Fi AP

Features

- Supports IEEE802.11ac 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 2.4/5GHz 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)
- **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** 1.2 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)
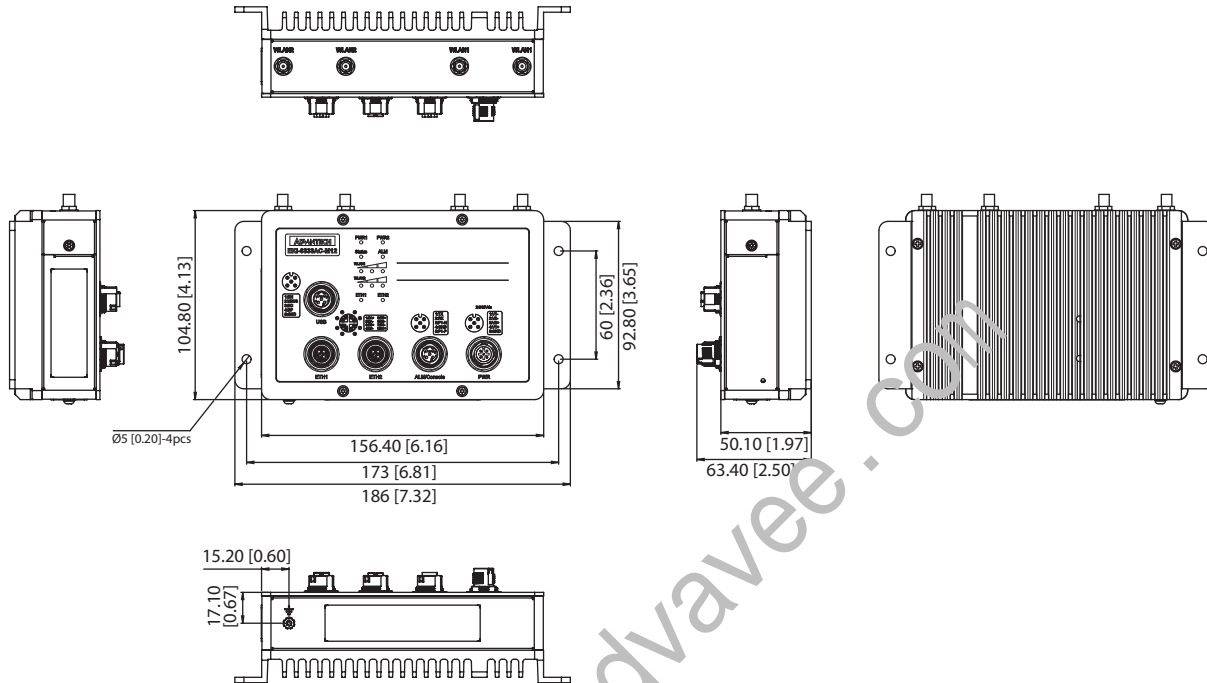
Channel Support

- **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

Dimensions

Unit: mm [inch]

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** -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)
- **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

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