VAISALA

VaiNet Wireless Access Point AP10

VaiNet Access Point AP10 is a wireless networking hardware device for Vaisala's proprietary wireless technology: VaiNet. AP10 can connect up to 32 VaiNet wireless data loggers (such as the RFL100) to Vaisala viewLinc Monitoring System.

AP10 in the viewLinc Monitoring System

AP10 access point transfers measurement data from wireless VaiNet data loggers to the viewLinc Enterprise Server, and enables the remote configuration and management of VaiNet data loggers by the viewLinc administrator. A wired Ethernet network connection between AP10 and viewLinc Enterprise Server is required.

Registration of new data loggers is handled by viewLinc Enterprise Server software. Whenever a new data logger is added to the system, AP10 automatically identifies it and forwards its information to viewLinc. Once accepted in viewLinc, VaiNet data loggers stay synchronized, even in situations where other nearby VaiNet networks overlap.

Data Integrity

Data is encrypted during VaiNet transfers to protect against eavesdropping, data tampering, and transfer errors. Both the access point and the viewLinc Enterprise Server software verify that the data has been received correctly. Once the data is verified, it is stored to viewLinc's secure database and protected from tampering and loss.

Redundancy

Redundancy of the wireless connection is achieved through use of multiple VaiNet access points and free connection capacity in the system. If a VaiNet data logger has a connection problem, it will automatically connect to another available access point in the system.

At least two access points with free capacity are needed for failover to function.

Time Synchronization

AP10 requires accurate time to operate its VaiNet wireless connection, and to maintain correct time on the connected data loggers. To achieve the accurate time, AP10 synchronizes with Network Time Protocol (NTP) servers.

AP10 synchronizes with default NTP servers over the internet. To allow AP10 to operate without an internet connection, configure it to use your local NTP server.

Technical Data

Wireless

Networking standards	Vaisala VaiNet
Modulation	LoRa™ chirp spread spectrum modulation
Output power	14 dBm (25 mW)
Antenna	Non-removable external antenna
Typical range (indoors)	At least 100 m (328 ft)
Maximum number of access points in an area	8
Frequency Bands	
Model AP10E	868 MHz
Model AP10A	915 MHz
Radio Standards and Approvals	
Model AP10E	ETSI EN 300 220-2 TRA No: ER67585/18 IMDA No: DB105576
Model AP10A	FCC ID: 2AO39-AP10A IC ID: 23830-AP10A Anatel ID: 04763-19-12322 NOM ID: 1901C00393 AS/NZS 4268

General

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Compatible viewLinc versions	5.0 and above
Supported devices	Up to 32 VaiNet compatible data loggers
User interfaces	Web browser interface Local touchscreen interface
User interface languages	English, German, French, Portuguese, Spanish, Swedish, Chinese, Japanese
Internal clock	Synchronizes with Network Time Protocol (NTP) server. NTP server connection required for operation.
Safety	EN/UL/IEC 61010-1

Operating Environment

Operating environment	Indoor use
Operating temperature	-20 ... +60 °C (-4 ... +140 °F)
Operating humidity	0 ... 90 %RH, non-condensing
Storage temperature	-20 ... +60 °C (-4 ... +140 °F)
EMC compliance	EN/IEC 61326-1, industrial environment

Mechanical Specifications

IP rating	IP30
Housing color	White
Mounting methods	Screws, tie wrap
Weight	350 g (12.3 oz)
Dimensions (H × W × D)	311 × 133 × 37 mm (12.24 × 5.24 × 1.46 in)
Materials	
Housing	PC/ABS blend
Display window	Polyester
Antenna	ABS

Inputs and Outputs

Operating voltage using dedicated power supply connector	10 ... 30 VDC
PoE power class	Class 0
Power consumption	Max. 13 W
Ethernet Interface	
Supported standards	10BASE-T, 100BASE-TX
IPv4 address assignment	DHCP (automatic), static
Connectors	
Power supply connector	2.0 mm center pin locking type DC power jack
Service port	Micro-USB (2.0)
Expansion port	USB type A (2.0)
Ethernet	8P8C (RJ-45)
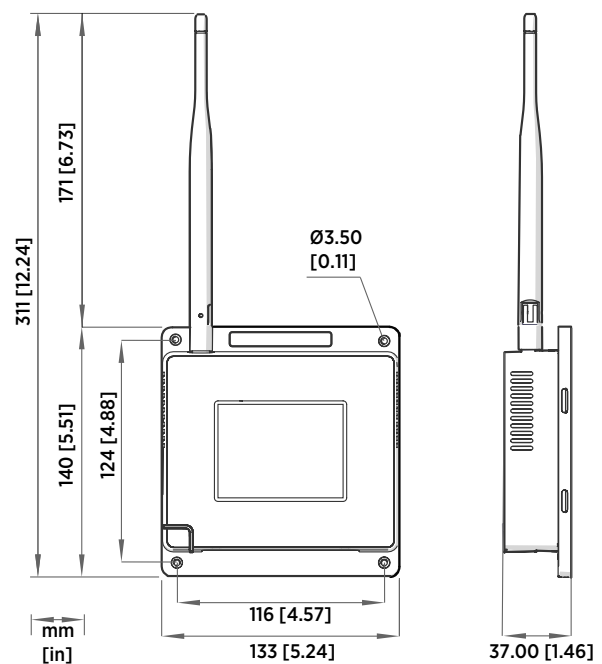
AP10 Access Point Dimensions

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