



### Features

- One AP10 supports up to 32 VaiNet data loggers
- Powered by Power over Ethernet (PoE) or DC adapter
- Minimal infrastructure and no signal amplifiers needed
- Uses HTTPS communication and encryption to ensure secure data transmission
- Chirp Spread Spectrum wireless modulation is resistant to multi-path fading
- Secure firewall and tamper-proof data backup

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
<b>Frequency Bands</b>	
Model AP10E	868 MHz (Europe and Singapore)
Model AP10A	915 MHz (North America, China, Australia, and New Zealand)
<b>Safety</b>	
Electrical safety	EN/UL/IEC 61010-1
RF exposure	KDB 447498 (United States) RSS-102 Issue 5 (Canada)
<b>EMC and Radio Standards</b>	
EMC compliance	EN/IEC 61326-1, industrial environment
Model AP10E	ETSI EN 300 220-2 EN 301 489-1 EN 301 489-3
Model AP10A	FCC title 47 part 15.247 (FCC ID: 2A039-AP10A) ICE RSS-247 (IC: 23830-AP10A) AS/NZS 4268

## Operating Environment

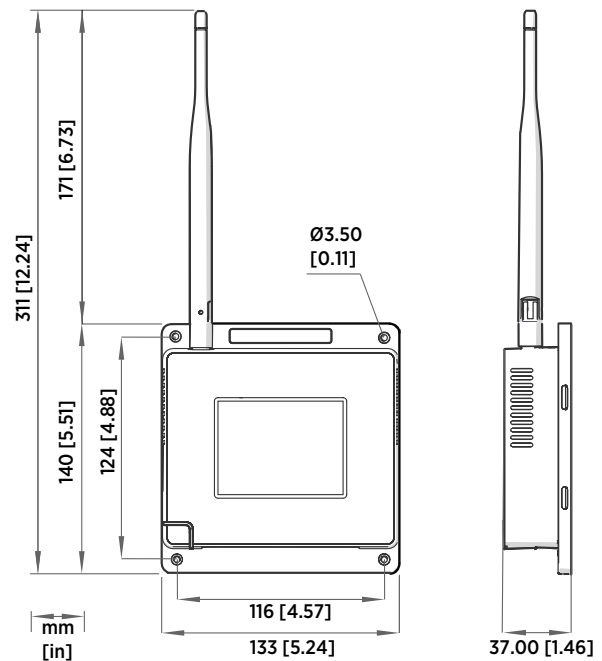
Operating environment	Indoor use
Operating temperature	-20 ... +60 °C (-4 ... +140 °F)
Operating humidity	0 ... 90 %RH, non-condensing
Storage temperature	-20 ... +60 °C (-4 ... +140 °F)

## 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)
<b>Materials</b>	
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
Internal clock	Synchronizes with Network Time Protocol (NTP) server. NTP server connection required for operation.
Supported devices	Up to 32 VaiNet compatible data loggers
Compatible viewLinc versions	5.0 and above
User interfaces	Web browser interface Local touchscreen interface
User interface languages	English, German, French, Portuguese, Spanish, Swedish, Chinese, Japanese
<b>Ethernet Interface</b>	
Supported standards	10BASE-T, 100BASE-TX
IPv4 address assignment	DHCP (automatic), static
<b>Connectors</b>	
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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