

# EX-AP-A

EX Certified Wi-Fi access point

# PIXAVI

WiFi 802.11abgn



II 2G EEx d II T6

CASTER®  
Interoperability  
warranty

INSIDE  
CISCO™ 12xx series by default

## Main features

- EX Zone 1
- 802.11 abgn
- EEx-d Explosion proof enclosure
- EEx-E junction box option
- Advanced WPA2/802.11i security
- 2.4 ghz + 5ghz dual mode
- Intrinsically safe antenna output option
- 802.11e wireless multimedia
- Mesh network support
- Fiber optic interface option (100base-fx)
- 2W amplifier option for 2 km + range
- Pixavi Xbeam A antennas included
- Diversity or single antenna options
- Aluminium and stainless steel versions
- EEX-d coax low loss connector option
- Easy to install (no fixed cables)
- POE (power over ethernet) support
- Lightning/surge protection



Pixavi has been chosen by Cisco to be part of their Technology Developer Partner Program. The EX-AP-A, Xpoint access points and the Xbeam A Xbeam antennas are part of the Cisco CTDP test program.

### What it is

The EX-AP-A is an EX certified (explosion proof) access point, ATEX certified for hazardous area. The dual band 2.4 ghz and 5 ghz EEx d /EEx de access point has been custom designed to accommodate a long range of configurations and features like an EX-e junction box, 100-base-FX (fiber) connection, PoE/cat5, lightning protection, amplification and several antenna connections and configurations.

### What it does

With the EX-AP-B you can create a state of the art wireless infrastructure directly in hazardous area with minimal efforts. The EX-AP-B has a dual radio design that enables coexistence of 802.11n, 802.11g and 802.11a networks. Wireless networks help organizations cut cabling cost and increase connectivity within their own facilities to start utilizing a wide range of wireless applications.

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## Introduction

VisiWear introduces the worlds most advanced EX WI-FI Access Point optimized and certified for use in hazardous environments. The access point allows for a multitude of cable types and antenna configurations enabling wide range of applications. The included Xbeam A antennas can connect with up to 30 meters of antenna cable length without significant loss of signal. The antennas have a wide angle beam, providing better coverage in multi path environments (metal walls etc) that involves signal reflections rather than line of sight transmission. The EX-AP-A Access Point can be configured as both a mesh endpoint and a standalone access point. Another benefit is that only one cable is needed to connect the access point to the network containing both power lines and Ethernet (POE).

Installing wireless networks instead of cabled networks cuts cabling cost and enables temporary network connections while maintaining communication speed and security. The cost/benefit of introducing wireless networks is even greater in hazardous and offshore environments, where cabling, throughputs, glands and manpower hours are more expensive.

An increasing number of EX PC terminals, EX PDAs, EX video terminals, control and monitoring systems are offered with integrated wireless networking. By installing wireless local networks, organizations can immediately start taking advantage of these new technologies.



Access point enclosure



EX-d low loss coax Antenna connector option eases installation

## Antenna specifications (Antenna is included)

Compatibility.....	802.11a+b+g+n
Frequency.....	2.4 and 5 ghz
Gain.....	Antenna gain2 dBi
Polarization.....	Vertical
Vertical beam width.....	80°
Horizontal beam width.....	360°
Impedance.....	50 Ohm
Max input voltage (amplitude).....	15v (EX limitation)
Max input power:.....	2 Watts (EX limitation)
VSWR.....	< 1.5:1 avg.
Weight.....	21 lbs. (100g )
Length.....	5 in. (125 mm)
Radome material.....	EX certified plastic material
Wind survival.....	>150 MPH
Operating temperature.....	-40° C to to 60° C (-40° F to 185° F)
Mounting method.....	Wall/mast adapter (included)



Pixavi Xbeam A 2,4 and 5.0 GHZ

## Radio data

- 802.11g output power: 100 mW
- 802.11a output power: 50 mW
- Amplifier option available up to 2W
- Maximum sensitivity: 96 dBm (1 mbps)

## Security Standards

- WPA
- WPA2 (802.11i)
- Cisco TKIP
- Cisco message integrity check (MIC)
- IEEE 802.11 WEP keys of 40 bits and 128 bits

## 802.1X EAP types

- EAP-Flexible Authentication via Secure Tunneling
- Protected EAP-Generic Token Card (PEAP-GTC)
- PEAP-Microsoft Challenge Authentication Protocol
- EAP-Transport Layer Security (EAP-TLS)
- EAP-Tunneled TLS (EAP-TTLS)
- EAP-Subscriber Identity Module (EAP-SIM)
- Cisco LEAP

## Encryption

- AES-CCMP encryption (WPA2)
- TKIP (WPA)
- Cisco TKIP / WPA TKIP
- IEEE 802.11 WEP keys of 40 bits and 128 bits

## Safety

- UL 60950-1
- CAN/CSA-C22.2 No. 60950-1
- UL 2043
- IEC 60950-1 / EN 60950-1
- FIPS 140-2 Pre-Validation List
- Common Criteria



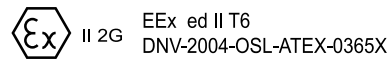
\* \*EX-D coax connector, low loss coax and and Xbeam A . Antenna and ethernet cables can be ordered at any length within recommended attenuation levels.

## Radio approvals

- FCC Part 15.247, 15.407
- RSS-210 (Canada)
- EN 300.328, EN 301.893 (Europe)
- ARIB-STD 33 (Japan)
- ARIB-STD 66 (Japan)
- ARIB-STD T71 (Japan)
- AS/NZS 4268.2003 (Australia )
- EMI and susceptibility (Class B)
- FCC Part 15.107 and 15.109
- ICES-003 (Canada)
- VCCI (Japan)
- EN 301.489-1 and -17 (Europe)

## EX certification

ATEX, zone 1



## Other certifications

- IEEE 802.11g and IEEE 802.11a
- FCC Bulletin OET-65C
- RSS-102

## Connections

- Antenna: Low loss COAX connections\* (gland or connector\*\*)
- Power and Ethernet: 8 wire CAT 5 cable (POE)
- For maintaining NORSOK requirements for the 220 volt version, a EEX-e Junction box is included (specified in order code on page 4)

## Dimensions and weight

- Aluminium enclosure version:  
Dimensions: 42cm 35cm 26cm Weight: 20 kg
- Stainless steel enclosure version:  
Dimensions: 28cm 28cm 15 cm Weight: 23 kg

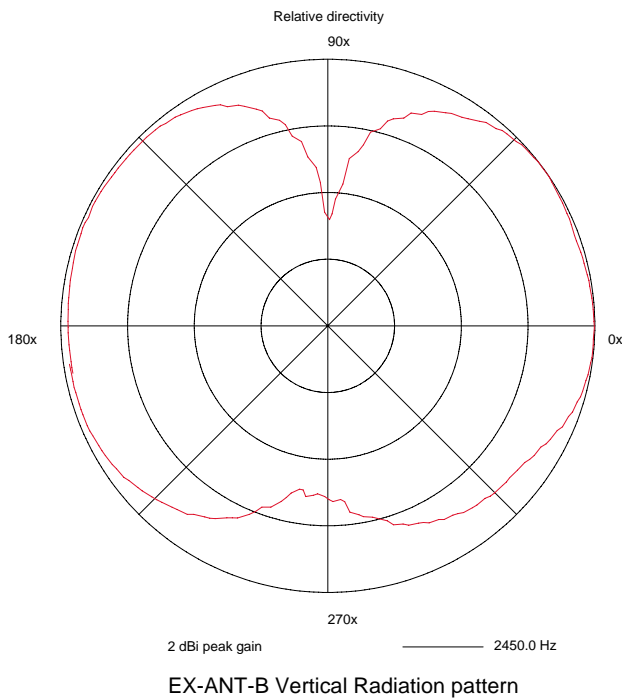
## Mounting kits

- Standard wall mount kit is included
- Mounting kits can be custom ordered



\*EX-AP-A can be ordered with single or diversity antennas

## Antenna Radiation Pattern



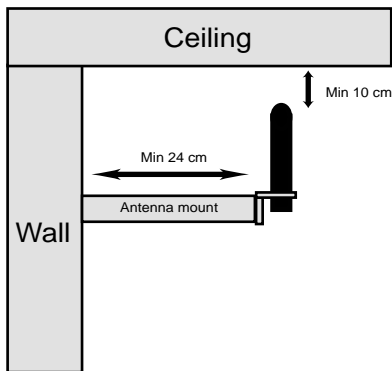
## Xcaster Interoperability



The VisiWear Xcaster is a new wireless HD video communicator. The Interoperability warranty ensures that the Xcaster and the EX-AP-A is Interoperable with emphasis on the following criterias:

- Optimal range
- Optimal QoS/performance
- Optimal security
- Optimal roaming
- Custom Cisco Access point/Xcaster Firmware tweaks as a result of VisiWear/Cisco CTDP development

## VisiWear WI-FI installation guide



1. Choose the shortest cable length possible
2. Place antennas visible from several angles (corners etc)
3. Generally place antennas on the upper part of walls (10 cm clearance to ceiling)
4. Leave two wavelengths (24 cm) between wall and antenna.
5. Don't hide the antenna behind obstacles
6. Don't place the antenna horizontally
7. Angle the antenna slightly downward when placed above ceiling height (check pattern)
8. Use a site survey tool to determine coverage. (Netstumbler etc)
9. Check for Wi-Fi channel interference (using Netstumbler etc)
10. We recommend max 30 meters antenna cable for the standard configuration and maximum 50 meters cable for the amplified configuration.

### Included in the standard EX-AP-A configuration:

Ready assembled EX- enclosure with the following components

- One EX-d enclosure
- Cisco 1240 access point
- 1 Coax gland
- 1 Ethernet/POE Gland
- 20 meters Ethernet cable with POE
- 10 meters low loss coax antenna cable
- 1 Xbeam A antenna
- Accessories and variations according to order code

### Order code: EX-AP-A\_P-Q-R-S-T-U-V-W-X- Y-Z

- P = Antenna type: Xbeam A =1 or Leaky feeder (radiating coax) =2
- Q = Lightning protection (0:no, 1:yes)
- R = Fibre to Ethernet converter(0:no, 1:yes)
- S = EX-e junction box (0:no, 1:yes)
- T = POE or AC (110-240V) supply (0: POE, 1:AC)
- U = SMA Coax connector (0:no, 1:yes)
- V = Amplifier (0:no, 1:yes)
- W = Material (1:Aluminium, 2: Stainless steel)
- X = Antenna cable length (1-50 meters)
- Y = Ethernet cable length (1-99 meters) \*ask for longer cable solutions
- Z = Number of antennas (0,1,2,3 or 4)