

# Unite AP4

## Access Point



CONFERENCE

### Description

The Unite AP4 access point is a multifunctional device with which various applications can be realised.

With one Unite access point, four audio channels can be wirelessly transmitted. For a maximum of 32 channels, eight Unite AP4 can be synchronised in one network.

Depending on the configuration, the device works as a transmitter (Broadcast mode) or a receiver with back (Full Duplex mode).

As a transmitter, the Unite AP4 transmits the audio signals of an external audio source on a maximum of four DECT channels. Typical applications are e.g. interpreting services in conjunction with an interpreting system, assistive listening and wireless microphone applications.

When using several Unite AP4 devices in different operating modes, almost any applications can be combined. Via the Ethernet connection, a maximum of eight Unite AP4 devices can be integrated into a network consisting of many Unite components. One or more Unite AP4 devices can be configured using the free Unite Manager PC Software. This also enables additional functionalities in the Unite network such as monitoring, maintenance, comprehensive configuration, pairing and setup of transmitters, receivers, chargers and Unite AP4 access points.

#### How to use the Unite AP4 in a DANTE® network

The DANTE® Audio Interface (DAI) built into the Unite AP4 supports two flows in the DANTE® network at a fixed sample rate of 48 kHz.

Each flow contains 1 to 4 channels. The configuration is done in the free DANTE® controller of the company Audinate®.

The following combinations are possible:

- » One connected device with 4 channels
- » One connected device with 1 channel + one connected device with 3 channels
- » Two connected devices with two channels each

### Features

- » 4-channel access point
- » High range
- » Integrated antennas
- » Digital Dante® interface (4 In / 4 Out)
- » Ethernet interface (network)
- » 4 analogue inputs and outputs (Phoenix®)
- » Power supply via PoE (Power over Ethernet)
- » With 8 synchronised access points, a maximum of 32 audio channels can be transmitted
- » Removable mounting plate for wall or ceiling mounting, on a tripod or via VESA adapter plate

### Supplied Accessories

- » External 36W power supply with power cable and mains plug (EU: CEE7/16, NA & JP: NEMA 1-15, 2-pin) and C7 device plug
- » Thread adapter 1/2" – 3/8" for tripod mounting
- » 2 x Phoenix® connectors (FMCD 1,5/6-ST-3,5), contact spacing 3.5 mm, two rows, 6-pin
- » 4 x cover plates for cable feed-through of the wall mount (pre-assembled)
- » 4 x M5x10 screws (for Vesa adapter plate)
- » 4 x M5 nut (for Vesa adapter plate)

## Versions

- » **Unite AP4 (EU) - Ref. 71.98.4030:** DECT band Europe (1,880 - 1,900 MHz)
- » **Unite AP4 (NA) - Ref. 71.98.4031:** DECT band North America (1,920 - 1,930 MHz)
- » **Unite AP4 (JP) - Ref. 71.98.40312:** DECT band Japan (1,893 - 1,906 MHz)

These three versions may only be used in the appropriate regions and are not compatible with each other.

### Trademark

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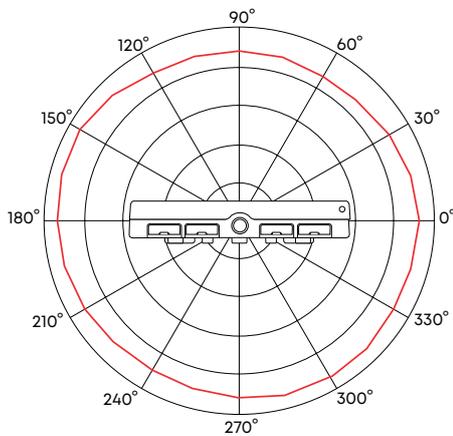
## Features

Power Supply	
Input voltage	100 – 240 V AC, 47-63 Hz
Input current	Max. 0.8 A
Output voltage	12 V DC
Output current	3 A
Power cable	Supplied depending on the region
Cable length	AC: 2 m [2.19 yds.] DC: 1.5 m [1.64 yds.]
	Polarity
Unite AP4	
DECT radio frequency range:	
• EU (Europa)	1,880 to 1,900 MHz
• NA (Nord America)	1,920 to 1,930 MHz
• JP (Japan)	1,893 to 1,906 MHz
DECT transmission power	Up to 250 mW (peak), depending on the country
DECT operating range	Up to 300 m outside (line of sight); the actual operating range depends upon the RF output settings, the surroundings, the signal absorption, signal reflection and signal interference
RF coverage	Up to 10,000 m <sup>2</sup> ; the actual coverage depends upon the RF output settings, the surroundings, the signal absorption, signal reflection and signal interference
Audio bandwidth High quality (HD)	50 Hz - 14 kHz (-3 dB)
Operating mode	Broadcast (4 channels)
Encryption	AES-256 bit encryption

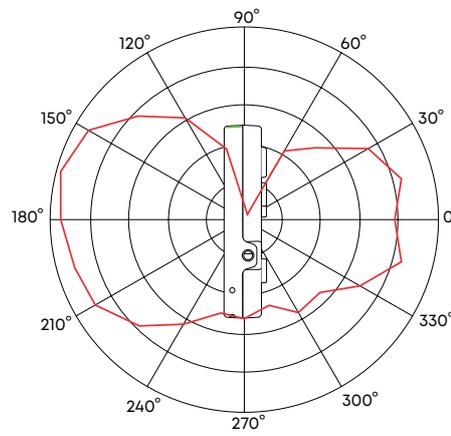
Antenna	Diversity, internal
Polar pattern of antennas	Two omnidirectional antennas with front-facing main lobe
Minimum distance between several Unite AP4 devices	2 m [2.19 yds.]
Connections	Ethernet (RJ 45)
	USB-C (currently not implemented)
	DC input, DC 12 V, power consumption max. 12 W
	Sync input (RJ 45)
	Sync output (RJ 45)
	Digital: Dante® (RJ 45; PoE: 12 W IEEE 802.3af-2003, 36 V - 57 V, only 48 kHz sample rate supported)
	Analogue: Phoenix® socket, balanced, contact spacing 3.5 mm [0.14"], two-rowed, 6-pin, balanced and shielded connecting cables required Input level (4-channel In): max. +7 dBu Input level for 0 dBFS @ 0 dB Gain: +5 dBu
Required cable features for RJ 45 Ethernet, Dante® and Sync connectors:	
• Cable type	Cat 5e AWG 24/1 F/UTP, shielded, assignment 1:1
• Cable length for Ethernet, Dante® and Sync	100 m [109 yds.]
• Total length of all Sync cables	Max. 700 m [766 yds.]
Reset button	To restore the factory settings (network, audio, DECT)
Network default	DHCP (IP)
Indicator	Status LED
Mounting for Vesa mount	75 x 75 mm [2.95" x 2.95"]
Mounting holes for secondary safety rope	Available (safety rope not included in the delivery)
Temperature range:	
• Operation	0 to +40 °C [32 to 104 °F]
• Storage	-20 to +50 °C [-4 to 122 °F]
Relative humidity	0 to 90%
Dimensions (L x W x H)	260 x 252 x 48 mm [10.2" x 9.92" x 1.89"]
Weight	860 g [30.34 oz.]

Dante Network	
Sampling rate	48 kHz
Sampling rate pull-up down support	Yes
Encoding formats	PCM16, PCM24 and PCM32
Latency values	1 ms, 2 ms and 5 ms
Device name	Changeable
Localisation function	No
AES67 support	No
Support of static IP address	Yes

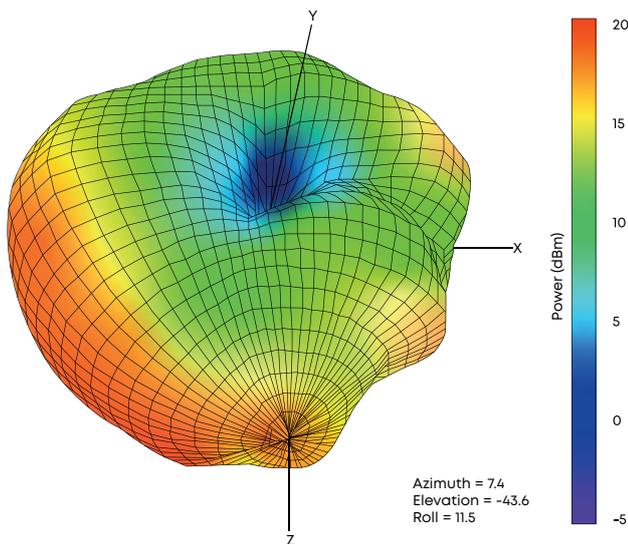
### Polar Pattern Antennas



Horizontal directivity



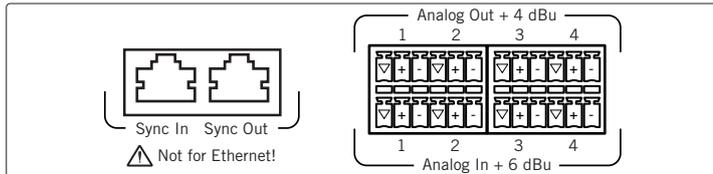
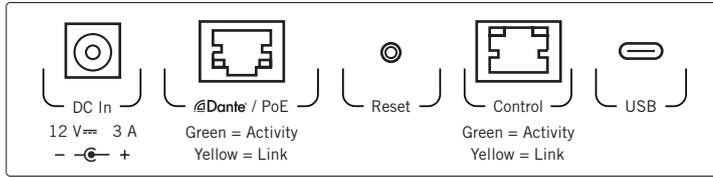
Vertical directivity



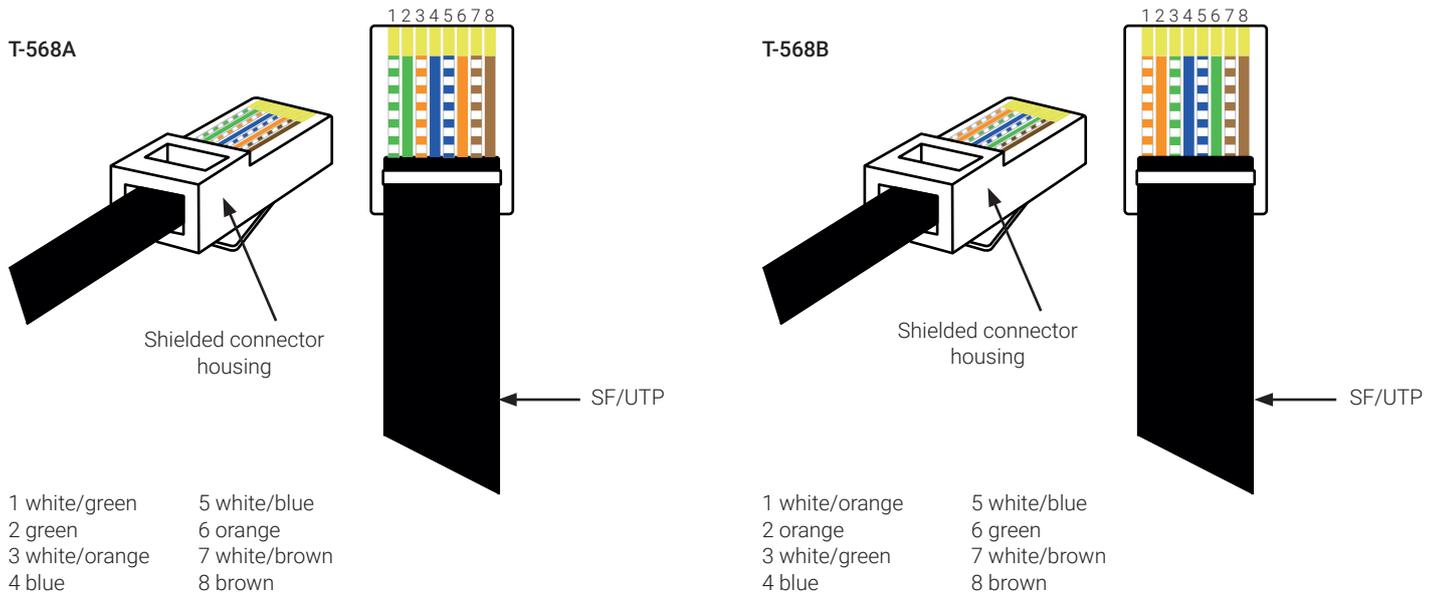
Azimuth = 7.4  
Elevation = -43.6  
Roll = 11.5

3D polar pattern

## Pin Assignment



## Pinout RJ45



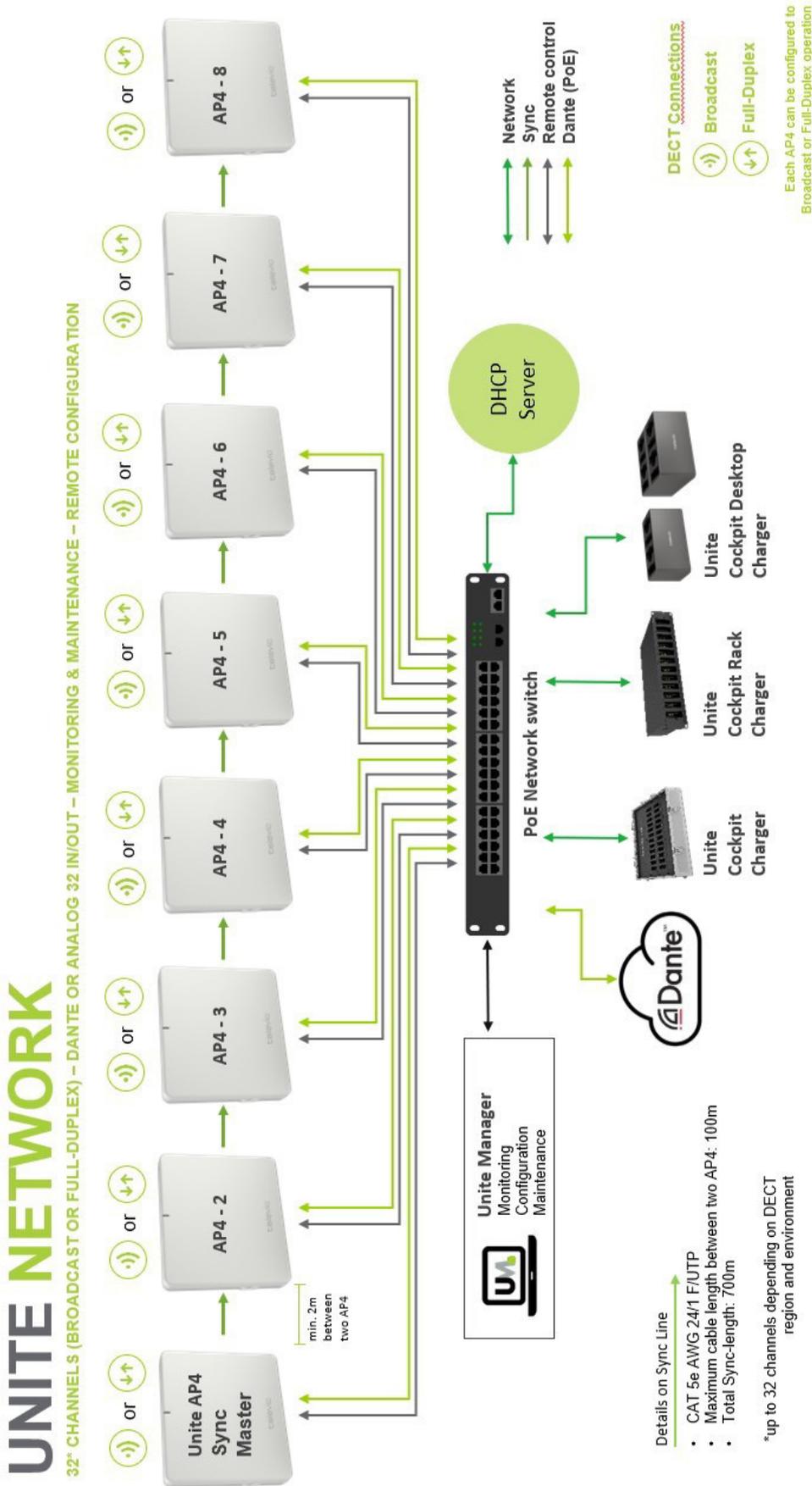
### Important:

Please use shielded connector housings. Twist the shield of the cable and fold it backwards so that a connection between the shield of the cable and the connector housing is created when crimping the strain relief of the cable.

Use either the T-568A or T-568B pin assignment for both cable ends. Do not use both pin assignments for one cable.

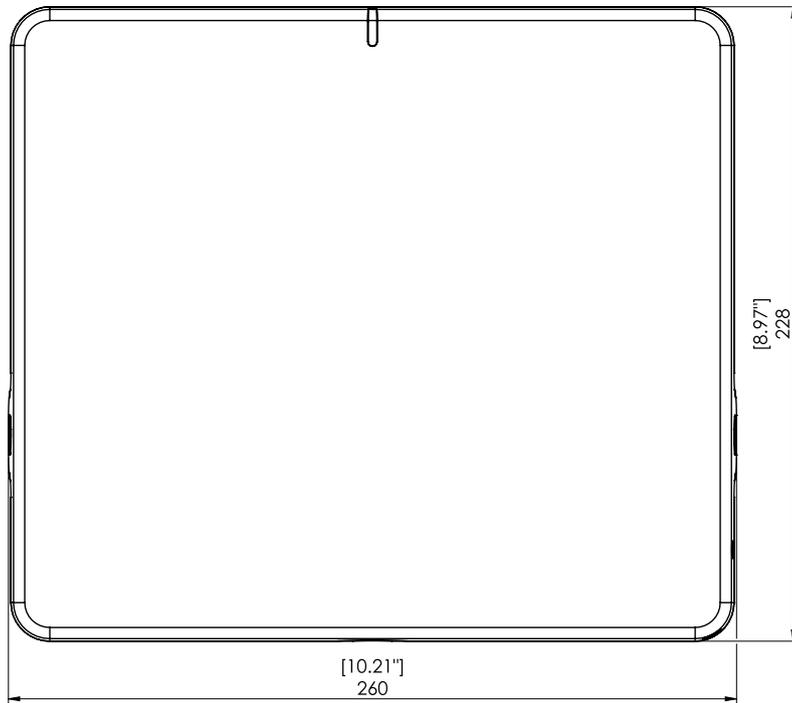
Network Build-Up

The configuration of one or more Unite AP4 is performed via the free Unite Manager Software.

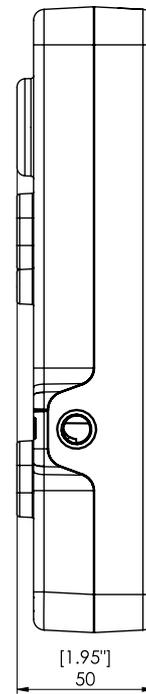


Dimensions in mm and [inch]

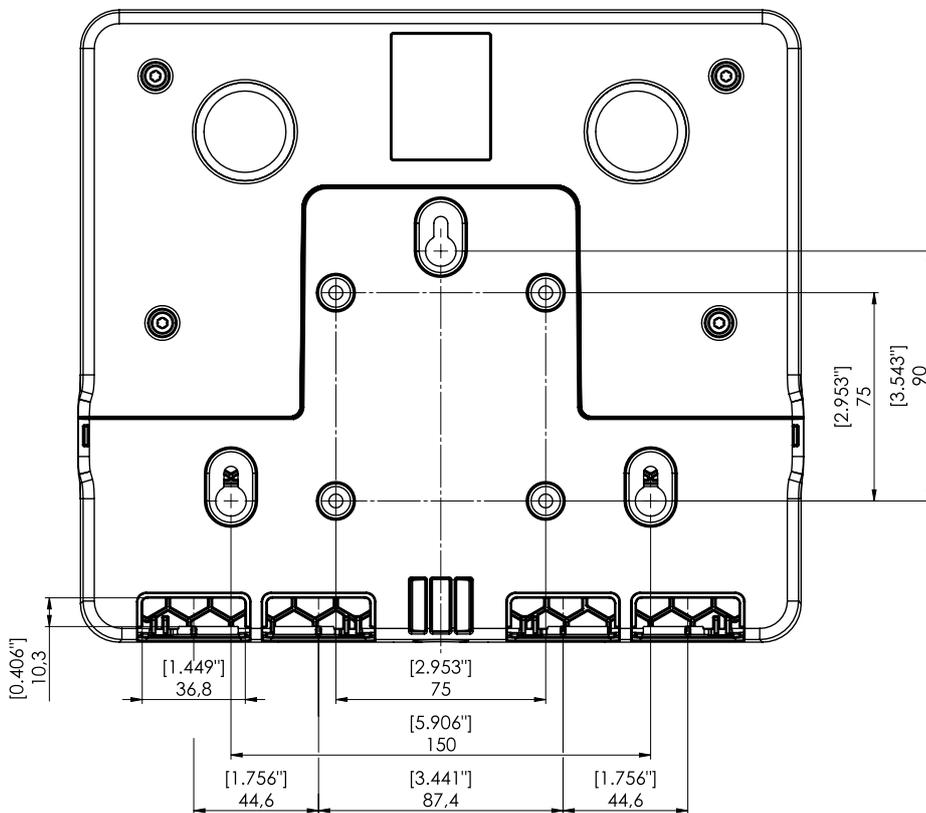
Front view:



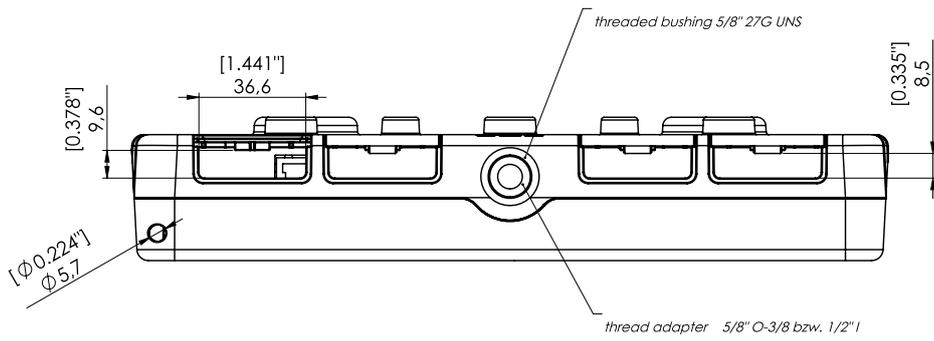
Side view



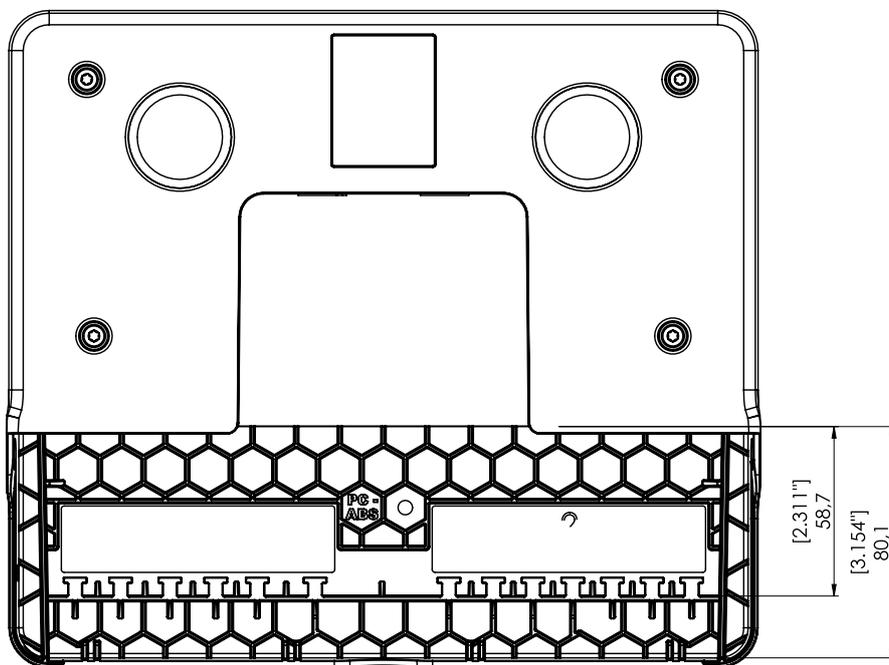
Rear view:



Bottom view:

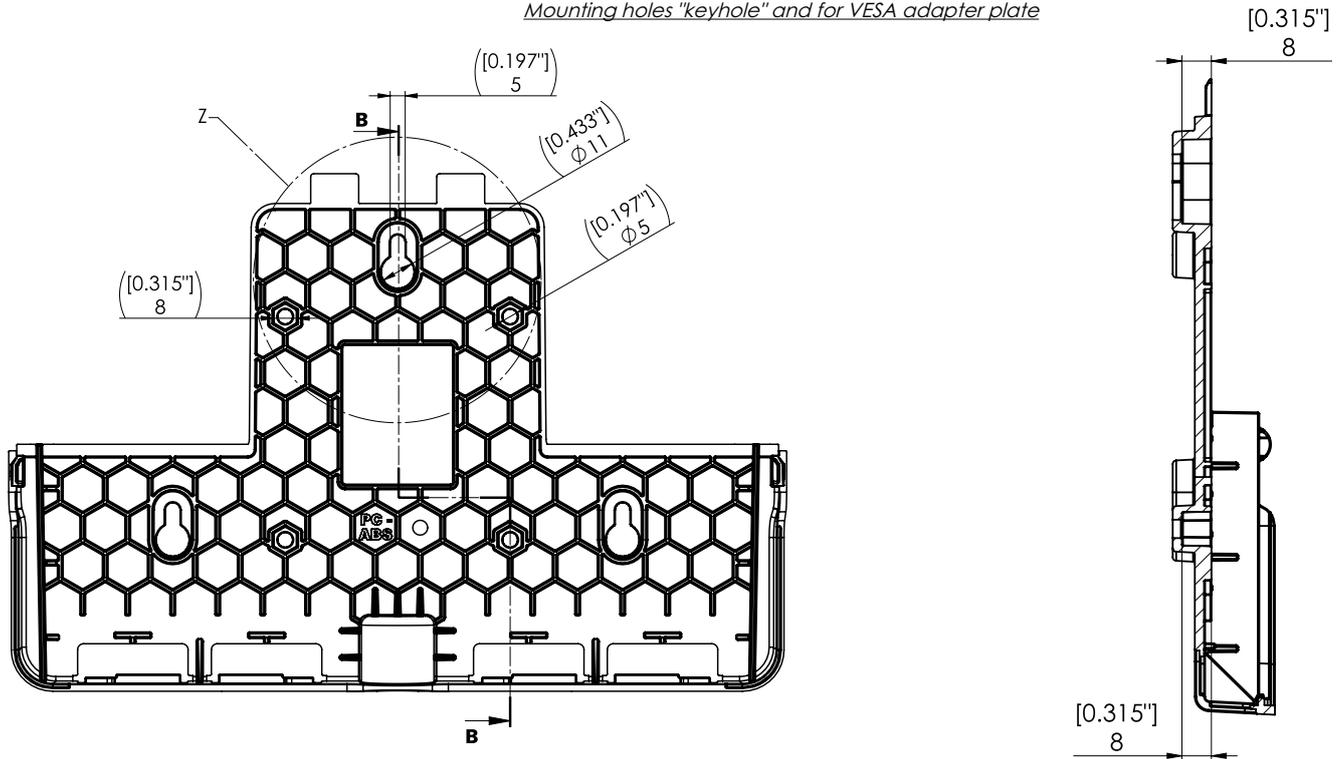


Rear view with mounting plate removed – cable duct:

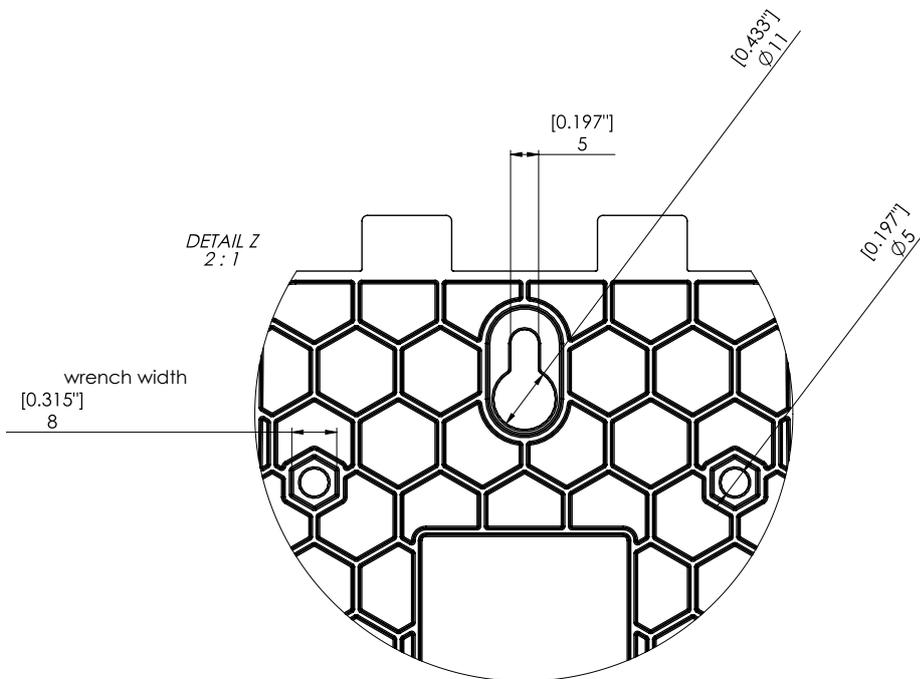


Dimensions of fixing holes for wall mounting and for VESA adapter plate:

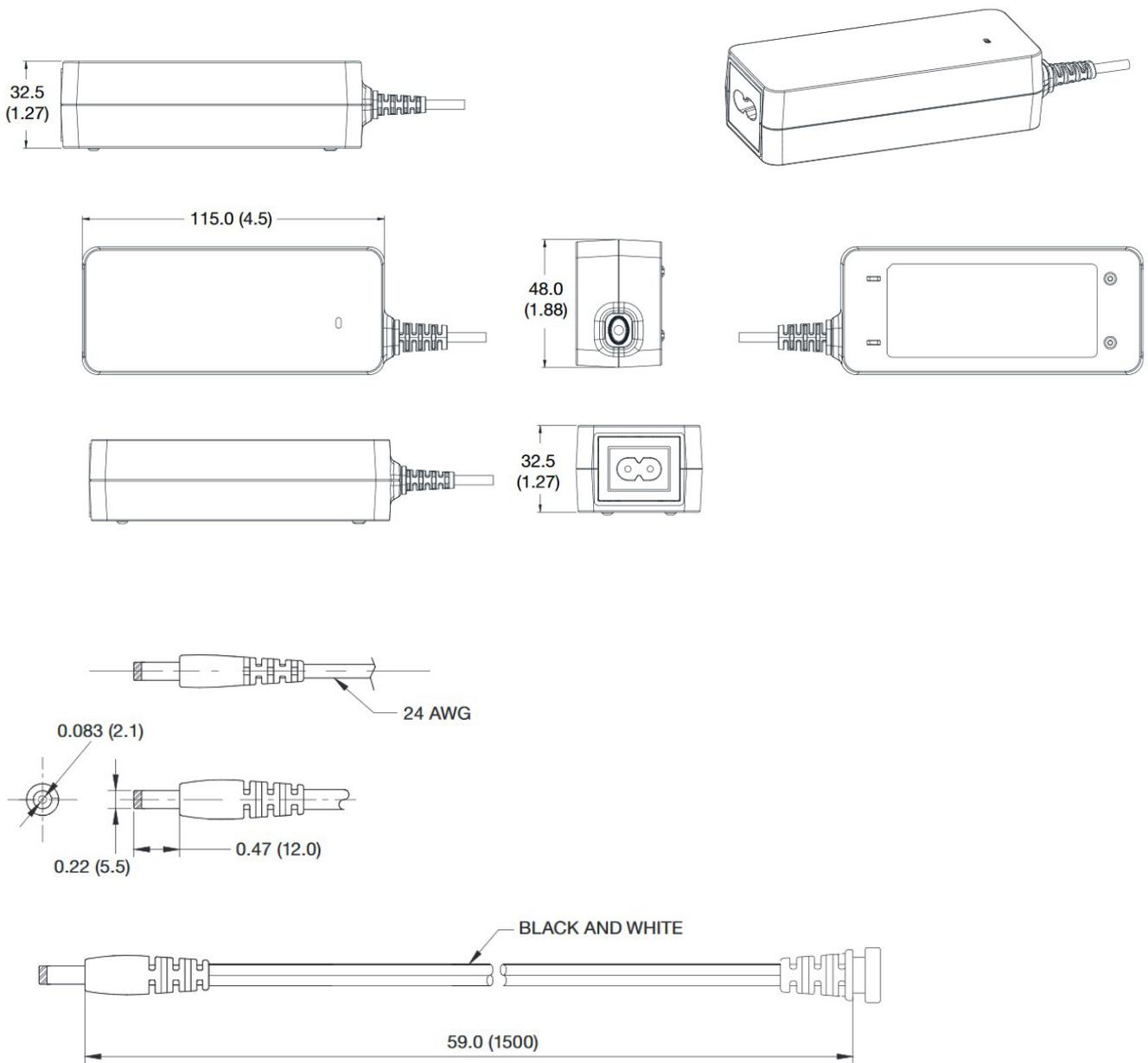
Mounting holes "keyhole" and for VESA adapter plate



Dimensions of fixing holes for wall mounting and for VESA adapter plate in detail:



Dimensions of power supply and cable:



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