TECHNICAL DATASHEET

EXTRONICS



iWAP XN3

Universal wireless enclosure system for Zone 2 and Division 2 hazardous areas

Use any wireless technology, including Wi-Fi access points, UHF RFID readers, LTE routers, IoT gateways including LoRa, and more

ATEX and IECEx Zone 2 and 22 certified

cMETus Class I, II Division 2 and Zone 2 certified

Available in four standard sizes to suit your chosen wireless technology

Your choice of wireless technology	Fully certified for hazardous areas
Highly rugged, IP66 and NEMA 4 rated	Use non-certified antennas with the intrinsically safe RF outputs
Easy installation and low maintenance	Suitable for a wide range of temperatures

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SPECIFICATION

Certification	Ⓔx II 3 (3) G Ex ec [ic Gc] nR IIC T6 Gc 3 D Ex [ic Dc] tc IIIC T85°C Dc cMETus Class I, Div 2, Groups A - D Class II, Div 2, Groups F - G cMETus Class I, Zone 2 AEx ec ic nR IIC T6 Gc Class II, Zone 22 AEx ec ic tc IIIC T85°C Dc -40°C <= Tamb <= 60°C
Power supply	Options for PoE/PoE+ (IEEEE 802 af/at), AC or DC Power.
Maximum power consumption	Dependant on wireless device chosen and power supply option, see below
Enclosure material	Marine grade copper-free aluminium alloy, epoxy powder coated.
Ingress protection	IP66 and NEMA 4
Enclosure weight (approx. excluding AP)	Model 15 7.8 Kg Model 24 10.3 Kg Model 30 12.0 Kg Model 36 13.7 Kg Model 15 293 x 388 x 220 mm (height x width x depth) Model 24 383 x 388 x 220 mm Model 30 443 x 388 x 220 mm Model 36 503 x 388 x 220 mm
Operating temperature	Dependant on wireless device chosen, see option 3 notes
Storage temperature	Dependant on wireless device chosen, see option 3 notes
Relative humidity	0 to 95%, non-condensing
Input connections	**AC/DC Power Options** Via 3 way plug **Incomming network connection** Gigabit Ethernet (including PoE/PoE+) via RJ45 or 8-way spring loaded terminal. Fibre optic options via Dual LC fibre connector. **Console connection (if applicable)** Via RJ 45 or mini USB B socket.
Output connection	Up to 8 galvanically isolated, intrinsically safe external RF outputs via N-type RF connections. Outputs are suitable for direct or remote mount antennas. See below for RF output location options. As standard, all RF outputs on chosen wireless devices will be used. Please discuss with Extronics, if this is not suitable for your application.

Frequency band	Insertion loss (dB)	Loss including surge arrestor (dB)
150MHz – 1GHz	0.50	0.60
1GHz – 3.5GHz	0.98	1.08
3.5GHz – 6GHz	1.55	1.85

Spot frequency	Insertion loss (dB)	Loss including surge arrestor (dB)
400MHz	0.28	0.38
900MHz	0.42	0.52
2.45GHz	0.72	0.82
5.5GHz	1.08	1.38

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ORDERING INFORMATION

IWAP XN3 -[#1]-[#2]-[#3]-[#4] -[#5]-[#6]-[#7]-[#8]

Specify option [#1]

Certification type

ATEX / IECEx and MET	**AIUS**
Ex certification for Japan	**J**

The iWAP XN3 is certified to ATEX, IECEx and ATEX as standard, should you have other certification requirements please discuss with Extronics

Specify option [#2]

Wireless network hardware supply

Hardware supplied by customer	**C**
Hardware supplied by Extronics	**E**

Extronics can offer a quotation to supply your chosen wireless hardware, or you may wish to 'free issue' your equipment which will involve you delivering your device to the Extronics UK factory (within the agreed timescale) in order for us to install as part of our manufacturing process.

Specify option [#3]

Wireless network hardware type

iWAPXN3 is subject to a certification limit of -40 to +60 degrees C. Operating temperatures will vary depending on the device and configuration chosen – if you have specific temperature limit requirements then please contact Extronics who will be able advise further.

Specify option [#4]

[See www.extronics.com/wireless-device-list/ for current options]

Power supply

POE / POE+ IEEE802at compliant (chosen device must be compatible)	**POE**
110 - 240 VAC supply	**AC**
24 VDC	**DC1**
48 VDC	**DC2**

Specify option [#5]

Ethernet connection

Gigabit Ethernet on CAT6 copper	**C**
Gigabit Ethernet on CAT6 copper with surge protection	**CS**
Multi mode 1000BASE-SX fibre with dual LC connector	**MF**
Single mode 1000BASE-LX fibre with dual LC connector	**SF**

If the chosen wireless device is able to accept a direct SFP connection then this will be used as default for all fibre applications when such an option is selected. On applications where an additional Fibre to Ethernet Media Conversion device is required, this will be included as part of Extronics scope.

Specify option [#6]

Antenna surge protection

Antenna surge protection fitted	**S**
No antenna surge protection	**N**

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ORDERING INFORMATION

Specify option [#7]

Antenna mounting

All RF Connections mounted on the TOP of the enclosure	**T**
All RF Connections mounted on the BOTTOM of the enclosure	**B**
SPLIT all available RF Connections between the top and bottom of the enclosure.	**S**

Note: As a standard option, a maximum of 6 RF connections can be mounted on the top of the enclosure and a maximum of 4 RF connections can be mounted on the bottom of the enclosure. For further details examples shown on the next page.

Specify option [#8]

Cable entries

M20 on underside of connection chamber	**M20**
½" NPT on underside of connection chamber	**NPT**

The iWAPXN3 contains x2 M20 threaded entries for in coming cables. NPT option is delivered via 1 (PoE) or 2 (AC/DC) appropriately certifed thread conversion devices

Additional wireless device to be included

The iWAPXN3 can support multiple devices in the same enclosure. If an additional wireless device is required please contact Extronics for compatibility and pricing.

Choice of Model:

Extronics engineers will select an appropriate enclosure size for the wireless hardware and options combination selected.

For specific size requirements- please discuss with Extronics during the quotation stage.

Accessories:

iANT2xx range of rugged simple apparatus antennas (see separate data sheets)	**IANT2xx**
316L stainless steel pipe mount bracket kit for iWAP XN3, to fit 2¼ - 2½" (58.0 - 63.5mm) diameter pipe.	**IWAPMB08**
iWAP XN3 Test Kit for verifying Ex nR seals. Required to be used only if the Ex nR enclosure has been opened for repair.	**IWAPTK01**

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RF OUTPUTS

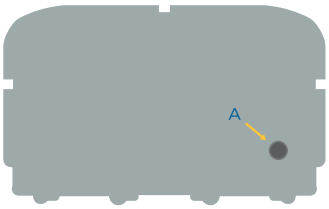
The iWAPXN3 is designed to provide maximum flexibility to the positions for RF outputs so that almost all wireless devices can be accommodated without compromising on performance.

Most common applications are completed by mounting all antennas on the top of the enclosure.

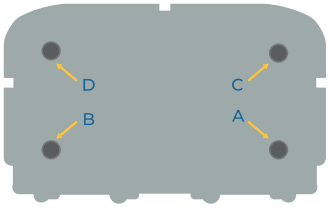
The table and illustration below show the combination of RF outputs available.

		Position Reference						
Orientation of antenna connection on enclosure	Number of RF connections	A	B	C	D	E	F	G
Top	0	P	-	-	-	-	-	-
	1	RF	-	-	-	-	-	-
	2	RF	RF	P	P	-	-	-
	3	RF	RF	RF	P	-	-	-
	4	RF	RF	RF	RF	-	-	-
	5	RF	RF	RF	RF	RF	-	-
	6	RF	RF	RF	RF	-	RF	RF
Bottom	0	-	-	-	-	-	-	-
	1	RF	P	P	P			
	2	RF	RF	P	P			
	3	RF	RF	RF	P			
	4	RF	RF	RF	RF			

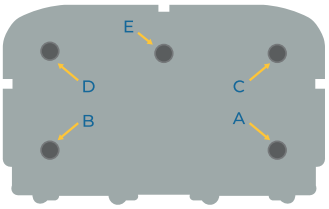
KEY
'-' Entry not present
RF Entry fitted with female N-type connector for remote or direct antenna connection
P Entry fitted with bulkhead stopping plug approved for use in iWAP XN3
⊕ Cable entry
* This table represents standard antenna configurations. An Extronics engineer will discuss alternative options if the standard configuration cannot be achieved.



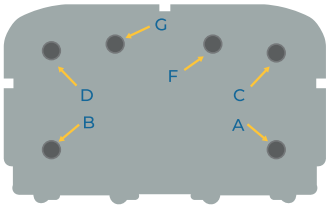
0 TOP RF CONNECTIONS



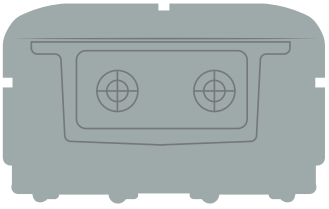
1-4 TOP RF CONNECTIONS



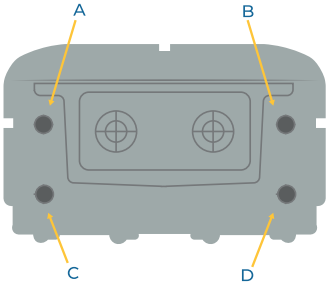
5 TOP RF CONNECTIONS



6 TOP RF CONNECTIONS



0 BOTTOM RF CONNECTIONS



1-4 BOTTOM RF CONNECTIONS

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