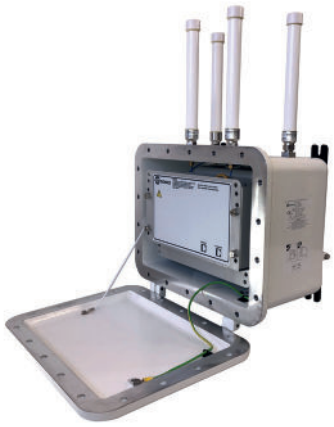
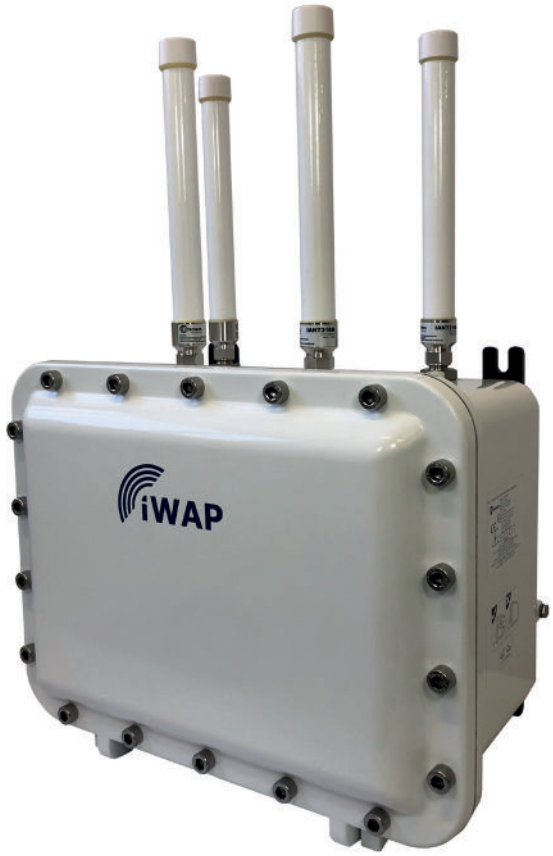
TECHNICAL DATASHEET





iWAP 107

Universal wireless enclosure system for Zone 1 and Division 1 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 1, 2, 21, and 22 certified

cMETus Class I, II Division 1 and Zone 1 & 21 certified

Intrinsically Safe RF outputs

Your choice of wireless technology	Fully certified for hazardous areas
Use non-certified antennas with the intrinsically safe RF outputs	Highly rugged, IP66 rated, and wide temperature range
Easy installation and low maintenance	Configured to suit your application

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SPECIFICATION

Certification	Ⓔx II 2 (1) GD Ex d [ia IIC Ga] IIB+H2 T5 Gb Ⓔx II 2 (1) GD Ex tb [ia Da] IIIC T100°C Db cMETus Class I, II, Div 1, Groups B-G cMETus Class I, II, Zone 1/21 Groups IIB+H2, III
Power supply	120VAC or 230VAC (+/- 10%) IEEE 802.3xx PoE
Maximum power consumption	Basic configuration: 25W With heaters: 125W
Enclosure material	Marine grade copper-free aluminium light alloy, epoxy powder coated or 316L Stainless Steel (optional)
Ingress protection	IP66
Weight	Aluminium: c. 26.5kg (POE version) 316L Stainless Steel: c. 70kg (hardware dependant)
Dimensions	Aluminium: 415 x 315 x 250mm (16.34 x 12.4 x 9.84in) 316L Stainless Steel: 415 x 315 x 253mm (16.34 x 12.4 x 9.96in)
Temperature	Ambient temperature depends on device chosen, see wireless device list.
Relative humidity	0 to 95%, non-condensing
Input connections	1 x AC power cable entry with screw terminals 1 x PoE power / data 10/100/1000BASE-T Ethernet on RJ45 socket or 1 x Single or Multi mode fibre input on LC connector & Splice Tray Note: MET enclosure entries are via 1/2" NPT drilled entries, all other variants are via M20 x 1.5-6H drilled entries
Ethernet link distance	10/100/1000BASE-T Ethernet on CAT6: up to 100m 1000BASE-SX Multi mode fibre: up to 550m, wavelength 850nm 1000BASE-LX Single mode: fibre: up to 20km, wavelength 1310nm
Output connection exceeded.	Up to 8 galvanically isolated N-Type RF outputs Please note it is the customer's responsibility to ensure the maximum values for RF Threshold power as per Table 4.0 of IEC 60079-0: 2018 are not The maximum RF output of the wireless transmitter and antenna gain must be taken into account when installing equipment.

Typical internal RF loss (between output of access point and external N-type connector)

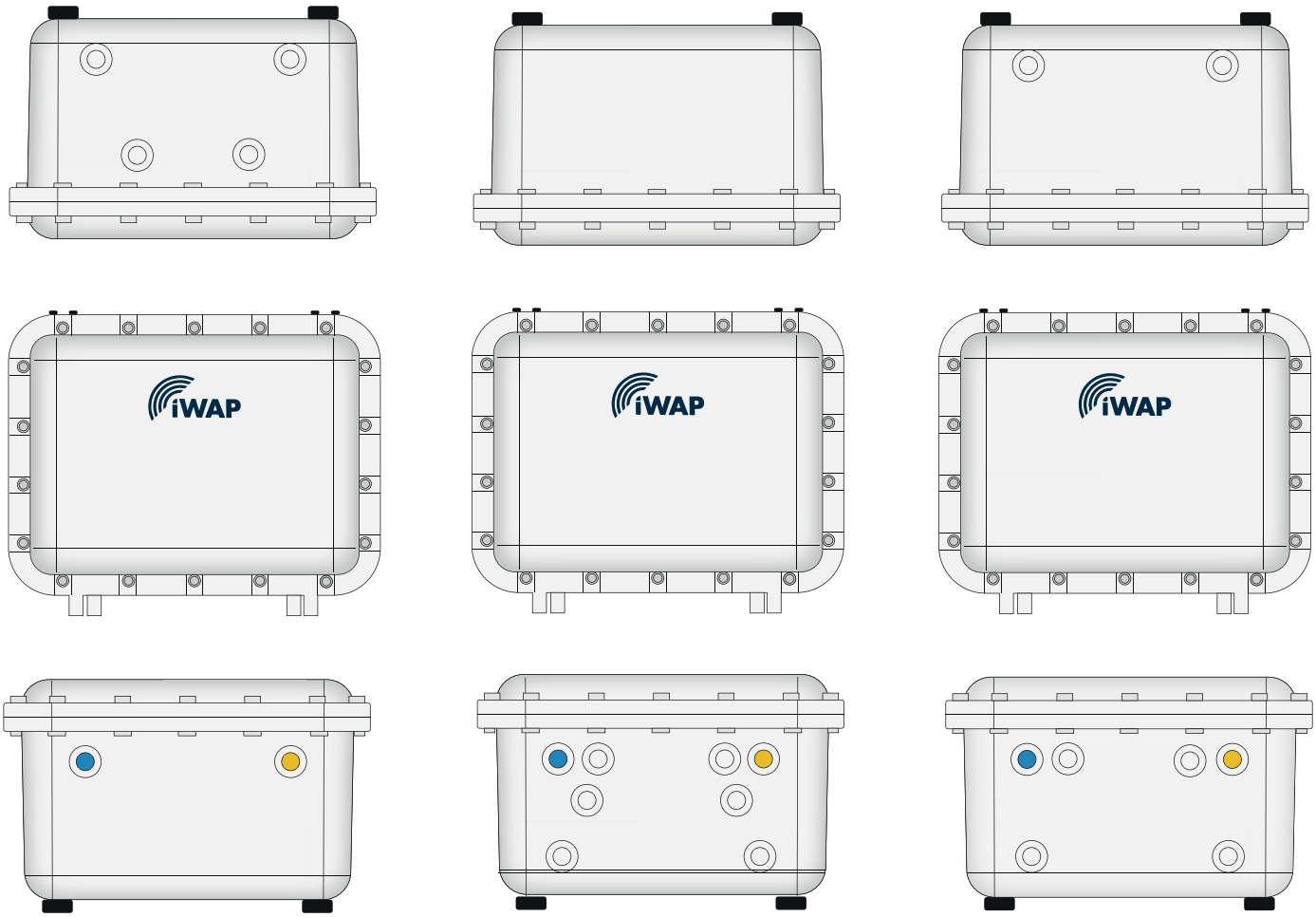
Frequency band	Insertion loss (dB)	Loss including surge arrestor (dB)
150MHz – 1GHz	0.30	0.45
1GHz – 3.5GHz	0.59	0.74
3.5GHz – 6GHz	0.99	1.14
6GHz - 8GHz	1.41	1.66

Spot frequency	Insertion loss (dB)	Loss including surge arrestor (dB)
400MHz	0.15	0.30
900MHz	0.16	0.31
2.45GHz	0.48	0.63
5.5GHz	0.99	1.14

Antenna Locations

The iWAP107 allows for over 50 standard antenna configurations which include top mounted, bottom mounted or split mouned antennas. The maximum number of antennas fitted to the enclosure is 8, up to 4 on the top and up to 8 on the bottom.

Below are common examples of antenna output locations.
Other options are available please discuss your requirements with an extronics engineer.



4 Top Mounted Antennas (T4)

6 Bottom Mounted Antennas (B6)

6 Split Mounted Antennas (S6)

KEY
Antenna location
Data input
Power input

Example codes,
Location + Number of antenna outputs
4 Top mounted antennas (T4)
6 Bottom Mounted Antennas (B6)
6 Split Mounted Antennas (S6)

ORDERING INFORMATION

Specify option [#1]	**iWAP107 -[#1]-[#2]-[#3]-[#4] -[#5]-[#6]-[#7]-[#8]**	
Certification type	ATEX / IECEx	AI
	MET CI / D1	USG
	MET CII / D1	USD
	MET CI/II, Zone 1/21	CA
	Ex certification for Japan	J
Specify option [#2] Wireless network hardware supply	Hardware supplied by customer	C
	Hardware supplied by Extronics	E
	Extronics can supply the wireless hardware, or you may wish to 'free issue' (supply and deliver to Extronics at your cost) one of the already assessed solutions (see option #3), which we will factory fit.	
Specify option [#3] Wireless network hardware type	Extronics iWAP range of hazardous area wireless enclosures are vendor agnostic. This means you can pick from a wide range of wireless devices, please visit the link below to see the wireless devices which have been certified. [See www.extronics.com/wireless-device-list/ for current options] If your preffered device is not listed please talk to an Extronics engineer who can advise on the process of certifiying a new device. Depending on the wireless device chosen, additional components may be added or removed such as POE injector, media convertor or secondary power supply. iWAP107 is subject to a certification limit of -40 to +60 degrees C. Operating temperatures will vary depending on the device chosen – if you have specific temperature limit requirements then please contact Extronics who will be able advise further.	
Specify option [#4] Power Supply	POE IEE 802.3xx	POE
	20VAC	AC1
	230VAC	AC2
	24VDC	DC1
Specify option [#5] Ethernet connection	100/1000Base T-Ethernet on CAT6 Copper	C
	100/1000Base T-Ethernet on CAT6 Copper (Surge Protected)	CS
	Multi mode 1000BASE-SX fibre with LC connector	SX
	Single mode 1000BASE-LX fibre with LC connector	LX

ORDERING INFORMATION

Specify option [#6] Antenna mounting	Top Mounted Bottom Mounted Split The number of antenna outputs on the wireless device will determine the number of antenna output connections Popular configurations and example coding shown on page 3	T B S
Specify option [#7] Surge protection	Antenna surge protection No Antenna surge protection	S N
Specify option [#8] Enclosure heating	No enclosure heating Enclosure heating	N H
Specify option [#9] Enclosure material	Marine grade copper-free aluminium light alloy 316L Stainless steel	AL SS
Accessories	iANT2xx range of rugged simple apparatus antennas (see separate data sheets)	iANT2xx
	316L stainless steel pipe mount bracket kit for iWAP107, to fit 2¼ - 2½"(58.0 - 63.5mm) diameter pipe.	iWAPMB03
	Double suction door opening tool - used for opening Ex d enclosure doors size of iWAP107 and above. Rated 50KG. This item is available to purchase separately, but is included FOC with each shipment of iWAP107 (1 tool per 1-10 iWAPs)	8580001