TECHNICAL DATASHEET

EXTRONICS

iRFID 107

Universal UHF reader enclosure system for Zone 1 and Division 1 hazardous areas

Use your preferred UHF RFID reader, 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 UHF RFID reader	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

SPECIFICATION

Extronics

Certification	⟨Ex⟩ II 2 (1) GD Ex d [ia IIC Ga] IIB+H2 T5 Gb ⟨Ex⟩ 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 48VDC
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	Up to 8 galvanically isolated N-Type RF outputs Please note it is the customer's responsibility to ensure the maximum valuesfor RF Threshold power as per Table 4.0 of IEC 60079-0: 2018 are not exceeded. 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 reader point and external N-type connector)	Due to the typical maximum transmit power of UHF readers, customers may need to install attenuators or excess lengths of RF cable to comply with Table 4.0 of IEC 60079-0:2018.

Spot frequency	Insertion loss (dB)	Loss including surge arrestor (dB)
900MHz	0.16	0.31

Antenna Locations

The iRFID107 allows for over 50 standard antenna configurations which include top mounted, bottom mounted or split mouned antennas. The maximum number of RF connectors fitted to the enclosure is 8, up to 4 on the top and up to 8 on the bottom.

As UHF applications will typically use remote mounted antennas, we recommend RF connectors are located on the bottom.

Below are common examples of antenna output locations.
Other options are available please discuss your requirements with an extronics engineer.
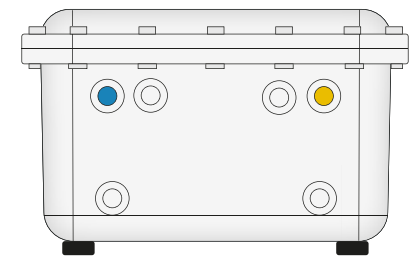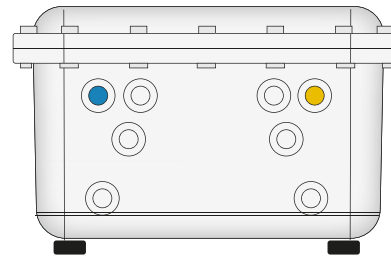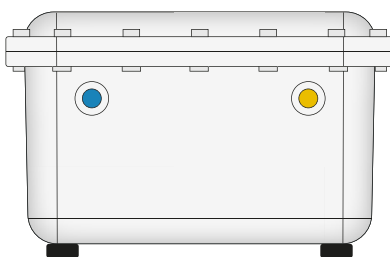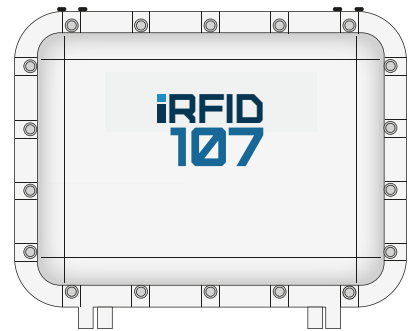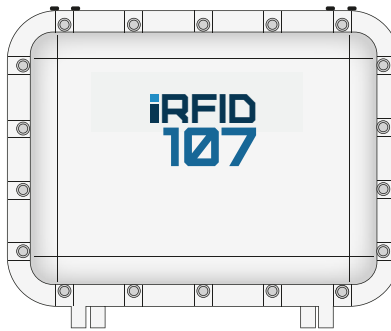
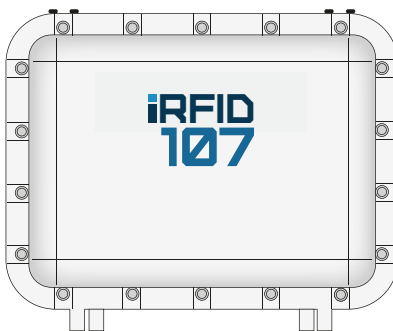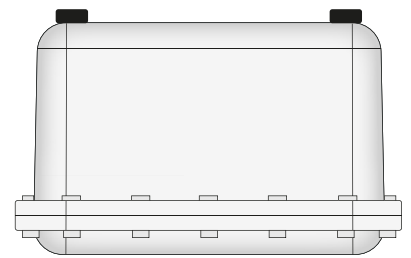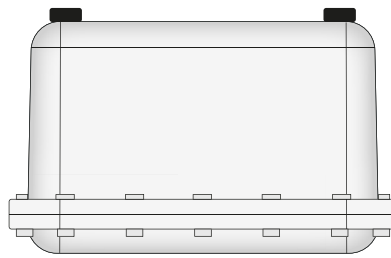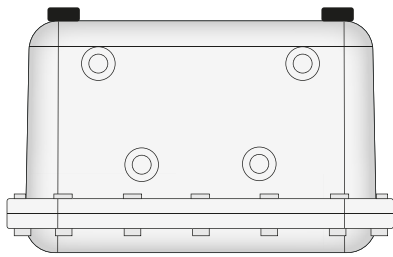| 4 Top Mounted Antennas (T4) | 6 Bottom Mounted Antennas (B6) | 4 Bottom Mounted Antennas (B4) |

KEY

◎	Antenna location
◉	Data input
◉	Power input

Example codes,
Location + Number of antenna outputs
4 Top mounted antennas (T4)
6 Bottom Mounted Antennas (B6)
4 Bottom Mounted Antennas (B4)

ORDERING INFORMATION

EXTRONICS

Specify option [#1]	iRFID107 -[#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]	Hardware supplied by customer	C
UHF reader hardware supply	Hardware supplied by Extronics	E

Extronics can supply the reader 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]

UHF RFID reader type

Extronics iRFID range of hazardous area wireless enclosures are vendor agnostic. This means you can pick from a wide range of UHF readers, please visit the link below to see the UHF readers 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 UHF reader chosen, additional components may be added or removed such as POE injector, media convertor or secondary power supply.

iRFID107 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]	POE IEE 802.3xx	POE
Power Supply	20VAC	AC1
	120VAC	AC2
	48VDC	DC1

Specify option [#5]	100/1000Base T-Ethernet on CAT6 Copper	C
Ethernet connection	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

Specify option [#6]	Top Mounted	T
Antenna mounting	Bottom Mounted	B
	Split	S
	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	

| Specify option [#7] | Antenna surge protection | S |
| Surge protection | No Antenna surge protection | N |

| Specify option [#8] | No enclosure heating | N |
| Enclosure heating | Enclosure heating | H |

Specify option [#9]	Marine grade copper-free aluminium light alloy	AL
Enclosure material	316L Stainless steel	
	MET CII / D1 option not available in stainless steel	SS

Accessories	iANT217 UHF RFID circular polarised antenna	iANT217
	316L stainless steel pipe mount bracket kit for iRFID107, 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 iRFID107 and above. Rated 50KG. This item is available to purchase separately, but is included FOC with each shipment of iRFID107 (1 tool per 1-10 iRFIDs)	8580001
	Extended Warranty and Technical Support (over and above standard first year) available on all iRFID107 configurations	W001