



# EXTRONICS iWAP107 Wireless Enclosure System User Manual

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**EXTRONICS iWAP107 Wireless Enclosure System**



## Introduction

The iWAP107 is an ATEX and IECEx approved Zone 1 Access Point Enclosure with intrinsically safe RF outputs; it is designed to allow the deployment of wireless networks in hazardous areas. The concept allows installation of equipment from leading WLAN vendors such as Cisco, Aruba, Aer Scout and Motorola. Each type of Access Point or RF transmitting device is rigorously checked and tested by Extronics to ensure conformity to the latest standards. This means that the user may select the vendor of their choice when extending a WLAN to hazardous areas. However equipment not previously approved will require assessment to determine its suitability.

The intrinsically safe RF outputs of the iWAP107 allows users to choose any antenna for use with their wireless hardware e.g. Extronics iANT200 range of high quality rugged outdoor antennas. Any antennas not listed in the Extronics range must be assessed by the user to ensure they meet the requirements for installation of non-electrical equipment in hazardous areas. Up to eight antennas can be utilized, allowing the MIMO functionality of the latest 802.11n/ac compatible wireless access points to be implemented, providing optimum coverage and maximum data throughput on Chemical Plants, Oil Refineries or Oil & Gas Platforms. Optional features include surge arrestors for lightning suppression in outdoor installations and single mode or multimode fibre optic inputs to allow for extended Ethernet link distance.

## Safety Information and Notes

### Storage of this Manual

Keep this user manual safe and in the vicinity of the device. All persons required to work on or with the device should be advised on where the manual is stored.

### ATEX/IECEx

1. Contact Extronics for information on the dimensions of the flameproof joints.
2. The RF output is only to be connected to an antenna suitable for the hazardous location; refer to associated RF galvanic isolator iSOLATE500 equipment certificate IECEx BAS 13.0064X / Baseefa13ATEX0112X, and associated instructions.
3. If the RF output connector is not intended to be connected to a cable and/or antenna, the output connector must be capped.

### List of Notes

The notes supplied in this chapter provide information on the following.

- Warning!
  - Possible hazard to life or health.
- Caution
  - Possible damage to property.
- Important
  - Possible damage to enclosure, device or associated equipment.
- Information
  - Notes on the optimum use of the device

**Warning!** Installation of the iWAP107 must be performed in accordance with IEC 60079-14 and IEC 60079-25. Maintenance and inspection must be performed in accordance with IEC 60079-17.

**Warning!** Installation of the iWAP107 is only to be performed by skilled electricians and instructed personnel in accordance with national legislation.

**Warning!** The iWAP107 contains INTRINSICALLY SAFE circuits.

**Warning!** The iWAP107 contains INTRINSICALLY SAFE circuits.

**Warning!** The iWAP107 Intrinsically Safe RF output ports are located in the positions shown in Section 3.3. Only antennas in accordance with Section 3.11 may be connected to these ports. Refer to Section 3.12 for antenna installation requirements.

**Warning!** The iWAP107 MUST be earthed. Refer to Section [earthing] for details.

**Warning!** The iWAP107 must NOT be installed in hazardous areas requiring Category 1, M1 or M2 equipment.

**Warning!** Although antennas connected to the Intrinsically Safe RF outputs of the iWAP107 may be installed in hazardous areas requiring Category 1 equipment, the iWAP107 flameproof enclosure must NOT be installed in these environments.

**Warning!** The iWAP107 flameproof enclosure must NOT be opened when an explosive gas or dust atmosphere is present, or when the equipment is energized.

**Warning!** The iWAP107 flameproof enclosure lid must be secured only with the bolts supplied, and these must be tightened to the correct torque value. See Section 3.2.2 for details. Contact Extronics for spare bolts.

**Warning!** The iWAP107 flameproof enclosure must only be fitted with suitably approved cable entry devices. See Section 3.3 for details.

**Warning!** Do not exceed the RF Threshold Power for the equipment group in which the iWAP107 and its antennas are to be installed; it must be controlled in accordance with IEC 60079- 0, and must not exceed the following levels:

- IIC – 2W (+33dBm)
- IIB – 3.5W (+35.4dBm)
- IIA – 6W (+37.7dBm)
- III – 6W (+37.7dBm)

See Section 3.10.1 for an example of how to calculate the RF Threshold Power

**Warning!** The iWAP107 must not be modified in any way.

**Warning!** There are no user-serviceable parts below the top plate of the iWAP107 – see Section 3.5 for details.

Always refer service enquiries to Extronics.

**Warning!** Hazardous voltages are present within the iWAP107 enclosure.

**Warning!** Hot surfaces may be present within the iWAP107 enclosure – observe the warning labels fitted

**Warning!** Optical radiation hazards may be present within the iWAP107 enclosure – observe the warning labels fitted.

**Warning!** The iWAP107 may weigh up to 70Kg. Exercise care when handling and mounting.

**Warning!** DO NOT lift the iWAP107 using the threaded entries, N-type RF connectors or door bolts. Lift only using suitably approved slings, fitted by suitably qualified personnel

**Important** Ensure that NO TOOLS come into contact with the flamepath of the enclosure, as this may cause irreparable damage and render the unit unsafe

**Important** Always re-apply a thin layer of Loctite 8104 or Loxeal GS silicone grease to the enclosure flame paths whenever the iWAP107 flameproof enclosure is opened. This is required to maintain the IP rating of the enclosure

**Important** Do not exceed the power supply parameters specified on the iWAP107 external rating plate

**Important** Only replace the fuse with the same value and type indicated on the internal fuse identification label

**Important** Ensure that only the correct fibre transceiver format/power is connected to the iWAP107. Damage to the iWAP107 fibre interface or customer equipment may occur if the wrong format/excessive optical power is used.

## Installation

### Mounting

**Warning!** The iWAP107 stainless steel enclosure weighs approximately 70Kg. Exercise care when handling, and use suitable mounting points and structures. Mount the enclosure ONLY using the mounting points shown.

**Warning!** DO NOT lift the iWAP107 using the threaded entries, N-type RF connectors or door bolts. Lift only using suitably approved slings, fitted by suitably qualified personnel.

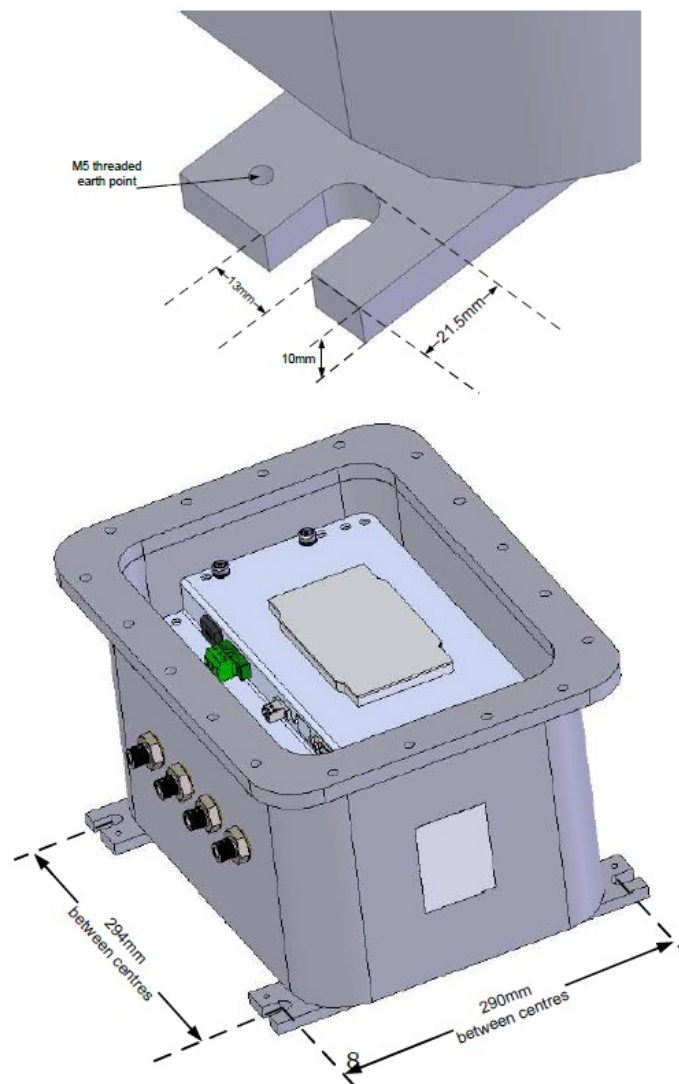


Figure 1: iWAP107 Stainless Steel Enclosure Mounting Points

## Opening and Closing the Enclosure

Important Ensure that NO TOOLS come into contact with the flamepath of the enclosure, as this may cause irreparable damage and render the unit unsafe.

**Warning!** The iWAP107 flameproof enclosure must NOT be opened when an explosive gas or dust atmosphere is present, or when the equipment is energized.

**Warning!** The iWAP107 flameproof enclosure lid must be secured only with the bolts supplied, and these must be tightened to the correct torque value. Contact Extronics for spare bolts.

**Important** Always re-apply a thin layer of Loctite 8104 or Loxeal GS9 silicone grease to the enclosure flame paths whenever the iWAP107 flameproof enclosure is opened. This is required to maintain the IP rating of the enclosure

## Opening the Enclosure

The flamepaths of the iWAP107 enclosure are supplied with grease applied to protect them. This can make the enclosure lid difficult to open as the grease can cause it to stick. Therefore Extronics recommend the use of a double suction lifter. This tool is available from hardware and builders supply stores. Extronics recommend using a lifter that has a working load of 50kg minimum and approximate dimensions 300mm x 120mm

- Remove all bolts, using a wrench with an 8mm hex head. Store the bolts carefully to avoid damage or loss.
- Attach the suction lifter as per the instructions provided with the lifter and release the door.

## Closing the Enclosure

- Check that the correct grease (Loctite 8104 or Loxeal GS9) has been applied to the flame-path, and that it is free of damage.
- Check all bolts are the correct type and free from damage.
- Re-insert the bolts and hand-tighten only.
- Using a torque wrench fitted with an 8mm hex head, tighten the bolts in opposite corners of the box, then work around the box. Use the following maximum torque.

### Lid Bolt Torques

Enclosure material	Maximum Bolt Torque
Aluminium	20Nm
Stainless Steel	44Nm

### Cable Entries

**Warning!** The iWAP107 flameproof enclosure must only be fitted with suitably approved cable entry devices.

**Warning!** The iWAP107 protective plastic transport caps fitted to all threaded cable entries MUST be replaced with suitably certified cable glands or stopping plugs before installation in a hazardous area.

**Warning!** Any iSOLATE-CT RF connector transits fitted to the iWAP107 must NOT be loosened or removed by the user under any circumstances, as their flameproof protection may be damaged by this.

### Cable Entries and Connections for iWAP107-C-37-AC-SG-2450- 4S-N-0-N stainless steel enclosure

The iWAP107-C-37-AC-SG-2450-4S-N-0-N stainless steel enclosure is supplied with entries and connectors as shown in Figure 3.

- Connections A-D are INTRINSICALLY SAFE outputs providing galvanically isolated RF signals (see Section 16 for details), carried on conventional 50Ω impedance N-type female connections. The N-type connections are the front part of the iSOLATE-CT devices which transit through the flameproof wall of the iWAP107022 enclosure, and are approved as part of the iWAP107 ATEX/IECEx certification. The designators A-D correspond with the RF port assignments of the Cisco AIR-CAP2602E-Z-K9 access point installed in the flameproof enclosure.
- Entries D and E are M20 x 1.5 – 6H threaded Ex d entries. Entry D is for the power supply, entry E for the data connection



*Figure 3: iWAP107-C-37-AC-SG-2450-4S-N-0-N Stainless Steel Enclosure External Entries and Connections*

## Earthing

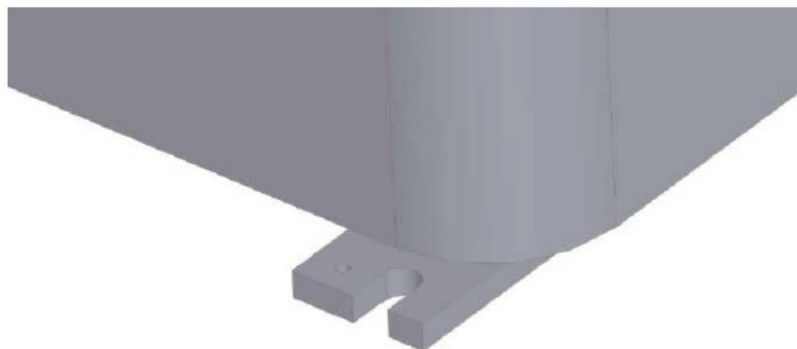
**Warning!** The iWAP107 MUST be earthed. It must be connected to the plant earth system using at least one of the external bonding points, using a minimum 4mm<sup>2</sup> conductor. The earth cable must be installed in accordance with the requirements of IEC 60079-14.

**Warning!** The iWAP107 enclosure door earth bond must not be removed.

**Warning!** The iWAP107 internal power input connector has an earth connection, which must be terminated to the protective earth conductor of the incoming power supply

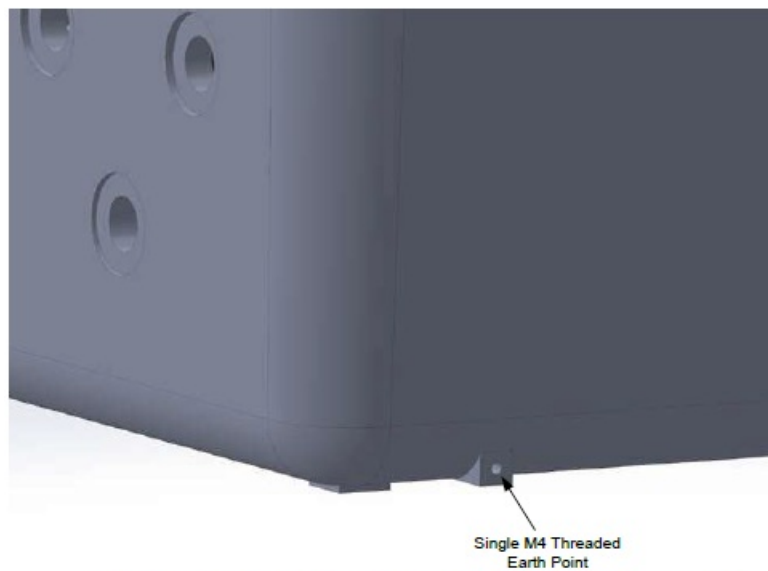
## Location of iWAP107 stainless steel enclosure external earth bond points

There is an M5 threaded earth bond point on each of the 4 enclosure feet.



*Figure 4: iWAP107 Stainless Steel Enclosure External Earth Bond Points*

## Location of iWAP107 aluminium enclosure external earth bond points

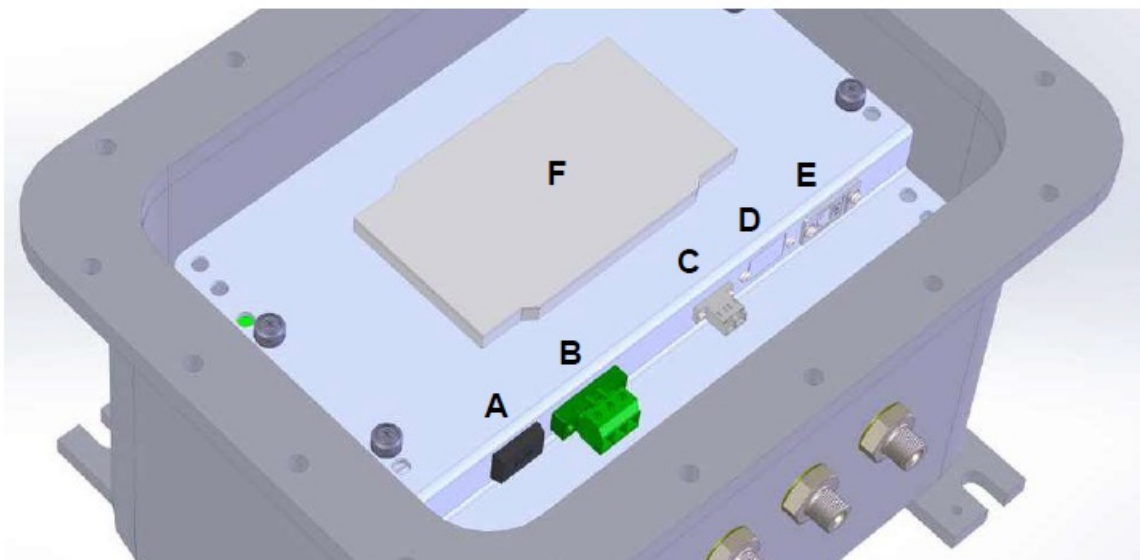


*Figure 5: iWAP107 Aluminium Enclosure Earth Bond Point*

## Electrical Installation

**Important** Do not exceed the power supply parameters specified on the iWAP107 external rating plate.

**Important** Only replace the fuse with the same value and type indicated on the internal fuse identification label.



*Figure 6: iWAP107 Internal Connections Showing All Options*



Designator	Purpose	Comments
A	Fuse Holder	Contains 1 active fuse and 1 spare. Not fitted on POE version. See Section <a href="#">3.7</a>
B	Power input	Mains (L,N,E) or DC (+,-,E) input, dependent on product configuration. Not fitted on POE version. See Section <a href="#">3.6</a> for details.
C	Fibre input	This can be single mode or multimode fibre, or replaced by a blanking plate, depending on product options. See Section <a href="#">3.9.3</a> for details
D	CAT5E input	This 10/100/1000 Base T CAT5E data connection. It may also be replaced by a blanking plate, depending on product options. See Section <a href="#">3.9.1</a> for details
E	Console port	This is a serial console port for Cisco Access Points. See <a href="#">3.9.4</a> for details.
F	Fibre splice tray	This is a 12-way fibre splice tray, only fitted when the fibre option is selected.

## Power supply

**Important** The iWAP107 may be powered from a number of different power sources, depending on its configuration. Refer to the rating plate of the unit supplied for details.

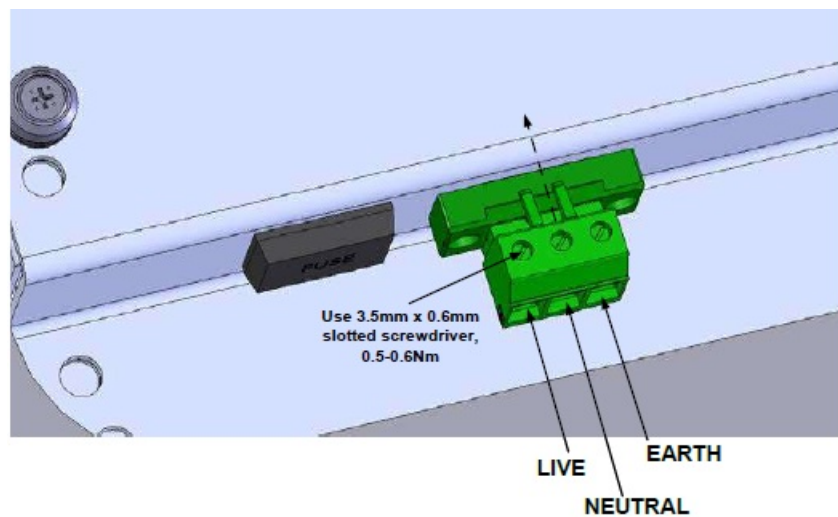


Figure 7: iWAP107 Mains Power Connection

The mains power connection is made with a 2-part screw-terminal connector (supplied), the plug part is Phoenix Contact 1804917, and spare plugs can also be supplied by Extronics. It has a minimum tightening torque of 0.5Nm, a maximum of 0.6Nm, and requires a 3.5mm x 0.6mm slotted screwdriver.

Wire Type	Minimum Cross Sectional Area	Maximum Cross Sectional Area
Single Solid Core	0.2mm <sup>2</sup>	4mm <sup>2</sup>
Single Stranded Wire	0.2mm <sup>2</sup>	4mm <sup>2</sup>
Single Stranded Wire, With Ferrule With/Without Sleeve	0.25mm <sup>2</sup>	4mm <sup>2</sup>
2 Solid Conductors With Same Cross Section	0.2mm <sup>2</sup>	2mm <sup>2</sup>
2 Stranded Conductors With Same Cross Section	0.2mm <sup>2</sup>	1.5mm <sup>2</sup>
2 Stranded Conductors With Same Cross Section, With Ferrules Without Sleeves	0.25mm <sup>2</sup>	1.5mm <sup>2</sup>

## Fusing

### Fuse Ratings

**Important** Only replace the fuse with the correct type, having established the reason for the fuse blowing. The iWAP107 is fitted with a single fuse on the Live circuit, of either a 1A or 2A, depending its configuration. The fuse requirement for the specific model supplied is written on the top plate next to the fuse holder. The iWAP107 contains surge suppression and filtering devices which may cause the fuse to blow if the unit is subjected to power surges or transients. Replacement fuses should be either 1 or 2A Time-lag 20mm x 5mm HRC Fuses, rated at 250VAC, 1500A Interrupt Rating, for example Littelfuse 0215001.MXP or 0215002.MXP.

### Changing Fuse

See Figure 8 for access to Fuse. The fuse holder also carries a spare fuse for convenience.

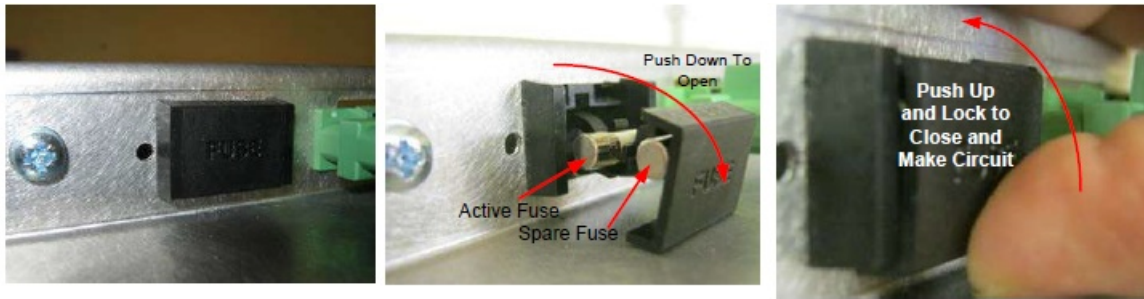


Figure 8: Fuse Access

### External Overcurrent Protection

The iWAP107 should be installed on a circuit with a double-pole circuit breaker of a maximum of 25A. This is the maximum current rating of the smallest internal chassis earth bond in accordance with EN60950-1 2.6.3.3. Refer to Extronics if it becomes necessary to exceed this rating.

### Data Connections

#### Copper Ethernet

**Information** Check that the line speed of the switch port to which the iWAP107 is connected matches the iWAP107 port configuration, otherwise communication may not be established

If Copper Ethernet is specified, this will be terminated in a standard CAT5E RJ45 Socket on the front plate of the iWAP107, Position D in Figure 6. Typically the interface will be an IEEE 10/100/1000BaseT format, but this is dependent on the access point installed.

Terminate the RJ45 plug as follows (EIA 568B standard):

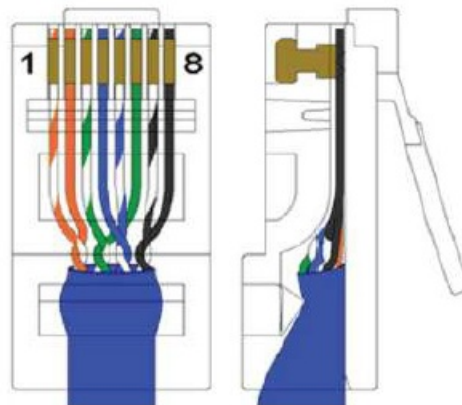


Figure 9: RJ45 CAT5E EIA 568B Plug Wiring

#### Power-Over-Ethernet (POE)

If Power-Over-Ethernet (POE) is used, the format will depend on the access point installed in the iWAP107. Ensure that the correct Power Sourcing Equipment (PSE) is used. Connect the RJ45 cable per Section 3.9.1.

#### Optical Fibre

**Warning!** Optical radiation hazards may be present within the iWAP107 enclosure – observe the warning labels fitted.

**Important** Ensure that only the correct fibre transceiver format/power is connected to the iWAP107. Damage to the iWAP107 fibre interface or customer equipment may occur if the wrong format/excessive optical power is used.

The iWAP107 optical fibre format may be any of the following, refer to product option code #4 for details. Other optical formats are available on request.

Option #4	Fibre Format	Connection	Transmitter Power	Receiver Sensitivity	Max Receiver Input Without Damage	Wavelength	Typical Range
F	100Base-FX	LC Duplex Multimode 62/125µm or 50/125µm	-14 to -20dBm (62/125µm) -14 to -23.5dBm (50/125µm)	-31dBm	-8dBm	1310nm	2km
S	100Base-FX	LC Duplex Single Mode 9/125 µm	-8 to -15dBm	-34dBm	0dBm	1310nm	30km
FG	1000Base-FX	LC Duplex Multimode 62/125µm or 50/125µm	-1 to -9dBm (62/125µm) -1 to -9dBm (50/125µm)	-19dBm	-1dBm	1310nm	2km (62/125µm) 1km (50/125µm)
SG	1000Base-FX	LC Duplex Single Mode 9/125 µm	-3 to -9.5dBm	-20dBm	-3dBm	1310nm	10km

### Console Port

The console port is a standard Cisco RS232 configuration port on an RJ45 socket. The port for Cisco Access Points is 9600 Baud, 8 Data Bits, No Parity, 1 Stop Bit. Other vendors may use different formats.

Pin	Function
1	RTS
2	DTR
3	TXD
4	GND
5	GND
6	RXD
7	DSR
8	CTS

Table 5: Cisco console port wiring

### Intrinsically Safe RF Outputs

**Warning!** The iWAP107 Intrinsically Safe RF output ports are located in the positions shown in Section 3.3. Only

antennas in accordance with Section 3.11 may be connected to these ports. Refer to Section 3.12 for antenna installation requirements.

**Warning!** Although antennas connected to the Intrinsically Safe RF outputs of the iWAP107 may be installed in a hazardous areas requiring Category 1 equipment, the iWAP107 flameproof enclosure must NOT be installed in these environments.

**Warning!** Do not exceed the RF Threshold Power for the equipment group in which the iWAP107 and its antennas are to be installed; it must be controlled in accordance with IEC 60079-0, and must not exceed the following levels:

- IIC – 2W (+33dBm)
- IIB – 3.5W (+35.4dBm)
- IIA – 6W (+37.7dBm)
- III – 6W (+37.7dBm)

The RF outputs of the iWAP107 are approved as:

- Ex ia IIC Ga
- Ex ia IIIC Da
- Um = 253Vr.m.s

**Refer to Figure 4 for location of Intrinsically Safe RF outputs of iWAP107-C-37-AC-SG-2450-4S-N-0-N**

#### **Example of RF threshold power calculation**

The following example shows how the RF threshold power may be calculated:

Maximum transmitter output power (from transmitter datasheet) = 20dBm (100mW) Coaxial cable loss = 2dB

Antenna gain = 5dBi

Threshold power = 20dBm – 2dB + 5dBi

Threshold power = 23dBm (200mW)

#### **Antenna Requirements**

Antennas connected to the iWAP107 Intrinsically Safe RF outputs must be assessed as “simple apparatus”™ in accordance with IEC 60079-11. Antennas supplied by Extronics for use with the iWAP107 already meet these requirements. It is possible to assess other antennas for this purpose, contact Extronics for details.

#### **Antenna Installation**

Antennas approved by Extronics for use with the iWAP107 may either be fitted directly to the RF connectors of the iWAP107, or via a length of coaxial cable.

If antennas are sited remotely from the iWAP107 flameproof enclosure, any metallic parts of the antennas must be isolated from earth by > 500Vr.m.s, to prevent hazardous earth currents from flowing in the coaxial cable.

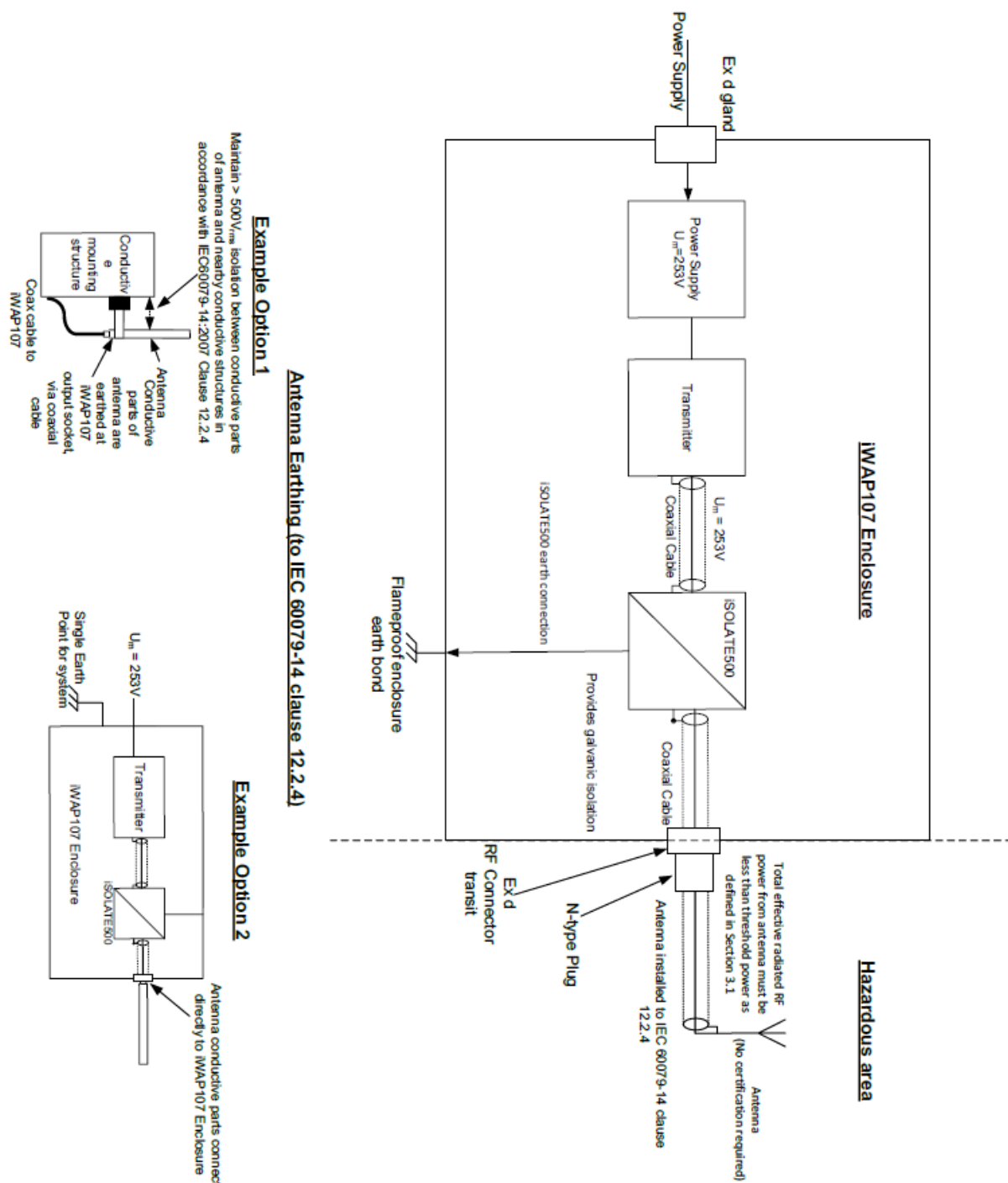


Figure 10: iWAP107 IS RF Installation Diagram

Figure 10: iWAP107 IS RF Installation Diagram

## Intended Purpose Usage

**Warning!** Maintenance and inspection of the iWAP107 must be performed in accordance with IEC 60079-17.

**Important** Before setting the units to work, read the technical documentation carefully.

**Important** The latest version of the technical documentation or the corresponding technical supplements is valid in each case

The iWAP107 is built using modern components and is extremely reliable in operation; however it must only be used for its intended purpose. Please note that the intended purpose also includes compliance with the instructions issued by the manufacturer for installation, setting up and service.

Any other use is regarded as conflicting with the intended purpose. The manufacturer is not liable for any subsequent damage resulting from such inadmissible use. The user bears the sole risk in such cases.

### **Transportation and Storage**

All iWAP107 devices must be so transported and stored that they are not subjected to any excessive mechanical stresses.

### **Authorized Persons**

Only persons trained for the purpose are authorized to handle the iWAP107; they must be familiar with the unit and must be aware of the regulation and provisions required for explosion protection as well as the relevant accident prevention regulations.

### **Cleaning and Maintenance**

The iWAP107 and all its components require no maintenance. All work on the iWAP107 by personnel who are not expressly qualified for such activities will cause the Ex approval and the guarantee to become void.

### **Cleaning and Maintenance Intervals**

The cleaning intervals depend on the environment where the system is installed.

### **Aggressive substances and environments**

The iWAP107 is not designed to come into contact with aggressive substances or environments, please be aware that additional protection may be required.

### **Exposure to external stresses**

The iWAP107 is not designed to be subjected to excessive stresses e.g. vibration, heat, impact. Additional protection is required to protect against these external stresses.

The iWAP107 will require additional protection if it is installed in a location where it may be subjected to damage.

## Technical Data

### Specification

<b>Certification</b>	Ⓔ II 2 (1) GD Ex d [ia IIC Ga] IIB+H2 T5 Gb Ⓔ II 2 (1) GD Ex tb [ia Da] IIIC T100°C Db MET Class I, II, Div 1, Groups B-G MET Class I, II, Zone 1/21 Groups IIB+H2, III
<b>Power supply</b>	120VAC or 230VAC (+/- 10%) IEEE802.3at PoE
<b>Maximum power consumption</b>	Basic configuration: 25W With heaters: 125W
<b>Enclosure material</b>	Marine grade copper-free aluminium light alloy, epoxy powder coated 316L Stainless Steel (optional)
<b>Ingress protection</b>	IP66
<b>Weight</b>	Aluminium - c. 30kg (hardware dependant) 316L Stainless Steel - c. 70kg (hardware dependant)
<b>Dimensions</b>	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)
<b>Temperature</b>	Ambient temperature depends on variant, see order information
<b>Relative humidity</b>	0 to 95%, non-condensing
<b>Input connections</b>	1 x AC power cable entry with screw terminals 1 x PoE power / data 10/100/1000Base-T Ethernet on RJ45 socket <b>or</b> 1 x Single or Multi mode fibre input on LC connector & Splice Tray <b>Note: MET enclosure entries are via 1/2" NPT drilled entries</b> <b>all other variants are via M20 x 1.5-6H drilled entries</b>
<b>Ethernet link distance</b>	<b>10/100/1000BASE-T</b> Ethernet on CAT6: up to 100m <b>1000BASE-FX</b> Multi Mode fibre : up to 2km, wavelength 1310nm <b>1000BASE-LX10</b> Single mode fibre: up to 10km, wavelength 1310nm
<b>Output connection</b>	Up to eight 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: 2011 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  
access point and  
external N-type  
connector)**

Frequency band	Insertion loss (dB)	Loss including surge arrestor (dB)
150MHz – 1GHz	0.3	0.45
1GHz – 3.5GHz	0.46	0.61
3.5GHz – 6GHz	1.09	1.24
6GHz – 8GHz	1.41	1.66

Spot frequency	Insertion loss (dB)	Loss including surge arrestor (dB)
400MHz	0.12	0.24
900MHz	0.16	0.31
2.45GHz	0.48	0.61
5.5GHz	1.28	1.43



## Label Drawing

		Part # iWAP107-DDD			
		Date			
		Serial #			
		MAC1 xxxxxxxxxxxx			
		MAC2 xxxxxxxxxxxx			
		II 2 (1) GD Ex d [ia IIC Ga] IIB+H <sub>2</sub> T5 Gb Ex tb [ia Da] IIIC T100°C Db RF Outputs: $U_m = 253V_{r.m.s}$ -20°C ≤ T <sub>amb</sub> ≤ 60°C TRAC14ATEX0022X IECEX TRC 14.0010X			
	<table border="1"><tr><td>AAA</td><td>BBB</td><td>CCC</td></tr></table>		AAA	BBB	CCC
AAA	BBB	CCC			
<p><b>WARNING</b> DO NOT OPEN WHILE ENERGIZED DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT CONTAINS INTRINSICALLY SAFE CIRCUITS REFER TO INSTALLATION INSTRUCTIONS RENEW SILICONE GREASE EVERY TIME COVER IS OPENED</p>					

Where AAA=Supply voltage, BBB=Supply current, CCC=Supply Frequency, DDD=Product option codes, EEE=Notified body number for production, MAC1/MAC2 are the Ethernet MAC addresses of up to 2 devices installed in the unit.

## Type Codes

## Ordering Information:

iWAP107 -[#1]-[#2]-[#3]-[#4]-[#5]-[#6]-[#7]-[#8]-[#9]-[#10]-[#11]-[#12]

### Specify option [#1] – certification type

ATEX / IECEx	AI
MET CI / D1	USG
MET CII / D1	USD
MET CI/II, Zone 1/21	CA

### Specify option [#2] – wireless network hardware supply

*Extronics can supply the wireless hardware, or alternatively 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 can factory fit.*

Hardware supplied by customer	C
Hardware supplied by Extronics	E

### Specify option [#3] – wireless network hardware type

*Maximum operating temperature listed in brackets only applies to PoE powered units; take a lower value if powered by AC. If the heater option is selected this will allow APs to operate at a lower ambient indicated on the certificate*

Aruba AP-220 series access point	41
Aruba IAP 204 access point	51
Cisco AP1530 series access point	39
Cisco AP1600 series access point	36
Cisco AP2600 series access point	37
Cisco AP2702EAV.9 access point	52
Cisco AP3600 series access point	38
Cisco AP3700 series access point	45
Siemens Scalance W770 series access point	53
Siemens Scalance W788 series access point	54
<i>New wireless hardware – order code to be advised</i>	TBC

### Specify option [#4] – power supply

120 VAC supply	AC1
230 VAC supply	AC2
IEEE802.3at compliant Power-over-Ethernet (chosen hardware must be compatible with PoE supply)	POE

### Specify option [#5] – Ethernet connection

100/1000Base-T Ethernet on CAT6 copper	C
100/1000Base-T Ethernet on CAT6 copper (surge protected)	CS
Multimode 1000BASE-FX fibre with LC connector	FG
Single mode 1000BASE-LX10 fibre with LC connector	SG

Specify option [#6] – isolated output for radio 1 150MHz to 8GHz	501
Specify option [#7] – number of antenna outputs for radio 1 0/1/2/3/4 off, CT-01 0/1/2/3/4 off, CT-01 with surge protector	0/1/2/3/4 0S/1S/2S/3S/4S
Specify option [#8] – isolated output for radio 2 Not required 150MHz to 8GHz	N 501
Specify option [#9] – number of antenna outputs for radio 2 0/1/2/3/4 off, CT-01 0/1/2/3/4 off, CT-01 with surge protector	0/1/2/3/4 0S/1S/2S/3S/4S
Specify option [#10] – enclosure heating (not compatible with POE supplies) No enclosure heating Supplied with enclosure heating	N H
Specify option [#11] – antenna position (see previous page for antenna layout pattern, which relates to total number of RF outputs) Remote mount Direct mount	R D
Specify option [#12] – enclosure material Marine grade copper-free aluminium light alloy 316L stainless steel	AL SS
<b>Accessories:</b>	
iANT2xx range of rugged simple apparatus antennas	IANT2xx
316L stainless steel pipe mount bracket kit for iWAP107, to fit 1.5 – 2" diameter pipe or rectangular post	IWAPMB03

## EU Declaration of Conformity

## EU Declaration of Conformity

**Extronics Ltd, 1 Dalton Way, Midpoint 18, Middlewich, Cheshire CW10 0HU, UK**

Equipment Type: **IWAP107**

This declaration is issued under the sole responsibility of the manufacturer

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation.

**Directive 2014/34/EU** Equipment and protective systems intended for use in potentially explosive atmospheres (ATEX)

Provisions of the directive fulfilled by the equipment:

**II 2 (1) GD**  
**Ex d [Ia IIC] Ga IIB+H<sub>2</sub> T5 Gb**  
**Ex tb [Ia Da] IIIC T100°C Db**  
**RF Outputs: U<sub>m</sub> = 253V<sub>r.m.s</sub>**  
**-20°C ≤ T<sub>amb</sub> ≤ 60°C**

Notified Body **TRaC Global Ltd 0891** performed EC-Type Examination and issued the EC-Type certificate.

EC-Type Examination Certificates:

**TRAC14ATEX0022X (incorporating variations V1 to V2)**

Notified Body for Production:

**SIRA, 0518,**

Harmonised Standards used:

<b>EN 60079-0:2012</b>	Explosive atmospheres – Part 0: Equipment – General requirements
<b>EN 60079-1:2007</b>	Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures "d"
<b>EN 60079-11:2012</b>	Explosive atmospheres – Part 11: Equipment protection by intrinsic safety "i"
<b>EN 60079-31:2009</b>	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"

Other Standards and Specifications used:

**None**

**Directive 2014/30/EU** EMC Directive

Harmonised Standards Used:

<b>BS EN 61000-6-2:2005</b>	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments
<b>BS EN 61000-6-4:2007+A1:2011</b>	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments

Other Standards and Specifications used:

**None**

**Directive 2011/65/EU** Restriction of the use of certain hazardous substances (RoHS)  
Compliant.

For and on behalf of Extronics Ltd, I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and regulatory requirements of the above listed directives.

Signed




Nick Saunders  
Operations Manager  
Date: 5th July 2016

**Manual Revision History**

Issued By:		Ben Seaby			Issue Date :		25/04/2014	
Approved By:		Nick Saunders			Approval Date :		13/09/2016	
Doc Ref:		404368	Revision:	2.5	ATEX RELATED DOCUMENT  THIS DOCUMENT MUST NOT BE MODIFIED WITHOUT PRIOR PERMISSION FROM THE AUTHORIZED PERSON			
Document Change History								
Issue No.	Changed By	Details Of Change		Date	Red Line PIL	ECN	Approved by:	
1.0	BTS	Initial Release		25/04/2014	N/A	N/A	BTS	
2.0	BTS	Added Aluminium enclosure details		29/04/2014	N/A	N/A	BTS	
2.1	AJP	Updated type codes and enclosure image		01/07/2014	N/A	N/A	AJP	
2.2	JR	Released to Winman in PDF Format		17/04/2015	N/A	N/A	NS	
2.3	SR	Updated EU Declaration of Conformity		04/07/2016	N/A	110	NS	
2.4	JR	Update of page 1 image.		29/07/2016	N/A	127	JR	
2.5	PR	Update opening the enclosure section 3.2.1		13/09/2016	N/A	150	NS	
Notes:								
This document is not to be modified without prior reference to an authorized person.								

Web: [www.extronics.com](http://www.extronics.com)

## Documents / Resources

 <p>CE Ex</p> <p>INSTALLATION AND OPERATING MANUAL iWAP107</p>	<p><a href="#">EXTRONICS iWAP107 Wireless Enclosure System</a> [pdf] User Manual iWAP107 Wireless Enclosure System, iWAP107, Wireless Enclosure System, Enclosure System</p>
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## References

- [🌐 Hazardous Area Solutions | Process Industries | Extronics](#)

Manuals+.