



IP-based
Broadband Wireless Access (BWA) System

605-0000-836 Rev B draft

HiperMAX

Technical User's Guide

HiperMAX Physical Installation - Masthead Equipment



Table Of Contents

Physical Installation - Masthead Equipment.....	1
Warnings and Cautions.....	1
SAFETY	1
WARNING - HAZARDOUS VOLTAGES.....	1
European Directive 1999/519/EC.....	1
SCRT 365T use in USA.....	2
SCRT.....	3
Introduction.....	3
SCRT	3
WiMAX Antennas.....	3
GPS Antenna.....	3
DC Power Feed Lightning Surge Protection.....	3
Physical.....	3
Interfaces.....	4
SCRT Installation	4
The SCRT installation kits:.....	6
Installation Requirements SCRT	9
Tools Required.....	9
SCRT Installation Parts and Kits	9
SCRT Installation with front mounting antenna - Pole Mounted	12
Mounting the Antenna	12
SCRT Installation Pole Mount with independent Antenna.....	17
Mounting the Antenna	17
SCRT Installation Plate Mount.....	20
SCRT Connections.....	22
Mating Torques.....	22
Power Input - HiperMAX-Micro	22
Power Input - HiperMAX.....	22
Optic Interface	23
Antenna RF Port.....	23
Protective Earth Connection.....	24
48V DC Cabling	25
Cables to SCRTs Connectorised Both Ends - For Use With HiperMAX-Micro	25
Cables to SCRTs Connectorised One End - For use with HiperMAX.....	25
GPS	26
GPS Antenna Installation	26
HiperMAX-micro.....	26
HiperMAX- ATCA	26
Lightning Protection	28
Equipment Protection	28
SCRT Power Protection (LPK-SCRT-PWR-1).....	28

Physical Installation - Masthead Equipment



Warnings and Cautions

SAFETY

1. Read and follow all warning notices and instructions marked on the product or included in this manual
2. When installed in the final configuration, the product must comply with the applicable safety standards and regulatory requirements of the country in which it is installed. If necessary, consult with the appropriate regulatory agencies and inspection authorities to ensure compliance.
3. Ascertain the radiation hazards when working in an environment close to other antennas and electromagnetic fields. e.g. working on towers with other microwave transmitters etc and act accordingly.



Hard hats and harnesses and safety shoes should be worn when installing masthead equipment and antenna



Beware of overhead power cables when installing antenna





Use manual handling techniques when lifting heavy objects

WARNING - HAZARDOUS VOLTAGES

1. On AC installations, hazardous voltages exist. Use caution when verifying or working with AC power. Remove metal jewellery that could come into contact with AC power.
2. On DC sections, short circuiting the low voltage, low impedance circuits can cause severe arcing that may result in burns or eye damage. Remove rings, watches etc. to avoid shorting DC circuits.

NOTES

1.  Airspan products do not contain hazardous substances (as defined in UK 'Control of Substances Hazardous to Health Regulations 1989', and the 'Dangerous Substances Regulations 1990'). At the end of any Airspan product's life cycle, the customer should consult with Airspan to ensure that the product is disposed of in conformance with the relevant regulatory requirements
2.  **CAUTION:** any modifications to this device not expressly authorised by the manufacturer could void the user's authority to operate this device.

European Directive 1999/519/EC

European Directive 1999/519/EC details basic restrictions and reference levels on human exposure to electromagnetic fields as advised by the ICNIRP. The directive states that adherence to these recommended restrictions and reference levels should provide a high level of protection as regards the established health effects that may result from exposure to such fields.

Standards EN50383 and EN50385 are the applicable harmonised standards for EM fields generated by fixed wireless equipment.

All Airspan WiMAX antennas operating in the frequency range 3.4 to 3.7 GHz comply with the ICNIRP exposure guidelines at a separation distance of 0.95m from the Antenna Unit.

All Airspan Communications WiMAX antennas operating in the frequency range 4.9 to 5.0 GHz comply with the ICNIRP exposure guidelines at a separation distance of 0.34m from the Antenna Unit.

The safe distance from a non-approved antenna of length D and Sector Angle δ is the higher of the two values calculated using the formula:

Safe distance,

$$r = \frac{180 \times P}{\pi \times D \times S \times \delta} \quad \text{and} \quad r = \frac{P \times G}{4 \times \pi \times S}$$

Where S is the maximum permitted flux density of 10 W/m² and P is the maximum transmit power of the SCRT in watts.



Verify the location and properties of **all** devices radiating on the roof/tower and arrange switching off of any which will potentially cause harm.

SCRT 365T use in USA

The 365TDD SCRT is certified for use from 3650 – 3700 MHz, operating in 5MHz and 10 MHz channel bandwidths.

The maximum permitted antenna port powers when used with a Omni-directional antenna with gain of 7dBi, are:

- 29dBm for 5 MHz bandwidth
- 32 dBm for 10 MHz bandwidth

When used with antennas with gain > 7dBi, the transmit power of the SCRT must be reduced by 1dB for each additional dB in antenna gain above 7dBi.

The maximum permitted exposure level for the SCRT is given by:

$$S = \text{EIRP} / 4 \pi R^2$$

Where:

Maximum Permitted Power Density, S = 1mW/cm² = 10W/m²

EIRP = Maximum Antenna Transmit Power, P of 32 dBm + 7dBi Antenna gain
= 39dB or 7.943 W

And R is distance from antenna

Safe distance from Antenna is therefore given by:

$$\begin{aligned} R &= \sqrt{(\text{EIRP} / 4 \pi S)} \\ &= \sqrt{(7.943 / (4 * 3.14158 * 10))} \\ &= \mathbf{0.25m} \end{aligned}$$

SCRT

Introduction

This document covers the installation of masthead equipment for both the HiperMAX and HiperMAX-micro systems of the SCRT , associated antennas, GPS and surge protection

SCRT

The Single Channel Radio Transceiver (SCRT) is housed in a masthead unit that forms the remote radio head of the HiperMAX\HipermaxMicro system. Several antenna and mounting arrangements are available for the SCRT, including a front mounting antenna. Alternatively independently mounted antennas may be used. The SCRT can be pole mounted or plate mounted using the appropriate installation kit. The SCRT requires a solar shield to protect the electronics from elevated temperatures, and various configurations are available depending on which mounting method and which antenna arrangement is used

WiMAX Antennas

Standard system configurations utilise a compact vertically polarised sector antenna which mounts and connects directly to the SCRT. Independently mounted antennas can also be accommodated. Antennas are available for a range of frequency bands and sector angles. For more details see the Airspan Product Catalog 005-8404-000

GPS Antenna

HiperMAX-micros that have the GPS option have a GPS antenna and four metres of cable included. HiperMAX requires the antenna to be mounted on the mast or a rooftop and cabled to the GPS shelf in the ATCA rack. The first consideration for a GPS antenna is a clear view of the sky, preferably 360 degrees. In the usual installation, the GPS antenna is located low and close to the equipment building roof or mast.

DC Power Feed Lightning Surge Protection

The DC feed should be protected against lightning surges as the antenna ends. For the HiperMAX-micros protection also has to be provided at the SDR. For HiperMAX protection also has to be provided at the building entry. For more details see the Airspan Product Catalog 005-8404-000

The sections below provide list the main characteristics of the unit.

Physical

	Height (mm)	Width (mm)	Depth (mm)	Weight (kg)
SCRT (excl bracket and Antenna):	340	270	140mm	6.5kg typical 6.5kg max
WiMAX Antenna	650	200(226 inc Bracket)	100mm	1.3kg max
GPS Antenna	55mm	89mm	254mm	0.15kg
DC power feed lightning surge protection	115mm	90mm	55mm	0.2kg

Interfaces

The following interfaces are provided on the SCRT:

Port Name	Description
Power Input	<p>Nominal -48V DC power input.</p> <p>Note that the SCRT operational voltage range is nominally -40.5V to -57.5V and power consumption is typically 50-60Watts per SCRT.</p> <p>Connector type : Weatherproof Proprietary Connection, compatible with connector supplied as part of pre-terminated power cable assembly from Airspan.</p> <p>Power cables for HiperMAX-micro are connectorised at both ends and are available in 3, 10, 30 and 100 metre lengths.</p> <p>Power cables for HiperMAX are connectorised at the SCRT end only and are available in 30 and 100 metre lengths.</p>
Optical Port	<p>The SDR & Masthead Transceiver are connected via a 2 channel multimode fibre interconnect in accordance with the OBSAI standard.</p> <p>Connector type: Outdoor Connector (ODC) supplied as part of pre-terminated fibre assemblies.</p> <p>The outdoor fibre interconnect is common to both HiperMAX and HiperMAX-Micro is available in 3, 10, 30 and 100 metre lengths.</p>
RF Port	<p>50 Ohm RF connector for external antenna.</p> <p>Connector type N-type</p>
Earth Stud	<p>Each unit is fitted with an earth stud (M6 Posi-drive screw)</p>

SCRT Installation

The SCRT can be used either with an antenna mounted on the front of the SCRT or with a remotely attached RF antenna. The SCRT can also be pole mounted or plate mounted. The SCRT requires a solar shield to protect the electronics from elevated temperatures, and various configurations are available depending on which mounting method and which antenna arrangement is used. Specifically the following kits are currently available:

1. Mounting kit and direct mounting antenna for pole mounting
2. Installation kit for independently mounted antenna and pole mounted SCRT
3. Installation kit for independently mounted antenna and plate mounted SCRT

Other kits may be made available to cater for other mounting arrangements. Note that the SCRT and the mounting kits are generally supplied as two separate boxes (except for the 4.9GHz SCRT).

Each SCRT connects to an SDR base-band unit using an optical fibre cable. Depending on the type of SDR unit in use, the cable termination at the SDR end may differ (different terminations for SDR-Micro and SDR-ATCA). Each SCRT also requires 48volt power which is supplied from the SDR-Micro or an alternative power supply when the HiperMAX-SDR (ATCA version) is used.

Surge protection kits are also available for added protection for HiperMAX installations.

Note: For pole mounted installation, the SCRT requires a 40-45cm pole diameter. The pole should be made of galvanised steel and must be earthed to ensure that a discharge path is available for lightning surges. In cases where the pole is painted or made of other materials or where the pole is not earthed, a substantial lightning conduction strap must be fitted to the earth terminal of the SCRT. Similarly for plate mounting installations, the installer must ensure that good earth is available to the SCRT. If the plate is not earthed or is painted, then a lightning conduction strap must be fitted to the SCRT.

The SCRT installation kits:

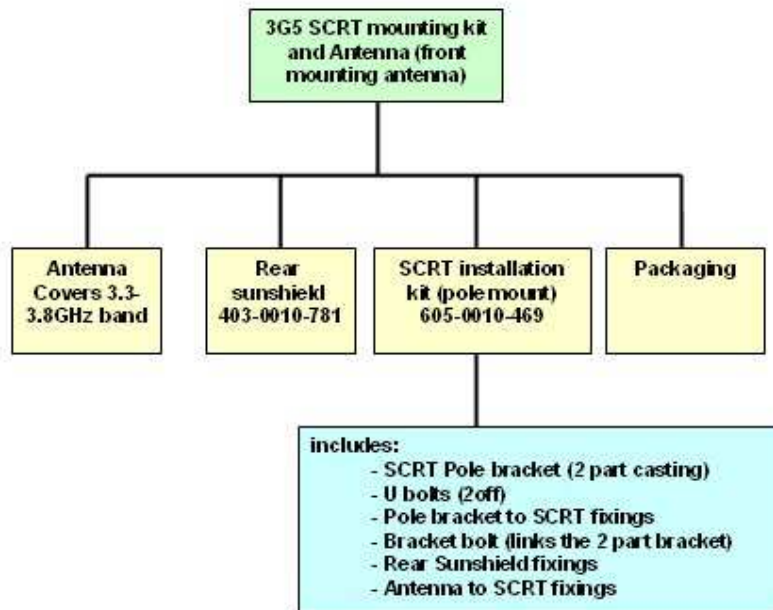
Three installation kits are currently available and these are briefly described below:

Installation kit for SCRT with a front mounted antenna:

The figure below shows an SCRT with a front mounted antenna. Note that in this arrangement only a rear mounting sunshield is required.



This corresponding kit is structured as follows:

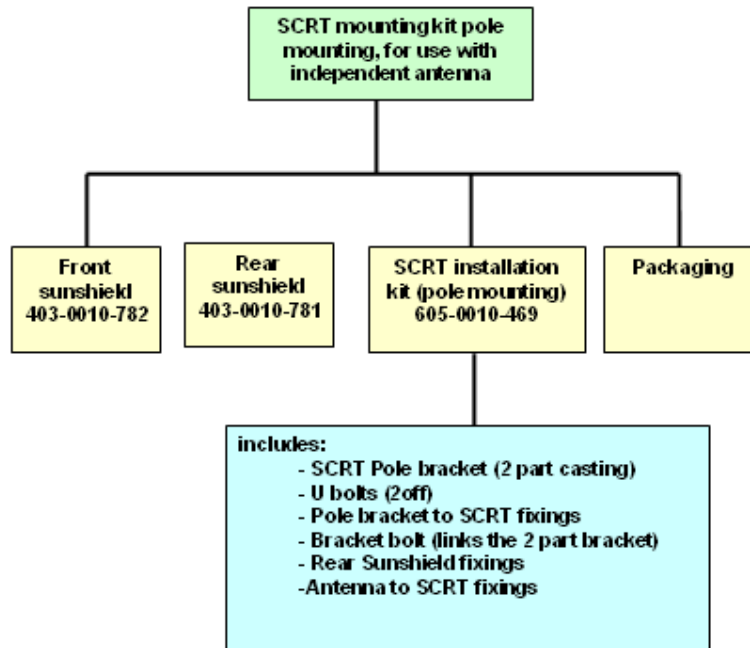


Installation kit for independently mounted antenna - pole mounting:

The picture below shows a view of the SCRT when used with an independently mounted antenna. Note that in this case, both a front mounting and a rear mounting sunshield are required.



This corresponding kit is structured as follows:

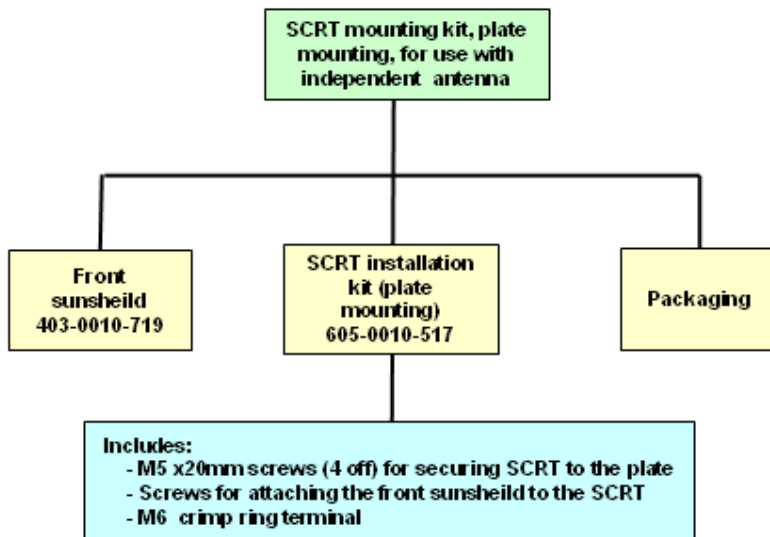


Installation kit for independently mounted antenna - plate mounting:

The picture below shows a view of a plate mounted SCRT when used with an independent antenna. Note that in this case, only a front mounting sunshield is required.



This corresponding kit is structured as follows:



Note: The 4.9Ghz variant is supplied with the front sunshield fitted and the remainder of the installation kit is supplied in the SCRT packaging box

Installation Requirements SCRT

Tools Required

Tool
Large Crosshead Screw driver Phillips # 3 or Pozidrive # 3
Small flat blade Screwdriver
13mm or 1/2" open ended Spanner"
10mm or 13/32" open ended Spanner
Wire strippers
Wire cutters
Ring terminals crimp tool

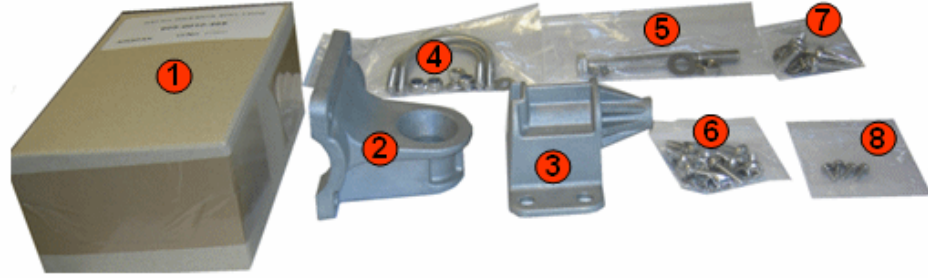
SCRT Installation Parts and Kits

In order to install an SCRT the following parts may be required (see earlier sections for regarding structure of installation kits).

Installation Parts	SCRT Installation Kit Mount per SCRT consisting of:	Notes
SCRT Basestation RF	1x SCRT Unit	
	1 x Antenna with Mounting Brackets	If remote antenna is used feeder is required see details below
	1x Rear Sunshield	
	1 Front Sunshield	Remote Antenna only Not required when SCRT mounted antenna is used
	SCRT Installation Kit	See below for details
	Connecting Cables	See below for details
	Surge Protector	See below for details
	Other installation parts	Not provided by Airspan. See below for details

SCRT Pole Mounting Installation Kit

This kit is shown in the picture below:



The content of the kit as shown below

SCRT Installation Kit - Pole Mounting (1)	
Reference	
1	Packing
2/3	1* Bracket (2Part)
4	2* U-Bolts with Nuts and Washers
5	1* M8x85mm Bolt: 1* M8 Nut: 1* M8 washer (for bracket)
6	8* M5 Flat Washers: 8* M5 Spring Washers: 8* M5X16mm Screws (see note)
7	4* M6 Flat Washers: 4* M6 Spring Washers: 4* M6X16mm Screws (for bracket)
8	4* M3 Flat Washers: 4* M3 Spring Washers: 4* M3X8mm Screws (for sunshield) (see note)
Note :	Item 8 is surplus when antenna is fitted to SCRT
	4 of item 6 are surplus when remote antenna is used

Installation Kit /Part	SCRT Installation Kit Bracket Mount per SCRT consisting of:	Note
Connecting Cables	1x Fibre	Available in 3, 10, 30 and 100 Metre lengths
	1x Power	Power cables for HiperMAX-micro are connectorised at both ends and are available in 3, 10, 30 and 100 metre lengths. Power cables for HiperMAX are connectorised at the SCRT end only and are available in 30 and 100 metre lengths.

Installation Kit /Part	Note
Surge Protection	LPK-SCRT-PWR-1: SCRT Power Lightning Protection Kit - consisting of 1x 48V surge arrestor

Installation Kit /Part	Note
Antenna/Feeder Note: These are not always provided by Airspan	Antenna. See Airspan Antenna and Feeder guide Short Feeder 1-2Metres

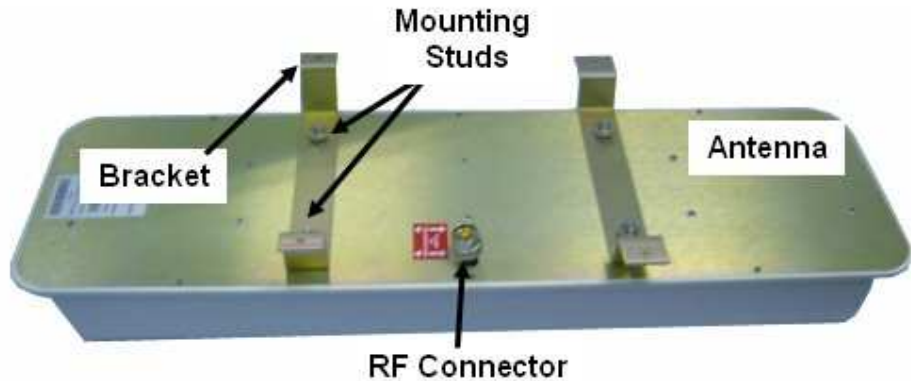
Additional Items (not provided by Airspan)
Cable ties
Self Amalgamating Tape (15cms x 20mm recommended)
Mounting Pole

SCRT Installation with front mounting antenna - Pole Mounted

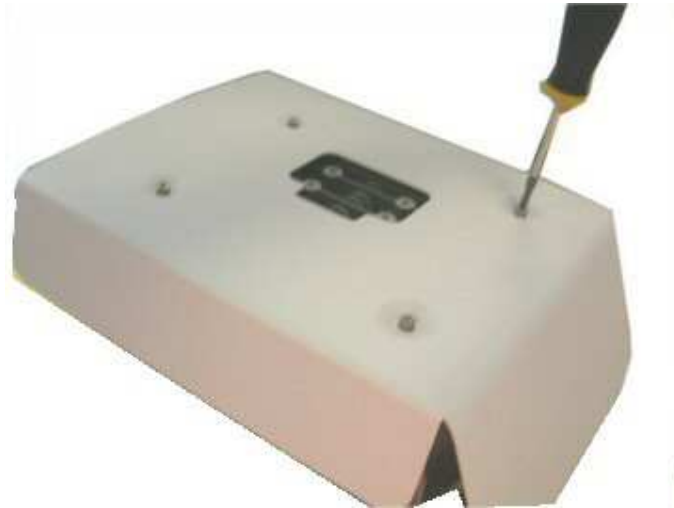
The installation instructions below should be followed when a front mounting antenna is supplied.

Mounting the Antenna

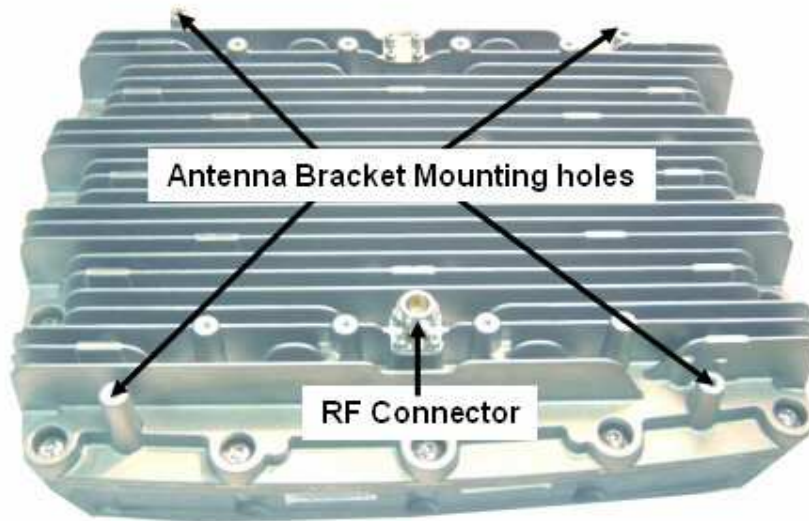
1. The antenna is already fitted with its brackets as per the view below.



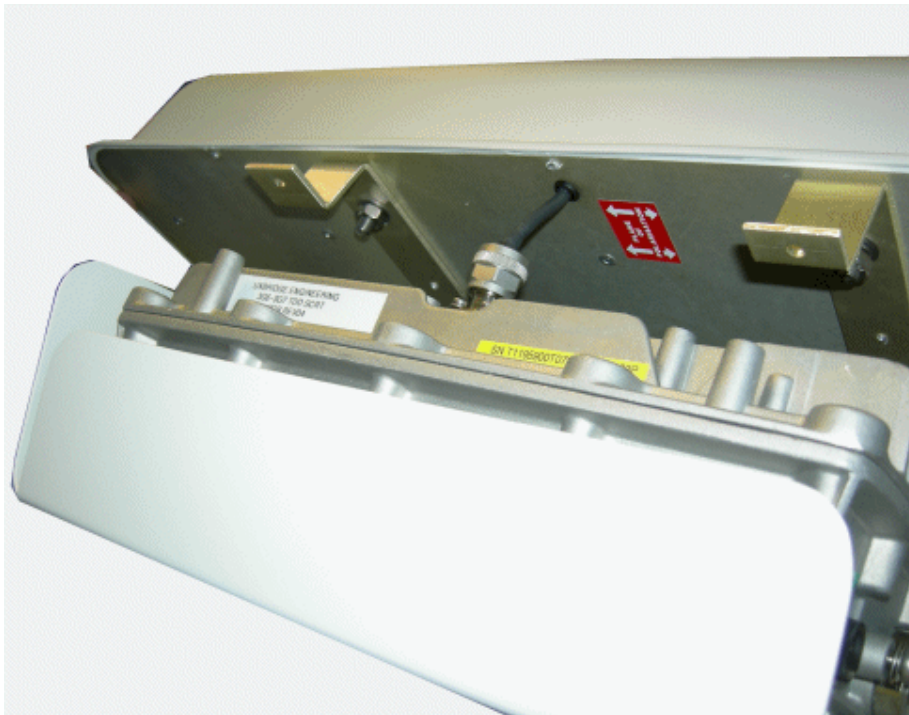
2. Fix the rear sun shield to the SCRT using the four M6 screws provided.



3. Place the SCRT on a flat surface with the RF connector facing up.



4. Place the antenna on top of the SCRT so that the RF connector on the antenna mates with the RF connector on the SCRT.
5. Loosely turn two screws with spring and flat washers through the brackets on the side furthest from the RF connector. This is to position the bracket but still allow the antenna to be moved away from the SCRT to allow access to the RF connector during assembly



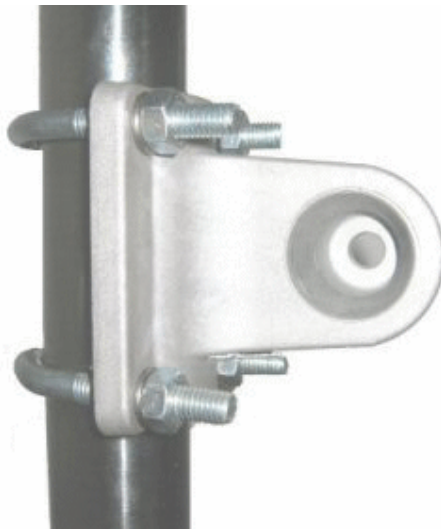
6. Tighten the RF connector clockwise using the fingers.
7. Take a piece of self amalgamating tape about 5" long and weather seal the connector and cable. Stretch the tape when applying in order to obtain the best seal. Ensure the cable and connector are sealed as shown below.



8. Using the screws provided secure all the antenna brackets to the SCRT using a Pozi-drive screwdriver.
9. Flip the unit over and fix the part of the pole mount bracket shown below to the SCRT



10. Fix the other half of the pole mount bracket to the pole as shown below using the two U bolts, nuts washers and spring washers provided.



11. Join together the two halves of the bracket and clamp with the Nut, Bolt, and Locking washers provided. The part of the bracket connected to the SCRT is designed to locate in the head of the bolt and stop it rotating. This allows the SCRT to be Vertically aligned.

Horizontal alignment is achieved by loosening the U-Bolts slightly and rotating around the pole.



The picture below shows the SCRT installed



12. Following alignment ensure all nuts are fully tightened.
13. Attach the fibre and DC cables to the connectors at the base of the unit.

The picture below shows a completed installation.



SCRT Installation Pole Mount with independent Antenna

The installation instructions below should be followed when the SCRT is to be pole mounted and connect to an independently mounted antenna.

Mounting the Antenna

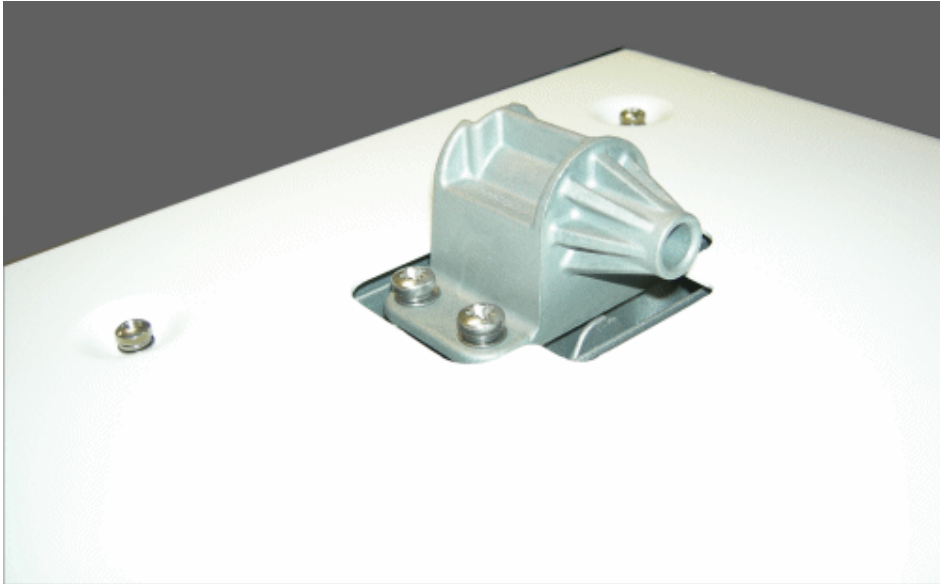
1. Place the SCRT on a flat surface with the RF connector facing up
2. Fix the sun shield (front) to the SCRT using the four M3 screws provided



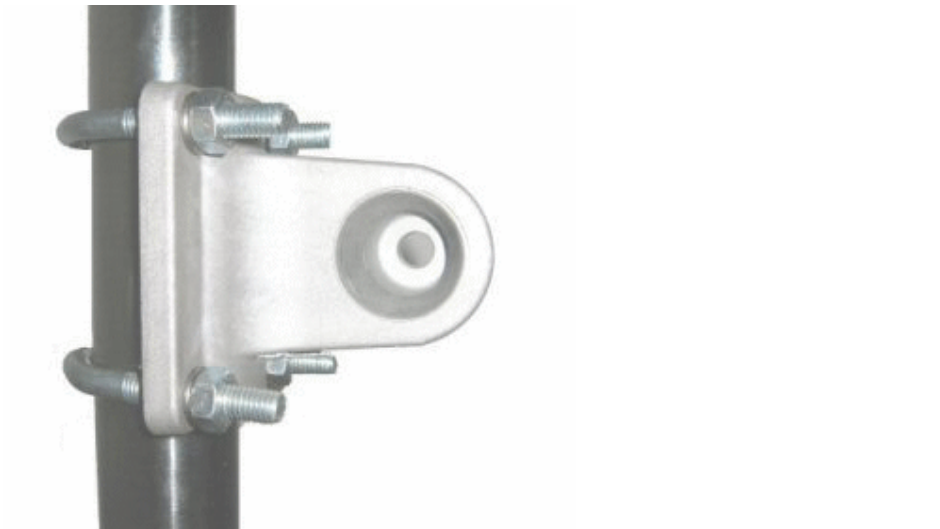
3. Turn over and fix sun shield (rear) to the SCRT using the four M6 screws provided



4. Using the screws provided secure the brackets to the SCRT using a Pozi-drive screwdriver.

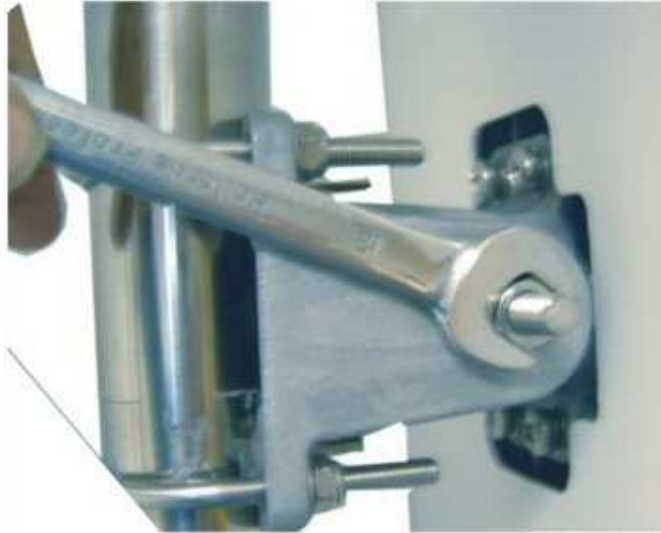


5. Fix the other half of the pole mount bracket to the pole as shown below using the two U bolts, nuts washers and spring washers provided.



6. Join together the two halves of the bracket and clamp with the Nut, Bolt, and Locking washers provided. The part of the bracket connected to the SCRT is designed to locate in the head of the bolt and stop it rotating. This allows the SCRT to be Vertically aligned.

Horizontal alignment is achieved by loosening the U-Bolts slightly and rotating around the pole.



7. Attach the Antenna feeder cable to the RF connector. Take a piece of self amalgamating tape about 5" long and weather seal the connector and cable. Stretch the tape when applying to obtain the best seal. Ensure the cable and connector are sealed
 8. Attach the fibre and DC cables to the connectors at the base of the unit.
- The picture below shows a completed installation.

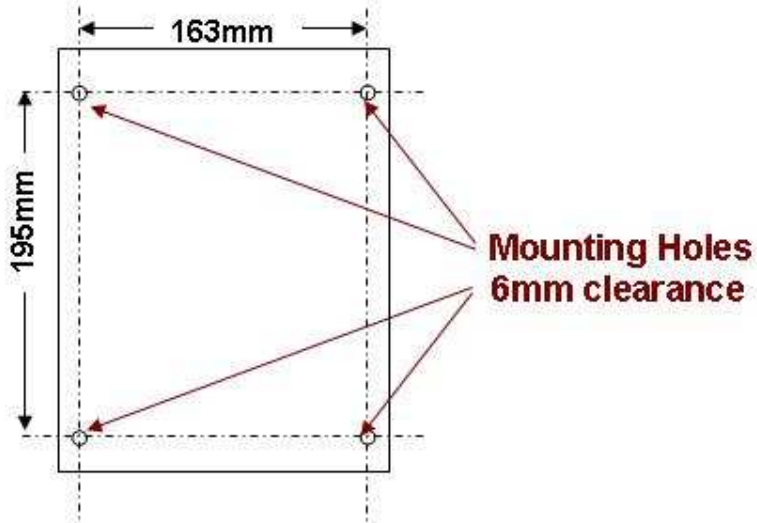


SCRT Installation Plate Mount

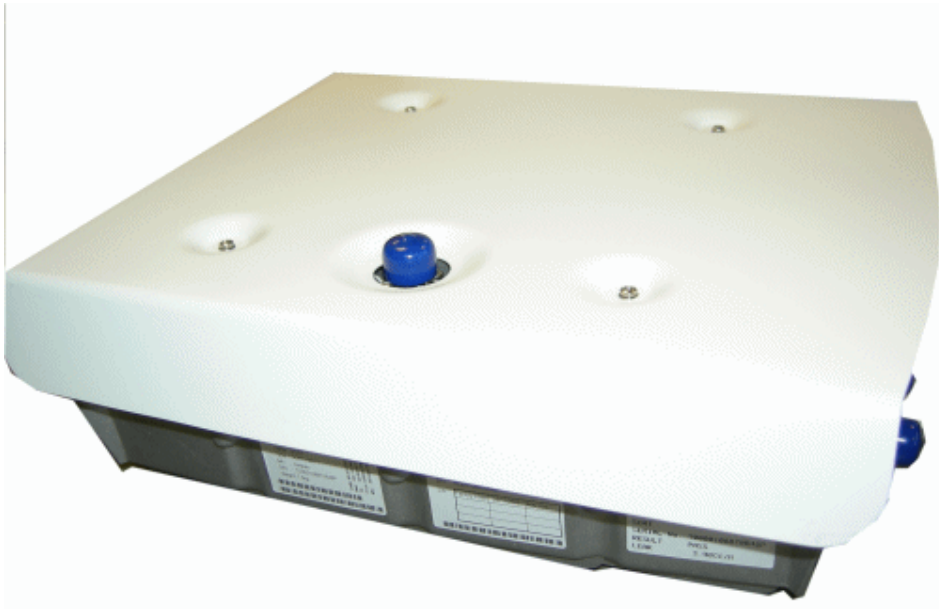
The SCRT can be mounted to a plate by screwing into the back through the metal plate. The SCRT should be mounted so that the power and optic connectors are facing down.

A plate should be provided for fixing the SCRT to the approximate dimensions below and drilled as shown

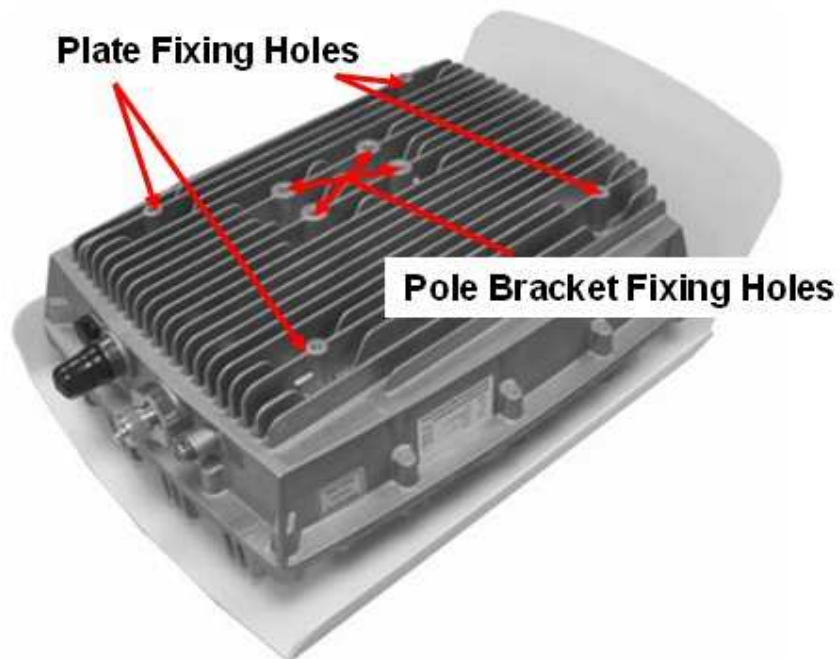
Note that the plate must be earthed. To prevent corrosion it is recommended that the plate is made of galvanised steel.




1. Place the SCRT on a flat surface with the RF connector facing up
2. Fix the sun shield (front) to the SCRT using the four M5 screws provided



3. Fix the SCRT to the plate using the fixing holes as indicated below



 **Note:** This method is only suitable when using an external antenna. For systems where the antenna is attached to the SCRT (i.e. 3.5GHz versions) the antenna should be pole mounted to allow for antenna panning to the base station.

SCRT Connections



Mating Torques

48V Connectors	300N.cm
OBSAI Connectors	100N.cm


Power Input - HiperMAX-Micro

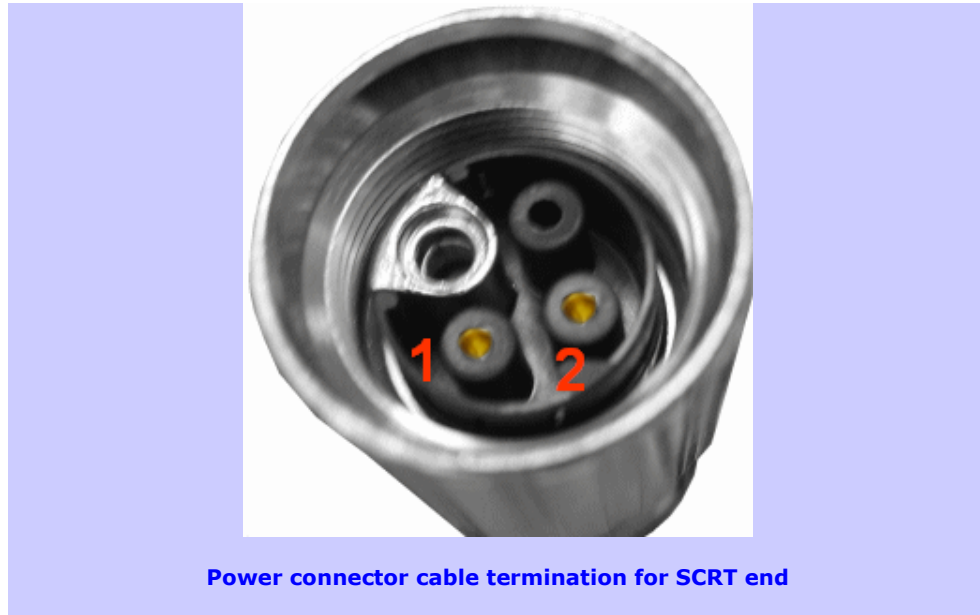
Each SCRT is provided with a 48 volt power cable terminated with a female connector at the SCRT end and a male connector at the other. The termination details for the SDR-micro are shown in the relevant installation manual.

Power Input - HiperMAX

Each SCRT is provided with a 48 volt power cable terminated with a female connector at the SCRT end and bare wires at the other. The termination details for the -48v supply are shown in the relevant installation manual.

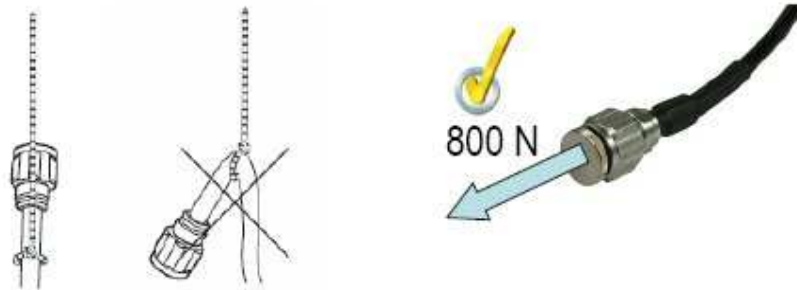


 **Important Note:** The female connector attaches to the SCRT and the male connector attaches to the SDR-micro. It is important that the power connector is attached at the correct end. See illustration below or damage to the connector/equipment will result.



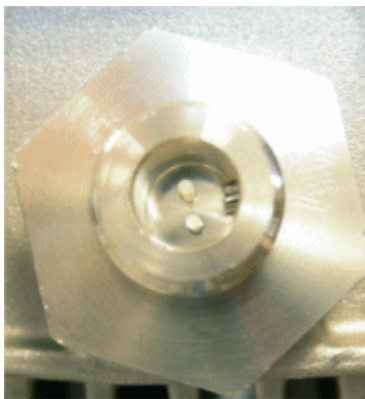
Optic Interface

When running cables care should be taken not to exceed a force of 800N on the cable or connector. Do not kink cable or bend over sharp edges.



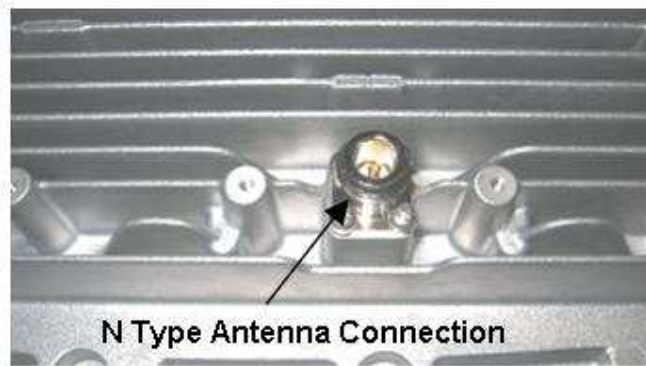
Each SCRT is connected with an optical fibre cable, ready terminated with optical connectors. Unscrew the protective dust cap and screw the fibre optic cable in place. Only remove the cap prior to installation and never leave the optical interface open without a protection cap.

Tighten to 1Nm using a calibrated torque wrench. Never exceed 2Nm as the optical interface may be damaged causing excess losses



Antenna RF Port

RF feeder connector: N-Type Female: Impedance: 50ohms: Minimum In-band Return Loss:15dB.



Protective Earth Connection

A screw terminal is provided on the SCRT for bonding the SCRT to a protective earth.

48V DC Cabling

Operational voltage range: -40.5V to -57.0V.

Abnormal operation (without damage): 0 to -40.5V and -57.5 to -60V

(SCRT will operate down to -39volts with reduced brown out margin)

Cables to SCRTs Connectorised Both Ends – For Use With HiperMAX-Micro

Procedure for terminating the DC supply for the SCRT at the SDR-Micro -48v DC source when using connectorised DC cable part numbers PWR-XX-INST-1 (where xx is cable length metres)

1. Run cable from the SCRT to the SDR-Micro The picture below shows the SDR end.



SDR END

2. Connect the cable at the SCRT
3. Connect the cable at the SDR-Micro
4. Do not apply power to the SCRT until the commissioning stage.

Cables to SCRTs Connectorised One End – For use with HiperMAX

1. Run cable from the SCRT to the DC source breakers. (The SCRT end is the connectorised end)



SCRT END

2. Connect the cable at the SCRT
3. Connect to the 48V DC Source distribution panel as follows

POLARITY	COLOUR	PIN
-48v	Blue	2
Return	Black	1

GPS

GPS Antenna Installation



HiperMAX-micro

SDRs that have the GPS option have a GPS antenna and four metres of cable included. The first consideration for a GPS antenna is a clear view of the sky, preferably 360 degrees. In the usual installation, the GPS antenna is located low and close to the equipment building roof. The GPS antenna should be attached to a suitable mast and connected to the SDR.

Use the guidance below to find the optimal position for mounting the GPS antenna

- a) The antenna must be mounted in an upward position.
- b) The antenna should be installed at the highest possible point available at the site. This is to ensure minimum obstruction from any surrounding obstacles (trees, buildings or other installations, etc.).
- c) To avoid influence of reflected waves, the antenna must not be installed less than 2m away from metallic objects with a dimension greater than 20 cm.
- d) Antenna installation should be avoided in close proximity with other receivers or transmitters likely to cause interference.
- e) The antenna should be positioned to minimise the risk of a lightning strike. See Lightning Protection Overview for guidance on placement.
- f) The antenna should be placed within 4 metres of the SDR.

HiperMAX- ATCA

The first consideration for a GPS antenna is a clear view of the sky, preferably 360 degrees. The GPS antenna should be attached to a suitable mast.

Use the guidance below to find the optimal position for mounting the GPS antenna

- a) The antenna must be mounted in an upward position.
- b) The antenna should be installed at the highest possible point available at the site. This is to ensure minimum obstruction from any surrounding obstacles (trees, buildings or other installations, etc.).
- c) To avoid influence of reflected waves, the antenna must not be installed less than 2m away from metallic objects with a dimension greater than 20 cm.
- d) Antenna installation should be avoided in close proximity with other receivers or transmitters likely to cause interference.
- e) The antenna should be positioned to minimise the risk of a lightning strike. See Lightning Protection Overview for guidance on placement.
- f) The antenna feed should be protected at the building entry using a surge arrester.

Mounting The Antenna

The GPS antenna bracket is mounted on a Pole up to 40mm (1.5"). The Antenna screws on to the 25m threaded tube.



1. The RJ58 antenna cable is provided with a TNC connector attached at each end. Run the cable from the SDR-micro or HiperMAX GPS receiver to the location of the GPS antenna.
2. Thread the TNC connector cable through the threaded tube on the bracket and attach the TNC connector to the Antenna.
3. Connect the tube to the antenna by holding the antenna firm and rotating the bracket around the cable until the Thread is fully engaged in the threaded part of the antenna.
4. Connect the bracket to the pole using the two U bolts and tightening with a 10mm spanner.

Lightning Protection

For general information on lightning protection see 605-0000-833 Base Station Site Prerequisites. Extreme care is to be taken to ensure excellent earth connections are available.

Equipment Protection

Airspan supplies optional surge protection kits for use with HiperMAX. These are generally only installed in geographies where lightning strikes are very common, ie. High risk areas.

The available kits are as follows:

- LPK-SCRT-PWR-1: SCRT Power Lightning Protection Kit - consisting of 1x 48V surge arrester

This section details the site requirements for installing these optional surge protection kits.

SCRT Power Protection (LPK-SCRT-PWR-1)

The SCRT power protection kit provides surge protection for the 48V DC power supply input of the SCRT. .

Kit Description:

2 off DC surge arrestors in weatherised enclosures

Positioning Recommendations:

HiperMAX: 1. As close to the SCRT as possible.
2. At the Building Entry

HiperMAX-micro: 1. As close to the SCRT as possible.
2. As close to the SCR as possible.

Mounting Requirements:

Pole Mount

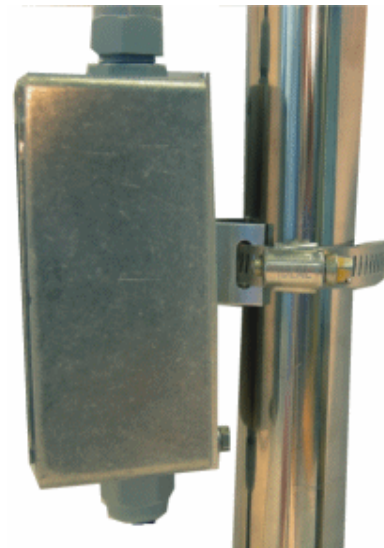
1. Remove the top of the case (4* M4 countersunk screws) and secure the flat studded plate to the rear of the enclosure with M4 pozidrive screws, nuts and shake proof washers. (8mm spanner required).
2. Attach the clip bracket to the studs on the plate using M5 nuts and shake proof washers. (10mm spanner required)



3. Thread the pole clip through the bracket as shown below.



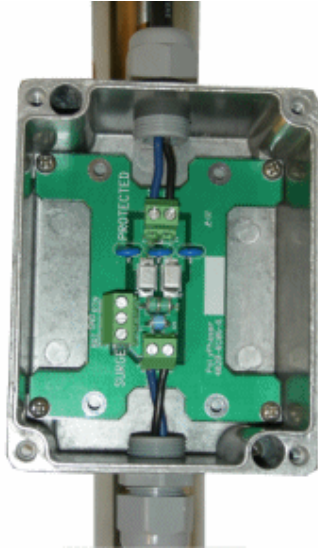
4. Orientate the enclosure so that the protected end is closest to the equipment. Pass the pole and tighten to the pole using the captive screw on the clip.



Wiring

Now connect the 48volt power cable using the following procedure.

1. Screw the protection module into the box (position 4). Ensure that the surge and output ends of the board are correctly orientated.
2. Pass the cable ends through the rubber grommets and terminate the surge and protected cables on to the module as follows. (refer to lid)
 - White or blue to +/-.
 - Black to GND



3. Tighten the Glands around the cable to provide a good environmental seal.
4. Screw the lid into place with the four M4 countersunk screws ensuring the rubber weather seal is located in its groove.

How to find out
more
about
Airspan products
and solutions



For more information about Airspan, its products and solutions, please visit our Web site:

www.airspan.com

Or write to us at one of the addresses below.

We will be delighted to send you additional information on any of our products and their applications around the world.

Airspan has offices in the following countries:

Europe

Czech Republic
Poland
Russia
United Kingdom

Africa

South Africa

Americas

United States

Asia Pacific

Australia
China
Indonesia
Japan
New Zealand



Worldwide Headquarters:
Airspan Networks Inc.
777 Yamato Road, Suite 105
Boca Raton, Florida 33431-4408
USA

Tel: +1 561 893 8670
Fax: +1 561 893 8671

Main Operations:
Airspan Communications Ltd.

Cambridge House, Oxford Road,
Uxbridge, Middlesex UB8 1UN
UK

Tel: +44 (0) 1895 467 100