



# StingRay RF over Fibre Outdoor Unit



The StingRay RF over Fibre Outdoor unit (ODU) is a robust weatherproof (IP65 rated) enclosure which has been designed to be wall or post mounted close to the antenna. It can accommodate up to 4 Transmit or Receive 400 series StingRay Fibre modules.

The transmit modules benefit from a high and wide dynamic range with automatic link optimisation ensuring high quality transmission. Resilience is provided by a full hot-swap, modular design.

**Typical applications:**

- Designed to be wall or post mounted close to an antenna
- Distribution of comms traffic across site with minimal loss

(O) = Optional Item



**Remote control & monitoring**

via RJ45 Ethernet port with SNMP & web browser interface.  
Ethernet options:  
- Copper Ethernet interface (O)  
- Single optical Ethernet interface (O)



**IP65 rated Weatherproof enclosure**  
can house up to 4 single RX or TX 400 series modules



**LNB powering** 13/18V & 22KHz tone (provided on TX modules)



**Sunshade** to protect from direct sunlight / solar loading (O)



**Reliability** from dual redundant field serviceable power supplies



**Local control & monitoring** Dip switches located under access panel



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**- Outdoor Enclosure Specifications -**

| Physical  |                            |
|---|----------------------------|
| Capacity  | Up to 4 4xx series modules |
| RF Connector Options<br>(As defined on the modules) | BNC / SMA / F-type         |
| Impedance Options<br>(As defined on the modules)    | 50Ω / 75Ω                  |
| Dimensions  | 407 x 154 x 254 mm         |
| Weight  | TBD                        |
| Colour  | White RAL9003 semi-matte   |

| System Control              |   |  |
|-----------------------------|---|--|
| Local Control               | Local settings selectable via DIP switches in the modules   |  |
| Remote Control & Monitoring | Ethernet (RJ45) Port, 10BaseT/100BaseTx or optical, including ETL TCP/IP protocol, SNMP & Web Browser Interface | Optical Ethernet connection 1310 nm, 10 km reach bidirectional over two single mode optical fibres |
| Monitoring                  | Temperature, RF power & optical power   | Remotely   |

| Power                  |                                    |  |
|------------------------|------------------------------------|--|
| LNB Power              | Yes, Module must support LNB power |  |
| AC Power               | 100-240Vac<br>50/60Hz              | Lightning protection suitable for local installation conditions should be provided |
| AC Consumption         | <120 W all channels occupied       | Total AC input   |
| Heat Load              | <60 W, 205 BTU/hr                  |  |
| PSU                    | Dual Redundant                     | Diode OR   |
| Field Serviceable PSUs | Yes                                |  |

| Environmental         |                                      |                                   |
|-----------------------|--------------------------------------|-----------------------------------|
| Operating temperature | -20 to +55 4 feeds with no LNB power |                                   |
|                       | -20 to +50 8 feeds with LNB power    |                                   |
| Location              | Outdoor or indoor use                |                                   |
| Storage temperature   | -40 to +80°C                         |                                   |
| Humidity              | Internally 20-90% RH, non-condensing | Internal humidity sensor (option) |
| Altitude              | 10,000 ft / 3,000 m AMSL             |                                   |

**- Fibre Module Options -**

| Module Model # for chassis above | Type     | Capacity | Frequency               | LNB Powering | -20dB Monitor Port |
|----------------------------------|----------|----------|-------------------------|--------------|--------------------|
| SRY-TX-L1-401                    | Transmit | Single   | 850-2450 MHz (L-Band)   | ✓            | ✓                  |
| SRY-RX-L1-402                    | Receive  | Single   | 850-2450 MHz (L-Band)   | ✗            | ✓                  |
| SRY-TX-B2-403                    | Transmit | Single   | 50-2450 MHz (Broadband) | ✓            | ✓                  |
| SRY-RX-B2-404                    | Receive  | Single   | 50-2450 MHz (Broadband) | ✗            | ✓                  |

Note 1: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.

Note 2: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.



| Model Number / Description   |   | ODU201 | ODU203 | ODU204 |
|--|---|--------|--------|--------|
| <b>ODU basic features &amp; functionality</b>  |   |        |        |        |
| Internal chassis capacity 10 x 200 series modules (Single or dual modules)           |   | ✓      |        | ✓      |
| Mounting plate capacity 4 x 400 series component modules                             |   |        | ✓      |        |
| IP65 rated enclosure   |   | ✓      | ✓      | ✓      |
| 1+1 redundancy configuration option  |   | ✓      | ✓      |        |
| 4+1 redundancy configuration option  |   |        |        | ✓      |
| Dual redundant hot swap power supplies   |   | ✓      |        | ✓      |
| Dual redundant field serviceable power supplies (not hot swap)                       |   |        | ✓      |        |
| Controller CPU card  |   | ✓      | ○      | ✓      |
| RJ45 Ethernet port for remote communications (copper Ethernet interface as standard) |   | ✓      | ○      | ✓      |
| 13/18V 22 kHz LNB powering 500mA   |   | ✓      | ✓      | ✓      |
| Hot swap fibre modules   |   | ✓      | ✓      | ✓      |
| Hot swap fan tray  |   | ✓      |        | ✓      |
| Operating temperature range -20°C to +45°C (higher to +55°C with limited modules)    |   | ✓      | ✓      | ✓      |
| Standard cable glands and hole configuration   |   | ✓      | ✓      | ✓      |
| Status LED's on gland plate  |   | ✓      |        | ✓      |
| <b>ODU Additional Options</b>  |   |        |        |        |
| <b>Control</b>   |   |        |        |        |
| SRY-OPT4-LCU   | Local control panel with keypad / display   | ○      | ○      | ○      |
| SRY-OPT3-OPE-xx  | Optical Ethernet converter for remote communications over fibre 10 km                         | ○      | ○      | ○      |
| SRY-OPT10-EC1  | Ethernet Copper Interface provides additional surge protection                                | ○      | ○      | ○      |
| SRY-OPT23-CPU  | ODU203 CPU card upgrade   |        | ○      |        |
| <b>Fixing / Mounting / Locks</b>   |   |        |        |        |
| SRY-OPT6-BR1   | Bolts and spacers for wall mount  | ○      | ○      | ○      |
| SRY-OPT7-BR2   | Pole mounting bracket   | ○      | ○      | ○      |
| SRY-OPT9-DRL   | Key operated door lock, replaces screwdriver operated door lock                               | ○      | ○      | ○      |
| <b>Environmental</b>   |   |        |        |        |
| SRY-OPT1-40C   | Thermostat controlled heater for -20°C to -40°C   | ○      |        | ○      |
| SRY-OPT2-60C   | Thermostat controlled heater for -20°C to -60°C   | ○      |        | ○      |
| SRY-OPT8-SUN   | Sun shade to protect from solar loading / direct sun light                                    | ○      | ○      | ○      |
| <b>Patch Panels / Cables</b>   |   |        |        |        |
| SRY-OPT11-TRY-xx   | Fibre management tray and optical patch panel (excluding patch leads)                         | ○      |        | ○      |
| SRY-OPT5-PPN-xxxx  | F-Type/BNC/SMA RF patch panel to facilitate easy cabling (excluding patch leads)              | ○      |        | ○      |
| SRY-OPT12-CCB-xxxx   | Coaxial patch lead (to connect RF ports of the fibre modules to the patch panel)              | ○      |        | ○      |
| SRY-OPT13-FPC-xx   | Fibre patch cable (to connect optical ports of the fibre modules to the fibre patch panel)    | ○      |        | ○      |
| SRY-FPT-xx-1M  | 1 metre fibre pig tail with FC/APC (or SC/APC) connector to splice onto unconnectorised fibre | ○      | ○      | ○      |
| SRY-OPT14-GP1  | Fit Roxtec CF 16 EMC Cable gland for up to 28 cables  | ○      |        | ○      |
| SRY-OPT15-GP2  | Custom gland plate to customer design (excluding glands and connectors)                       | ○      |        | ○      |
| <b>Other</b>   |   |        |        |        |
| SRY-OPT16-10M  | Internal 10 MHz passive splitter for 10 MHz distribution to modules                           | ○      |        | ○      |