



# StingRay RF over Fibre

## 200 series 10MHz Reference Modules with ultra low phase noise

The StingRay 200 Series of RF over fibre chassis are designed to give compact fibre links of up to 10 km (Link budget 4 dB). The transmit modules benefit from a high and wide dynamic range with automatic link optimisation ensuring high quality signals. Resilience is provided by a full hot-swap, modular design.

**Other options in the StingRay series:** The StingRay range is also available with additional features such as RF monitoring ports, high linearity, switchable LNB powering & redundancy systems.

### Typical applications:

- Used in conjunction with L-band & Broadband fibre modules
- General satcoms– teleports, video head-ends, TVRO
- Compact solution for small quantity links such as tactical HQ
- A resilient solution for satellite teleports with transition distances up to 10km

### Fibre Modules



**10 MHz** operating frequency range



**-20dB Monitor port** to measure input signal levels



**TX & RX** module options to transmit and receive signals up to 10 km



**Flexibility** 10 MHz modules can be housed in same chassis as fibre modules

### Chassis Options



**Compact indoor & outdoor** chassis options, which can be part populated



**Resilience** from dual redundant hot-swap power supplies, hot-swap fibre modules & fans



**Remote control & monitoring** via RJ45 Ethernet port with SNMP & web browser interface



**10MHz Inject** from an external source chassis option



**Local control & monitoring** via front panel push buttons & display



Indoor chassis showing hot-swap power supply modules, fibre modules and fans



Outdoor Unit (ODU)





**PRELIMINARY SPECIFICATIONS**

| RF Parameters (TX and RX) |            |  |   |   |
|---------------------------|------------|--|---|---|
| Model Number              |            | SRY-TX-Y-281-xxxx  |   | SRY-RX-Y-282-xxxx                         |
| Frequency Range           |            | 10 MHz   |   |   |
| Return Loss               | 50 ohm SMA | 18 dB typical, 12 dB minimum                                 |   |   |
|                           | 50 ohm BNC | 18 dB typical, 12 dB minimum                                 |   |   |
| Input AGC level           | Maximum    | +15 dBm  |   |   |
|                           | Minimum    | 0 dBm  |   |   |
| Output AGC level          | Maximum    | +15 dBm  |   |   |
|                           | Minimum    | 0 dBm  |   |   |
| Noise Figure              |            | 27 dB (with 281 TX or 282 RX +10 dBm input and output level) |   |   |
| Optical Wavelength        |            | 1310 ± 10 nm   | 1100 to 1650 nm (Optimised for 1310 nm and 1550 nm) |   |
| Max RF Input              |            | +16 dBm total power (Damage level )                          |   |   |
| Phase Noise               | 0.1 Hz     | -114 dBc/Hz typical, -98 dBc/Hz maximum                      |   |   |
|                           | 1 Hz       | -123 dBc/Hz typical, -117 dBc/Hz maximum                     |   |   |
|                           | 10 Hz      | -130 dBc/Hz typical, -124 dBc/Hz maximum                     |   |   |
|                           | 100 Hz     | -141 dBc/Hz typical, -135 dBc/Hz maximum                     |   |   |
|                           | 1000 Hz    | -153 dBc/Hz typical, -147 dBc/Hz maximum                     |   |   |
|                           | 10000 Hz   | -153 dBc/Hz typical, -147 dBc/Hz maximum                     |   |   |
|                           | 100000 Hz  | -153 dBc/Hz typical, -147 dBc/Hz maximum                     |   |   |
|                           | 1000000 Hz | -153 dBc/Hz typical, -147 dBc/Hz maximum                     |   |   |
| Laser Type                |            | DFB (Two stage optical isolator for improved performance)    |   | N/A                                       |
| Optical Power output      |            | 5.5 ± 2 dBm  |   | N/A                                       |
| Optical Power in          |            | N/A  |   | 0 to 7 dBm (Max 10 dBm )                  |
| Power Consumption         |            | 6W   |   | 4W  |
| AGC                       |            | Factory Set  | Maintains optimum level of laser modulation         | Factory Set<br>Maintains set output level |
| MTBF                      |            | >200,000   |   | TBC                                       |
| RF Connectors             |            | BNC 50 Ω (B5) or SMA 50 Ω (S5)                               |   |   |
| Optical Connectors        |            | FC/APC (FA) or SC/APC (SA)                                   |   |   |
| Operating Temperature     |            | -40 to +55 °C  |   |   |
| Storage Temperature       |            | -40 to +85 °C  |   |   |
| Location                  |            | Indoor use   |   |   |
| Humidity                  |            | 20 to 90% non-condensing. Relative Humidity                  |   |   |
| Altitude                  |            | 10,000 feet AMSL (Above Mean Sea Level)                      |   |   |
| Dimensions                |            | 87.8 x 18 x 150 mm   |   |   |
| Weight                    |            | 0.35 kg  |   |   |

Please see separate datasheet for 200 series chassis options.