



# StingRay RF over Fibre

## 200 Series 1PPS to 1MPPS, and IRIG-B (DCLS TTL) Over Fibre Modules

The SRY-TX-Y-285 and SRY-RX-Y-286 are optical transmitter and receiver modules for 1PPS up to 1MPPS, and IRIG-B DCLS TTL over Fibre, built in a compact EMC sealed housing which converts 1PPS up to 1MPPS signals to 1310nm for transmission over single mode fibre. It uses optically isolated DFB laser and is suited up to 10km. Can also be used with ETL model D0216S1UIA-22512 Dual input 16-way Time & Frequency Distribution unit.

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

### Typical applications:

- Mission critical PPS distribution for communication systems, satellite earth stations, test facilities and engineering .
- Compact solution for small quantity links such as tactical HQ.
- A resilient solution for satellite teleports and other facilities with transition distances up to 10km

### Fibre Modules



**1PPS to 1MPPS & IRIG-B DCLS TTL** input/output frequency range

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



**Monitor ports** to measure signal levels



**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



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



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



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



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



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



Outdoor Unit (ODU)





RF Parameters (TX and RX)		
Model Number	SRY-TX-Y-285-xxxxxx	SRY-RX-Y-286-xxxxxx
Capacity	Single PPS / IRIG-B (DCLS TTL)	
Chassis	Any StingRay 200 Series chassis	
Signal	Input: 1PPS to 1MPPS and IRIG-B DCLS (50 ohm TTL)	Output: 1PPS to 1MPPS and IRIG-B DCLS (50 ohm TTL)
Input / Output ports	50Ω SMA, BNC.	
Input / Output Level	Input: Up to 5V peak nominal TTL	Output: 5V TTL peak nominal (when terminated with 50Ω)
Duty Cycle	0 to 100%	
Rise/Fall Time	<20ns Measured between 10% low and 90% high thresholds.	
Jitter	<200ps RMS	
Laser Type	DFB (Two stage optical isolator for improved performance)	N/A
Optical Wavelength (nm)	1310 ± 10	1100 to 1650nm (Optimised for 1310nm and 1550 nm)
Optical Power output (dBm)	+6 dBm typical	N/A
Optical Power in (dBm)	N/A	0 to +6 dBm (Max 10 dBm )
Power Consumption	< 5W	< 4W
MTBF	TBC	>250,000
RF Connectors	SMA 50 Ω (S5) / or BNC 50 Ω (B5)	
Optical Connectors	FC/APC (FA) or SC/APC (SA) Single mode fibre, Use angle polish connectors only	
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)	
Control & Monitoring	Local front panel control and remote control via ethernet. 10/100BaseT. TCP/IP, SNMP, Web browser.	
Temperature Monitors	Each module TTL frequency monitored, all are independently monitored and reported.	
Module Monitoring	Laser optical output & input power, Status of amplifier stages in each module	
AGC	Factory Set. Maintains optimum level of laser modulation	N/A
Dimensions	87.8 x 18 x 150 mm	
Weight	0.35 kg	

Please see separate datasheet for 200 series chassis options.