

Titan OTC RFoG Return Path Receiver

The Titan RFoG Return Path Receiver (RPR) is specifically designed to support the low power burst-mode return path transmission operations dictated by the SCTE based RFoG networks. It is a member of the Titan OTC (Optical Transport Chassis) product family that includes HFC return path receivers, EDFAs, 1310 and 1550nm CATV transmitters along with the 14 slot OTC chassis. The RFoG RPR receiver module houses 2 highly sensitive manageable optical receivers allowing a single 4RU Titan OTC chassis to support 28 RFoG network links, minimizing precious head-end equipment space. They are very sensitive, low- noise devices that provide a wide dynamic range and unrivaled NPR performance allowing the Titan RFoG RPR to faithfully receive burst mode optical inputs as low as -27dBm without compromising RF output quality. When combined with Titan's high power NanoNode RFoG ONUs and EDFAs, robust RFoG networks with 20KM reach and 64 splits can be deployed allowing you to optimize your fiber investment without resorting to remote hubs or field electronics. With a spectral width from 1100nm to 1620nm and input sensitivity from -12dBm to -27dBm, the Titan RFoG RPR can easily support both HFC and RFoG return path applications.



Features and Benefits

- Low Noise, high performance for the highest return path capacity and reliability.
- High density chassis design with 2 RFoG RPRs per module for up to 28 RPRs in a 4RU shelf.
- Wide band version available to support future DOCSIS channel bonding up to 200MHz.
- Remote management using SNMP allows easy integration to standard management systems.
- High sensitivity and wide dynamic range for easy deployment of RFoG networks and ONUs.
- 0 to 30dB attenuation (software controlled) in 0.2dB steps for optimal performance tuning.
- Low power consumption. 14 Watts per module for low cost ongoing operations.
- Status indicators, RF monitor and Hot-swappable design for easy diagnostics & maintenance.
- A Titan OTC Transport system allows flexible deployments and consistent operations.
- A perfect match for RFoG applications using Titan's High-power EDFAs with internal WDMs.

Applications

- Standard RFoG network deployments
- Long distance HFC return path support
- High split count RFoG networks for MDU and high density residential
- High performance DOCSIS networks with upstream channel bonding

Generic Specifications

General

Dimensions W x H x D	1.2" x 5.12" x 14.6" (1 wide chassis slot)
Weight	2.5Lbs. (1.13kg)
Receivers per module	2 independent RPRs per module
Optical connectors	SC/APC on front pane
RF Connectors	75Ohm, Female "F" connectors
Replacement	Plug-in, hot swappable

Optical Performance

Input wavelength	1100nm to 1620nm
Input sensitivity	-27dBm to -12dBm (-24 to -10 for wideband version)
EIN	0.75pA/sqrt(Hz) (1.0pA/sqrt(Hz) for wideband version)
Optical return loss	>40dB

RF Performance

RF Bandwidth	5MHz to 85MHz (5 to 200MHz for wideband version)
RF output level	16dBmV (pad disabled, -27dBm input)
Flatness	+/-0.75dB (no tilt)
RF return loss	>16dB (into 75 ohm load)
RF Monitor	-20dB referenced to output
RF attenuation range	0 to 30 in 0.2dB steps

Electrical Requirements

Power consumption	14 Watts Max
-------------------	--------------

Environmental

Operating temp range	0 to 50 °C
Storage temp range	-30 to +70 °C
Humidity	5% to 85% (non-condensing)

Management

The Titan TCRRFG receiver is managed via the OTC controller. Front panel controls on the receiver provide local monitoring & diagnostics.	
Local management	Backlit LCD display with menus and navigation control buttons
Remote management	RJ45/LAN with SNMP
Receiver controls	Receiver enable/disable, Output attenuation, alarm suppression

Ordering Information

(OTC Plug-in module, dual RFoG return path receiver)

The Titan TCRRFG return path receiver can be ordered and customized to your specific needs as follows:

TCRRFG-bw

bw = Receiver RF bandwidth (**none** – 5 - 85MHz or **W** - 5 to 200MHz)

Mechanical Drawings

