7808RFT, 7808RFT–2

L–Band/Wideband RF over Fiber Receiver Series

The 7808RFT is a high-performance RF over fiber transmitter platform available in single-channel (7808RFT) and dual-channel (7808RFT–2) configurations. This modular and hot-swappable card is designed for integration inside the 7800FR, 7801FR, 5710FR, and 350FR enclosures. It seamlessly integrates with Evertz' 7800 series RF products, such as RF splitters/combiners, RF routers, spectrum analyzers, IRDs, and demodulators.

The 7808RFT accepts a single RF input and provides a single fiber output, while the 7808RFT-2 accommodates two RF inputs and supplies two fiber outputs for optical transmission. Both configurations feature an RF monitoring port for each RF input, facilitating rapid monitoring or signal distribution. Selectable 13/18V DC LNB power + 22kHz tone is also available per input, along with current limiting, short circuit protection and current monitoring for advance warning of LNB failure.

When housed inside Evertz' 570 Series and 7800 Series multi–frames, 7808RFT modules support 10MHz injection from the chassis' reference input, presenting a simple solution for applications requiring 10MHz insertion into the LNB, without the need for external devices. Please contact Evertz for more information on 10MHz RF over Fiber transport products.

For long-haul transport applications or instances with excessive optical loss, a high power DWDM version (-xxx, -xxx/yyy) offers an extended optical budget as well as the ability to interface with Evertz DWDM multiplexer systems for up to 40 channels onto a single fiber. A CWDM version (-xx, -xx/yy) is also available to accommodate up to 16 channels onto a single fiber. The 7808RFT13/15-2-W version presents an on-board fiber multiplexer (WDM), requiring only a single fiber between the companion receiver (7808RFR-2-W).

Gain control, essential for tuning optimal CNR performance, can be conveniently managed either locally or remotely using manual mode or the Automatic Gain Control (AGC) mode. Additionally, the system provides detailed monitoring of various parameters such as optical output power, RF input power, temperature, and more, with individualized information available for each RF input. This comprehensive monitoring capability enhances the user's ability to maintain and optimize performance, ensuring efficient and reliable operation. The modules provide a seamless and user-friendly experience for remote monitoring and control via the WebGUI interface and/or SNMP/VistaLINK PRO®. With the integration of Evertz' innovative SmartMON™ technology, operators can efficiently monitor the 7808RFT from a distance without the need for a separate data connection. Vital information, including RF input power, gain settings, LNB current, DC input power, internal temperature, and laser status, is transmitted over fiber to the compatible Evertz receiver (e.g. 7808RFR), enabling easy access through SNMP or WebGUI. This advanced system ensures comprehensive oversight and control, enhancing operational efficiency and facilitating streamlined management of Evertz transmitters.

Features & Benefits

- Wide frequency range for extended L–Band, IF, UHF/VHF, off–air DTV and more
- Dual-Channel: Up to 28x conversions in 3RU or 8x conversions in 1RU
- Single-Channel: Up to 14x conversions in 3RU or 4x conversions in 1RU
- Protocol–independent design for support of all modulation formats
- CWDM and DWDM multiplexing options available
- Single–mode and multi–mode fiber support

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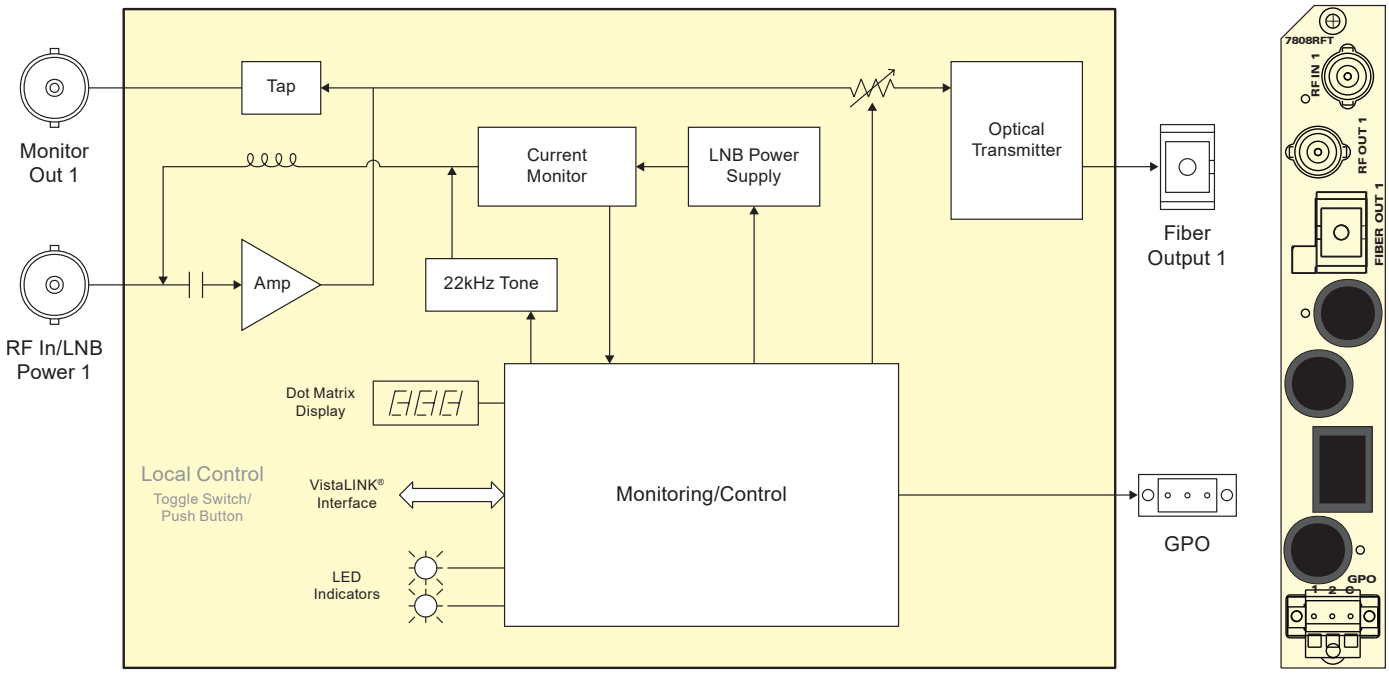
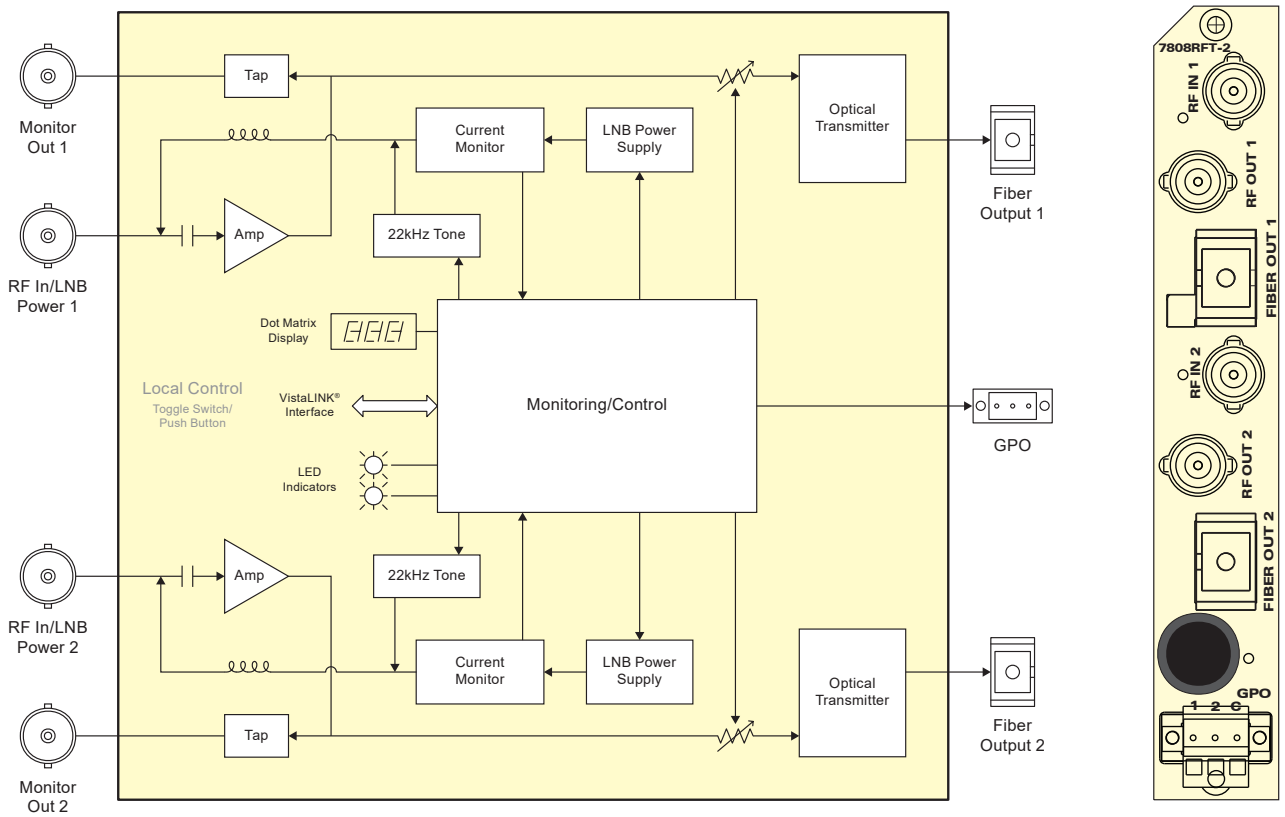
7808RFT



7808RFT-2



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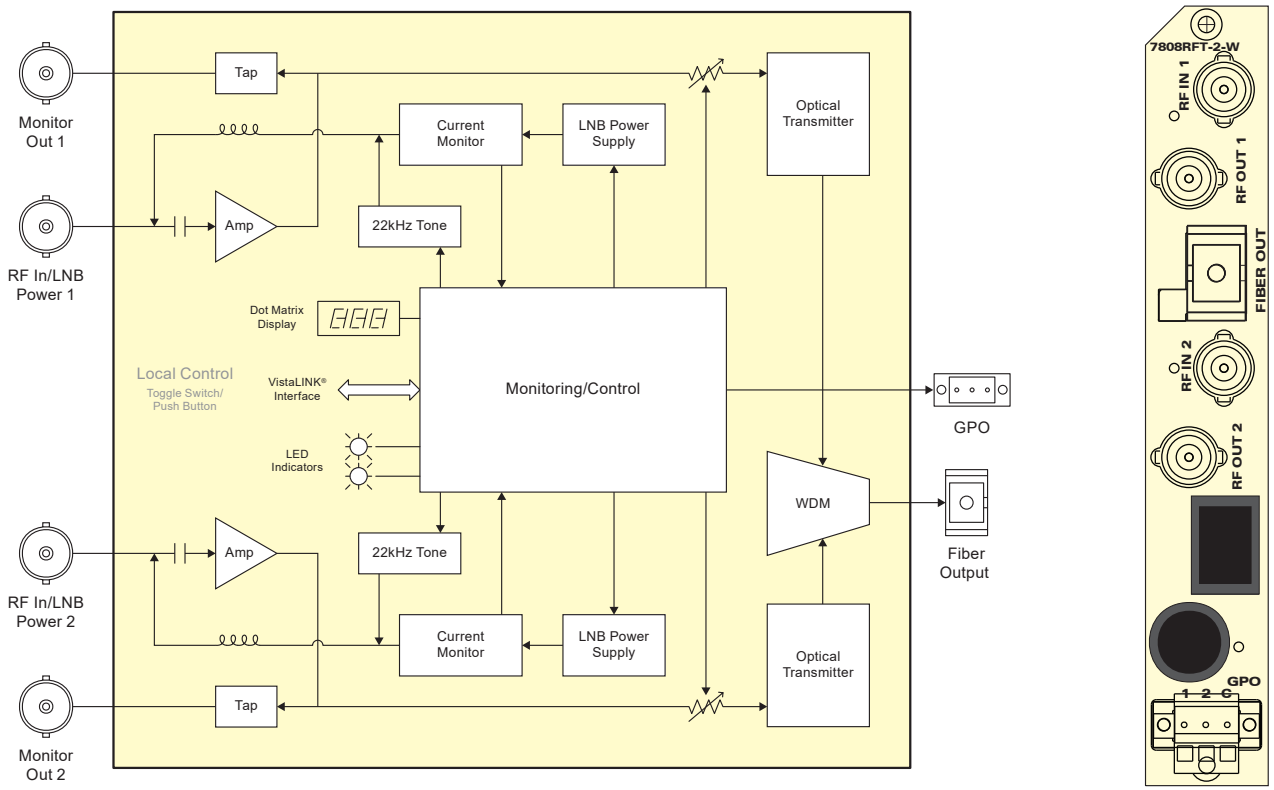
7808RFT-2-W



Specifications

RF Input:

Number of Inputs:	
7808RFT:	1
7808RFT–2:	2
Connectors:	BNC per IEC 61169–8 Annex A (F–Type and SMA optional)
Input Impedance:	75Ω (50Ω optional)
Return Loss:	>16dB
Frequency Range:	50MHz - 3GHz
Input Power Range:	-10dBm to -60dBm
Manual Gain:	0 to +30dB in 0.5dB steps
AGC Mode Range:	0 to -30dBm
Input IP3:	+16dBm

LNB Power:

Voltage:	13V DC, 15V DC, 18V DC, off (selectable)
Current:	500mA
Protection:	Short circuit, current limited
LO Control:	22kHz on/off (selectable)

RF Monitor Output:

Number of Outputs:	
7808RFT:	1
7808RFT–2:	2
Connector:	BNC per IEC 61169–8 Annex A (F–Type optional)
Output Impedance:	75Ω (50Ω optional)
Return Loss:	>15dB
Frequency Range:	50MHz - 3GHz
Output Level:	within -2.0dB of input signal

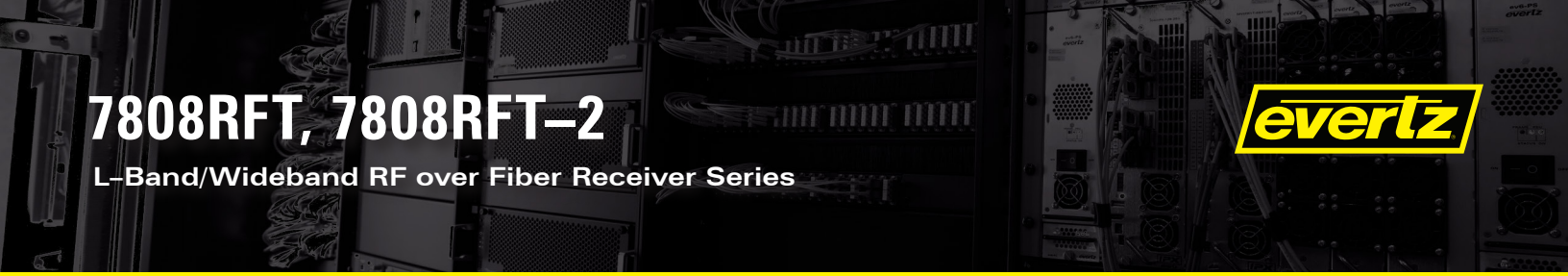
Ordering Information

Single Channel Transmitters:

7808RFT13	Single channel wideband RF fiber transmitter with SmartMON, VistaLINK, and WebGUI support. LNB powering with 22kHz tone, 1310nm DFB laser
7808RFT13–F75	Single channel wideband RF fiber transmitter with SmartMON, VistaLINK and WebGUI support. LNB powering with 22kHz tone, 1310nm DFB laser. 75 Ohm F-Type connectors.
7808RFT13–B50	Wideband RF fiber transmitter with SmartMON and VistaLINK support. LNB powering with 22kHz tone, 1310nm DFB laser, 50 Ohm BNC connectors
7808RFT13–S50	Wideband RF fiber transmitter with SmartMON and VistaLINK support. LNB powering with 22kHz tone, 1310nm DFB laser, 50-Ohm SMA connectors.

Dual Channel Transmitters:

7808RFT13–2	Dual wideband RF fiber transmitter with SmartMON and VistaLINK support. LNB powering with 22kHz tone, 1310nm DFB laser.
7808RFT13–2–F75	Dual channel wideband RF fiber transmitter with SmartMON, VistaLINK and WebGUI support. LNB powering with 22kHz tone, 1310nm DFB laser. 75 Ohm F-Type connectors.
7808RFT13–2–B50	Dual wideband RF fiber transmitter with SmartMON and VistaLINK support. LNB powering with 22kHz tone, 1310nm DFB laser, 50 Ohm BNC connectors.
7808RFT13–2–S50	Dual channel wideband RF fiber transmitter with SmartMON, VistaLINK and WebGUI support. LNB powering with 22kHz tone, 1310nm DFB laser. 50 Ohm SMA connectors.



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Specifications (continued)

Optical Output:

Number of Outputs:	
7808RFT:	1
7808RFT–2:	2
Connector:	Female SC/UPC, FC/UPC, SC/APC, FC/APC
Operating Wavelength:	1310nm DFB (1550nm and CWDM optional); DWDM C–Band (ITU G.694.1 compliant)
Output Power:	
Dual Fiber:	+3dBm ± 1dBm
Single Fiber:	+3dBm ± 1dBm
DWDM:	+11dBm

RF System Performance
7808RFT–2 + 7807LR–2 pair:

Flatness:	
850–2250MHz:	± 1.5dB
50–2800MHz:	± 2dB

General Purpose Outputs:

Number of Outputs:	2
Type:	"Dry Contact" relay contacts — normally open and normally closed contact provided
Connector:	3–pin terminal strip

Electrical

Voltage:	12V DC
Power:	10W excluding LNB power

Physical:

Number of Slots:	1

Compliance:

EMI/RFI:	Complies with FCC Part 15, Class A EU EMC directive.
Safety:	IEC 62368-1, 60950-1

Ordering Information (continued)

Ordering Options:

+SC	SC fiber connector
+AP+SC	Angle Polish, SC fiber connector
+FC	**FC** fiber connector
+AP+FC	Angle polish, FC fiber connector

Enclosures:

7800FR	3RU Multiframe Which Holds up to 15 Single Slot Modules with AC Power Supply
7801FR	1RU Multiframe Which Holds up to 4 Single Slot or 2 Dual Slot Modules, Requires Rear Plate Option for Modules
570FR	Compact High Density Distribution Frame, includes main power supply
350FR	3RU Portable Multiframe Which Holds Up to 7 Single Slot Modules with AC Power Supply