

FS32RC-1544

Compact Remote Repeater Unit (RRU)

- 144-512 MHz Frequency Range
- +25 dB Gain
- Compact Size
- Fault-Over-Fiber Feature
- Low Noise & High Dynamic Range
- Optional Wavelength Division Multiplexing (WDM)



RF on Fiber® technology offers a new and flexible layer to traditional Distributed Antenna System (DAS) design. Fiber optic cable is not only less expensive to purchase and install than its coaxial counterpart, but it is virtually bandwidth unlimited, making it ideal for multi-service solutions and applications where long runs of coax become cost prohibitive.

This VHF/UHF dual-band product is ideal for applications requiring RF coverage extension into areas ranging from 50,000 to 100,000 square feet. Separated Tx and Rx RF ports can be connected directly to an external filter system, or to Tx and Rx antennas separated by approximately 40 dB. Up to 32 RRU's can be deployed to create a reliable wireless communications

service area of 1,000,000+ square feet. The FS32RC family of products can be successfully implemented for both in-building and campus wide environments.

The FS32RC-1544 Dual-band Remote fiber optic Repeater Unit (RRU) is part of Fiber-Span's FS3200 family of products and is designed to deliver > +20 dBm of base-to-portable output power in the VHF/UHF bands. It features an integrated high dynamic range fiber optic transceiver, a medium gain, low noise Power Amplifier, and separated Tx and Rx ports. Consult Fiber-Span Sales for application-specific filter configurations.

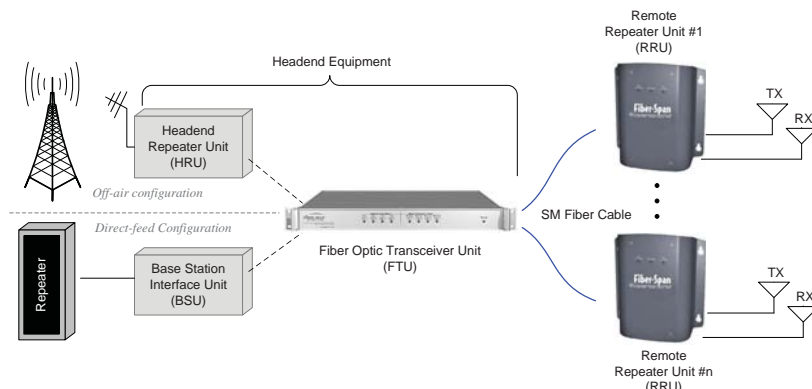
As depicted in the diagram below, a Fiber Transceiver Unit (FTU) is required to perform the RF-to-optical conversion

at the headend. The FTU can be ordered in 1-port, 2-port, or 4-port configurations for supporting up to 4 RRUs. Multiple FTUs can be used to support any number of RRUs. Refer to data sheet DS31F-01 for determining which FTU model number best fits your application. Consult Fiber-Span Sales for assistance in determining whether an HRU or BSU may be required for your application.

All of Fiber-Span's FS3200 series RRUs come standard with a Fault-over-Fiber feature that sends a summary fault condition over the uplink fiber path to the headend Fiber Transceiver Unit (FTU). The summary fault condition appears as a dry contact relay at both the back panel of the FTU, and as a local alarm to the RRU.

Applications:

- In-building
- Shopping Malls
- Warehouses
- Parking Garages
- Airports
- Justice Centers
- Manufacturing Facilities
- Stadiums
- Convention Centers
- Universities



Fiber-Span is a world-leading manufacturer of RF ON FIBER® Communication Network Products for in-building, in-tunnel and outdoor coverage extension systems serving the Commercial Wireless, Public Safety, Government and Military markets.

Parameter	Downlink	Uplink
Operational Range	144-512 MHz	144-512 MHz
System Gain @ 4 dBo optical path loss ¹	+25 dB	0 to +10 dB
Composite Output Power	+20 dBm	n/a
Gain Reduction (manual)	20 dB continuous	n/a
Max. RF Input Level	n/a	-10 dBm no damage
Uplink Noise Figure	≤ 10 dB (@ max gain & < 1 dBo)	
Wideband Noise (dBm/Hz)	-106 dBm/Hz @ max gain	
Max. RF Output Power (per 25 KHz FM Channel)	1 Carrier: +20 dBm, 2 Carriers: +17 dBm, 4 Carriers: +14 dBm, 8 Carriers: +11 dBm	
Spurious Emission	< -13 dBm	

¹ Depends on Headend FTU configuration.

Environmental

Operational Temperature Range	-5 to +50 deg C
Humidity	10 to 95%

Fiber Optic Parameters

Wavelength	1310 nm
Laser type	DFB
Max. Optical Budget	Downlink: 4 - 10 dBo ² Uplink: 10 dBo
Fiber Optic Cable Type	Single-Mode 9/125um
Connector Type	SC/APC
Back Reflections	< -50 dB typ.

² Downlink fiber optic link budget is dependent on headend FTU configuration.

Ordering Information

Identification Part Number

FS32RC-1544 FS32RC-1544X

Where: X = W or N (see WDM table)

WDM - Wavelength Division Multiplexing

W = Tx & Rx signals are multiplexed onto a single fiber.

N = Tx & Rx signals are on separate fiber strands.

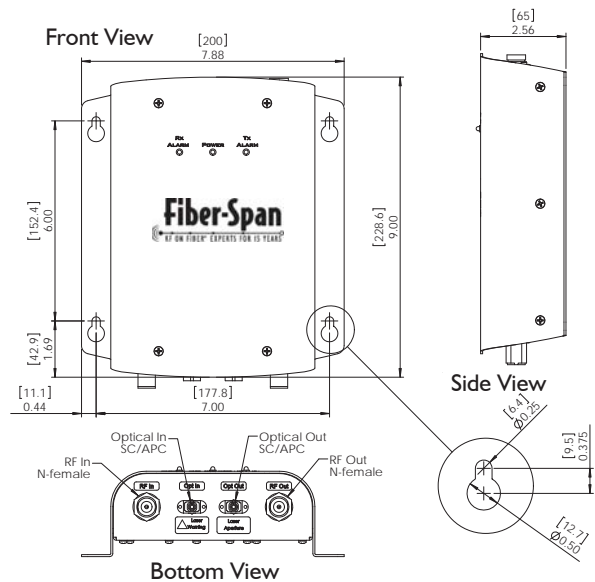
Electrical

AC Power	50/60 Hz, 115-230 VAC
Power Consumption	< 30 Watts
Local Alarms:	Dry Contact Relay ³
Remote Alarms:	Summary Fault sent to headend FTU over fiber. ³

³ Dry Contact Normally Open = OK

Mechanical Specifications

Dimensions (W x H x D) inches	8 x 9 x 3 (approx.)
Weight (approx.)	Wall-mount: < 8 lbs.
RF Connector Type	N-Female



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