

OPTIX

Fiber Optic Remote Antenna Distribution System

OPTIX is a low noise RF to fiber optic (RFoF) conversion system designed to facilitate the remote placement of wireless audio antennas. It converts radio frequency energy arriving from an antenna source into optical signal, sends that signal down a length of fiber-optic cable, and converts the signal back into RF.

Included Accessories

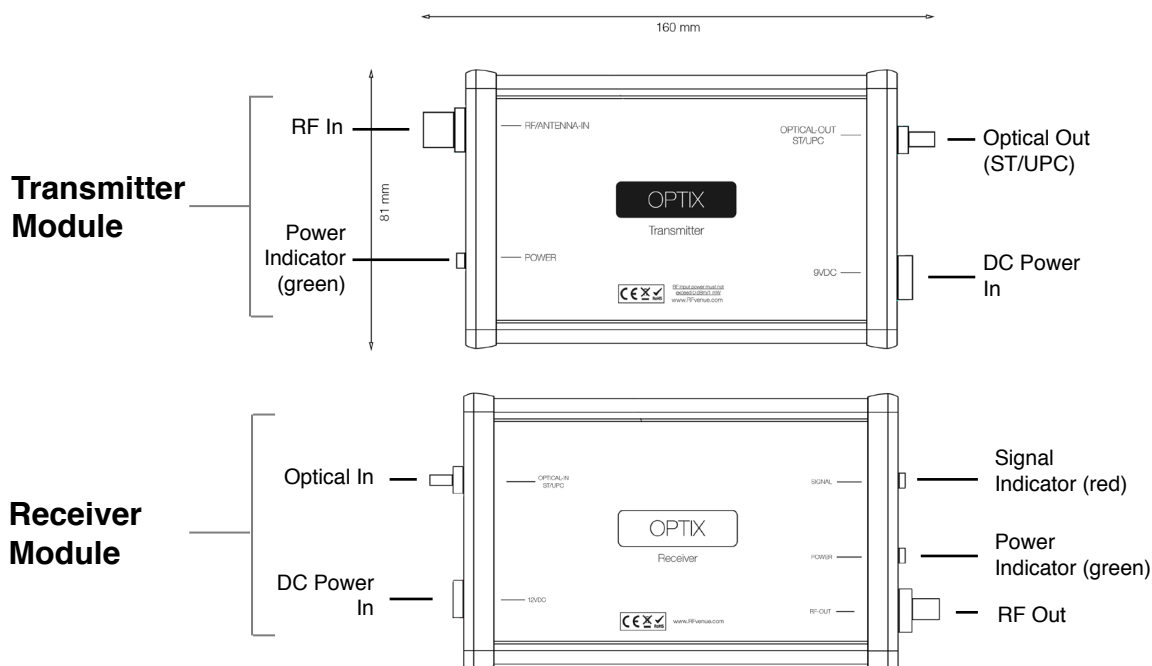
(2) BNC coaxial jumper cable

Required Accessories (not included)

Fiber optic cable, 1310 nm singlemode, ST/UPC

Recommended Accessories

Fiber optic cleaning tool



IMPORTANT: Maximum RF input power 0dBm/1mW. Do not exceed. Do not connect Optix modules to IEMs, IFBs, intercoms, or other Tx devices without attenuating input. Exceeding input voids warranty.

IMPORTANT: Fiber-optic connector end-face must be kept clean. Clean only with tools designed for fiber-optic component cleaning. Do not clean with cloth or paper.

WARNING: To avoid electrical shock, do not remove cover. Do not expose to moisture.

Electrical

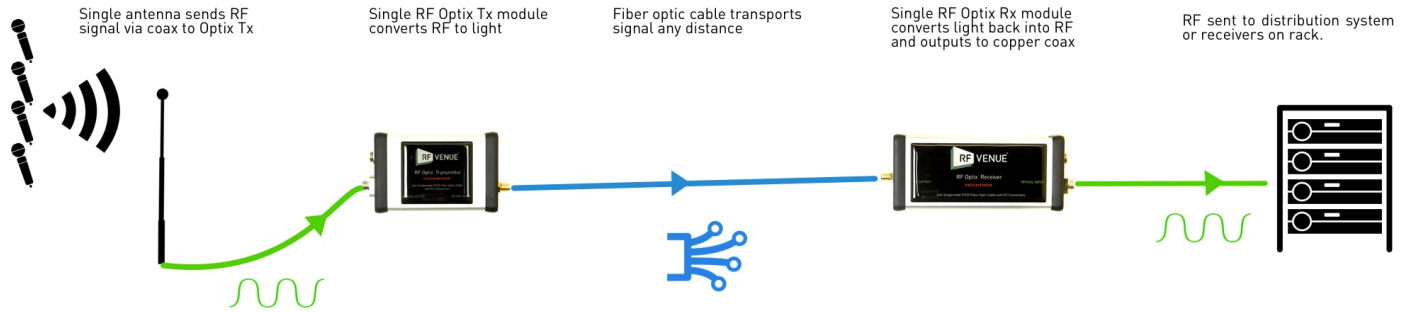
Operating frequency	100–1000 MHz
VSWR avg.....	< 2.5:1
Impedance (nom).....	50Ω
Max RF input power	< 0 dBm / 1 mW
DC operating voltage.....	7–12 V
Power supply voltage	9VDC
Tx Module Power Draw.....	~130 mA @ 9VDC
Rx Module Power Draw.....	~10 mA @ 9VDC
Optical Tx wavelength	1310 nm
Optical Rx wavelength.....	1310 nm
Optical output power	1 mW
Recommended dynamic range.....	60 dB
Input noise floor.....	< -90 dB

Physical

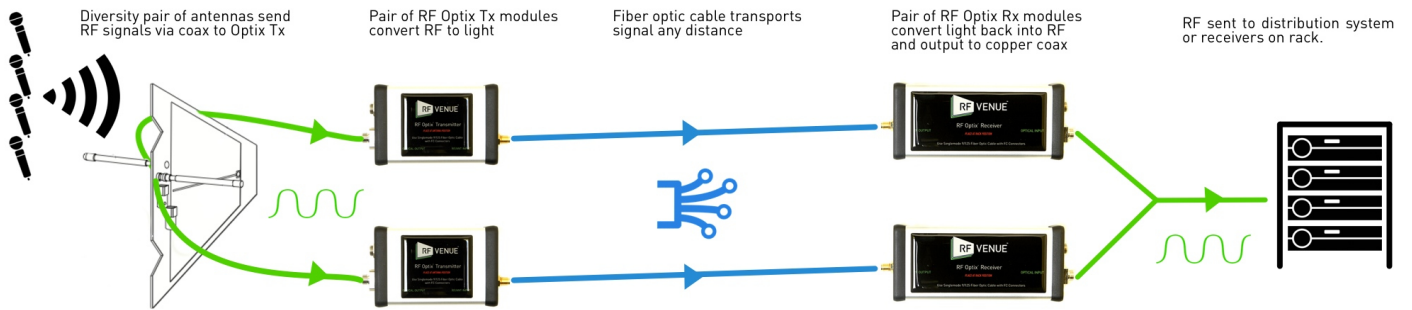
Dimensions (both modules).....	160 mm X 81 mm X 47 mm
Tx weight	100 g
Rx weight.....	130 g
Operating temperature	-25C–75C
RF Connectors.....	BNC female
Optical connectors	ST/UPC

Distribution Diagram

SINGLE CHANNEL



DIVERSITY (2) CHANNEL



Using the RF Optix with active devices and transmitters

RF Optix can be used with active devices, like in-ear monitor transmitters and IFBs, when used with the correct accessories.

The maximum input power of the transmitter module is 0 dBm/1 mW. Any direct coaxial connection between a radio transmitter and this module will exceed the dynamic range of the system.

To use active devices, the input must be attenuated.

As a rough guide, use the table to the right to select the appropriate attenuator required for your application.

The power level on the output of the receive module will be no more than 1mW/0dBm. In-line re-amplification may be required to return signal to the level it was prior to attenuation.

Input Power	Attenuation Required	Mini-Circuit SKU	Connection Type
10 mW	10 dB	VAT-10+	SMA>SMA
30 mW	15 dB	VAT-15+	SMA>SMA
50 mW	17 dB	VAT-20+	SMA>SMA
100 mW	20 dB	VAT-20+	SMA>SMA
250 mW	24 dB	VAT-30+	SMA>SMA