



ORX18U-201 UPSTREAM PHASE-LOCK RECEIVER

- ◆ **Low-Noise, Phase-Locked Receiver for upstream DOCSIS signals**
- ◆ **No Need for Waveguide, Connects Directly to Antenna**
- ◆ **Coherent, Pilot-Tone locked operation and Pilot-Tone controlled AGC**

PRODUCT APPLICATION:

The ORX18U-201 Receiver provides for the reception of upstream data as part of a wireless return path, enabling cable operators to offer the same DOCSIS-compatible, high-speed internet connection to subscribers served through systems with wireless AML links as those served exclusively by HFC. The ORX18U-201 Receiver is designed for operation in conjunction with the ITX18U and OTX18U series transmitters.

The receiver delivers DOCSIS-compatible signals in the 5 to 42 MHz frequency range with either QPSK or 16-QAM modulation.

The receiver features a two-piece design. A small downconverter unit is normally attached directly to the antenna feed at the back of the antenna, while the VHF unit is placed at the base of the tower or indoors. The two units are interconnected by

standard cable. Other mounting configurations are also possible.

Diagnostic and status monitoring can be performed at the VHF unit, or remotely via the VHF unit's monitor interface connector.

The receiver is phase-locked to the transmitter by a low phase noise CW pilot tone. Alternatively, the receiver can also be phase-locked to the existing Group C AML transmitter at the headend.

AGC (Automatic Gain Control) is also implemented via the Pilot-Tone from the transmitter.

The 5/8-24 receiver output port delivers the 5 to 42 MHz output signals directly to the output cable and can be powered from the 60 VAC power feeding the coaxial cable plant.

ORX18U-201

ORX18U-201 Upstream Receiver	
Input Signal Frequency:	18,198.21 to 18,235.21 MHz
RF Pilot Tone Input:	18,267.167 MHz
Noise Figure:	4.5 dB
Output Signal Frequency:	5.0 to 42.0 MHz
External Frequency Reference:	73.956140 MHz
Maximum Gain ² :	45 dB
AGC Dynamic Range:	15 dB
Frequency Response:	±1 dB
Nominal Output Level:	26 dBmV
Frequency Stability:	0.0005 %
Input Connector:	WR-42 Waveguide Cover Flange
Output Connector:	5/8-24 Cable Entry
Temperature Range:	-40° to 130° F (-40° to 55°)
Humidity:	100 % max.
Primary Power:	60 VAC, 60 Hz (other options available)
Power Consumption:	90 VA RMS
Weight: Downconverter Unit:	6.5 lbs (3 kg)
Sub-low Unit:	16.5 lbs (7.5 kg)
Dimensions: Downconverter Unit:	7" H x 10" W x 5" D (18 x 25.4 x 12.7 cm)
Sub-low Unit:	9" H x 15" W x 7" D (23 x 38 x 18 cm)

¹ Specifications subject to change without prior notice.

² Actual gain is adjustable and can be automatically controlled by pilot-tone AGC.