

Outdoor MMDS Transmitter

Models: PmP-Tx-50-2527-O-B-1

PmP-Tx-50-2527-O-B-2

PmP-Tx-100-2527-O-B-1

PmP-Tx-100-2527-O-B-2

Product Features

- *Weatherproof outdoor thermostatically controlled design*
- *Full 2500 MHz to 2700 MHz capability*
- *Automatic output level control*
- *222 MHz to 422 MHz IF input*
- *Local or optional remote monitoring and control*
- *Compatible with all current analog and digital modulation schemes*
- *Optional transmitter redundancy configurations*



Product Description

The 50 Watt and 100 Watt outdoor broadband transmitters are intended for use in Multi-Channel Multi-Point Distribution System (MMDS). They are capable of transmitting between one and thirty-one 6 MHz analog or digital channels in the 2.5 GHz to 2.7 GHz frequency range.

These broadband transmitters can provide cost-effective, omni-directional or sectorized coverage for small to medium size markets. The transmitters are compatible with all current modulation schemes and are transparent to all popular encoding systems. The transmitted signals can be received using standard customer premises downconverter and decoding equipment.

The transmitters feature RF muting when the input IF signal is below the preset threshold. Thermal shutdown and overpower shutdown are automatic protection features incorporated in the Transmitter. The transmitter parameters can be controlled directly or remotely through an external monitoring unit.

The transmitter is housed in a corrosion resistant, weather-proof NEMA-style cabinet for outdoor pole mounting and it is designed with maximum reliability and versatility in mind. The hinged front panel provides easy access to internally mounted components for control and maintenance.

The temperature inside the enclosure is thermostatically controlled.

The outdoor MMDS transmitters are available in two AC power options: 220V – 50 Hz and 115V – 60 Hz.

Extended bandwidth and alternate frequency configurations are available. UBS can also supply monitoring software, control software, and hardware packages, all customized to meet specific requirements.

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Product Specifications (specifications are subject to change without notice)

Parameters

	Tx-50 / Tx-100
Output Power at 1 dB Gain Compression Point, single CW tone	50 Watts / 100 Watts
Output Frequency	2.5 GHz - 2.7 GHz
IF Input Level, ALC on	-20 dBm to -10 dBm
IF Input Frequency	222 MHz - 422 MHz
Frequency Stability	$\leq \pm 500$ Hz
SSB Phase Noise	≤ -110 dBc/ Hz @ 10 kHz offset
In-band Spurious Products	≤ -60 dBc
Harmonics	≤ -60 dBc
Hum and Noise	≤ -60 dBc
Group Delay	$\leq \pm 10$ ns

Analog Performance

Peak Sync Output Power, single channel	25 Watts / 50 Watts
Composite RF Output Power, CTB -55 dBc	2.5 Watts / 5 Watts
Signal to Noise Ratio, in 6 MHz channel	> 70 dB
Gain Flatness, in 200 MHz	± 0.5 dB
Noise Figure	≤ 10 dB

Digital Performance

Digital Average Output Power	5 Watts / 10 Watts
Spectral Regrowth at channel edge	< -40 dB
Frequency Response, in 6 MHz channel	$\leq \pm 0.2$ dB
RF Output Power stability, ALC on	$\leq \pm 0.3$ dB
Modulation Mode	QPSK, 64/256 QAM, COFDM, AM, FM

Digital Modulation

Error Vector Magnitude (EVM)	$\leq 2\%$
Signal to Noise	≥ 40 dB
Magnitude Linearity (AM-AM conversion)	$\leq \pm 0.125$ dB
Phase Linearity (AM-PM conversion)	$\leq \pm 0.75^\circ$

Connectors

IF Input Connector	F-type (female), 75 ohm
IF Monitoring Connector	F-type (female), 75 ohm Level: Typ. 25 dB below the IF input level
RF Output Connector	N-type (female), 50 ohm
RF Monitoring Connector	N-type (female), 50 ohm Level: Typ. 40 dB below the RF output level
Monitor Connector(optional)	26 pin connector, for optional indoor unit

Power Supply

Voltage	115 VAC or 220 VAC
Frequency	60 Hz or 50 Hz
Power Consumption	500 VA / 800 VA

Mechanical

Dimensions	660 x 510 x 280 mm (26" x 20" x 11")
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Environmental

Operating Temperature	-40°C to +40°C (-40°F to +104°F)
Relative Humidity	100%
Cooling	Natural convection