



## **ITX02-1000RD HIGH POWER REDUNDANT TRANSMITTER (1000 Watts)**

- **Broadband Transmitter with 31 Carrier Capability (200 Digital TV Programs)**
- **State-of-the-Art Linearization Technology**
- **Completely Redundant Transmitter: Redundant Drivers, Power Amplifiers and Power Supplies**
- **Built In Diagnostics**

### **PRODUCT APPLICATION:**

The ITX02-1000RD is a broadband MMDS transmitter with a channel capacity of 31 analog television channels or 150 digital channels (64QAM, 256QAM or OFDM modulation). The transmitter incorporates traditional Cable AML reliability and design features including advanced linearization techniques.

The ITX02-1000RD is designed to provide cost-effective coverage over a wide area. With an omnidirectional transmit antenna, it can cover an area of approximately 50 Kilometer radius when fully loaded with 31 channels. A larger area can be covered if the desired coverage is less than 360 degrees in azimuth.

The per channel output power depends on the channel loading. For a 12 channel load, the transmitter delivers a total of 4 Watts per channel with a C/CTB of 50 dB (measured with CW carriers), or approximately 7 Watts per channel (peak power).

The ITX02-1000RD features a redundant power amplifier assembly (four amplifiers in parallel) for increased reliability. It also features redundant drivers and power supplies.

To facilitate transmitter monitoring with a field strength meter or a TV monitor, the ITX02-1000RD includes signal monitoring at VHF frequencies. Transmitter diagnostic voltages can be monitored locally. An option allows the voltages to be monitored remotely by a serial port interface to a standard Windows-equipped PC.

The transmitter features a modular design, consisting of redundant drivers, redundant power amplifiers, and redundant power supplies for ease of service and maintenance.

# Product Specification<sup>1</sup>



<b>Transmitter</b>																									
Input Frequency <sup>2</sup> :	222 to 420 MHz																								
Nominal Input Level for 12 TV:	+20 dBmV (-29 dBm)																								
Output Frequency <sup>2</sup> :	2.5 to 2.7 GHz																								
Output Level for 50 dB C/CTB: (measured with CW carriers) <sup>3</sup>	<table border="1"> <thead> <tr> <th>Channels</th> <th>Average Power dBm/Channel</th> <th>Peak Power dBm/Channel</th> <th>C/N (dB)</th> </tr> </thead> <tbody> <tr> <td>9</td> <td>37.5</td> <td>40.0</td> <td>66.5</td> </tr> <tr> <td>12</td> <td>36.0</td> <td>38.5</td> <td>65.0</td> </tr> <tr> <td>18</td> <td>34.0</td> <td>36.5</td> <td>63.0</td> </tr> <tr> <td>24</td> <td>32.0</td> <td>34.5</td> <td>61.0</td> </tr> <tr> <td>30</td> <td>31.0</td> <td>33.5</td> <td>60.0</td> </tr> </tbody> </table>	Channels	Average Power dBm/Channel	Peak Power dBm/Channel	C/N (dB)	9	37.5	40.0	66.5	12	36.0	38.5	65.0	18	34.0	36.5	63.0	24	32.0	34.5	61.0	30	31.0	33.5	60.0
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Local Oscillator Frequency <sup>2</sup>	2278 MHz																								
Frequency Response	±1 dB																								
Frequency Stability	0.0005%																								
Input Return Loss:	15 dB																								
Input Connector:	Type "F"																								
Output Return Loss:	18 dB																								
Output Connector:	Type "N"																								
Temperature Range:	60° to 100°F (16° to 32°C)																								
Humidity:	95% max.																								
Primary Power:	120/240 VAC, 50/60Hz (per customer specification)																								
Power Consumption:	2700 VA RMS																								
Mounting:	Enclosed Equipment Rack																								
Weight:	450 lb. (205 kg)																								
Dimensions:	22" W x 84" H x 27" D (55.9cm W x 213.4cm H x 68.6cm D)																								

<sup>1</sup> Specifications subject to change without prior notice.

<sup>2</sup> Other frequencies available.

<sup>3</sup> The C/CTB with modulated carriers are approximately 6 dB better than with CW carriers.