

WIRELESS CPE TRANSCEIVERS FOR INTERNET DATA, VIDEO AND VOICE COMMUNICATION AT 3.5 GHZ

The Renaissance Wireless 3.5 GHz Transceiver, carries high-speed two-way data by providing up-stream and down-stream frequency translation between the IF and RF frequencies. The unit is DOCSIS modem compliant and is designed to accommodate other customer-specific frequency plans through simple component replacement. The Transceiver will deliver a RF output power of +25 dBm into a 50 ohm antenna load and an IF signal of -30 dBm into a 75 ohm connector.

The Transceiver is ideally suited to all Point-to-Point and Point-Multi-Point applications, including:

- Interactive Television
- High speed Internet access
- Voice over IP



THE LEONARDO III™

FEATURES

- High Data Transfer Rates
- TX and RX channels can be selected
- Up-Converter, Down-Converter use LO rejections filters
- Noise and spurious frequency reduction
- 16 QAM/QPSK (TX); 64 QAM (RX)
- Integrated monolithic high-gain antenna packaged solutions available
- Deploy wireless services in days vs. months

SPECIFICATION	TRANSMITTER	RECEIVER
RF range	3300 - 3700 MHz	3300 - 3700 MHz
IF range	5 - 55 MHz	410 - 430 MHz
ACTUAL TEST DATA		
RF as tested	3424-3444 MHz	3518-3552 MHz
IF as tested	36 - 52 MHz	420 MHz
Output Impedance	N type, 50 Ohms	F type, 75 Ohms
Return Loss	15 dB	15 dB
P1 dB	28 dBm	-20 dBm
Linear Gain	45 dB	35 dB
Channel Bandwidth as Tested *	6 MHz	6 MHz
Gain Flatness/Channel	<1 dB	<1 dB
Freq. Stability @-30 to +70 °C	+/-3.5 kHz	+/-3.5 kHz
Noise Figure	N/A	5.5 dB
Power Blanking	yes	N/A
Input Power	-25 to -30 dBm	-50 to -80 dBm
LO Phase Noise		
1 kHz	-80 dBc	-70 dBc
10 kHz	-85 dBc	-83 dBc
100 kHz	-114 dBc	-112 dBc
Spurious in-band	-55 dBc	-45 dBc
Harmonics, 3rd order	-60 dBc	
SYSTEM OPERATING REQUIREMENTS		
DC Bias	15 to 40 VDC	
Current	1 A @ 15 V	
Operating Temperature	-30 to +70 °C	
*Other Channel Bandwidths Available		