

**Part Number QV-2150 (Vertical) & QH-2150 (Horizontal)**  
**MDS Hub Sector Antenna**

Operating Frequency	2150 - 2162 MHz
Antenna Gain	14 dBi $\pm$ 1 dBi
Gain Flatness	$\pm$ .25 dB
Polarization Isolation	>23 dB
Maximum Side Lobe	-30 dB
3dB Beam Width	30°
Power Handling	50 Watts
Impedance	50 OHMS
VSWR	<-18 dB
Operating Temperature	-40° C to +70°
Output Connector	"N" Type Female
Mount w/Optional Tilt	3" O.D. Pipe
Operational Windload	75 MPH
Survivable Windload	125 MPH
Antenna Housing Material	Fiberglass Radome
Dimensions	3.5 x 16 1/8 x 16 1/8 inches
Weight	6.5 Pounds 10 Pounds With Mounting Hardware

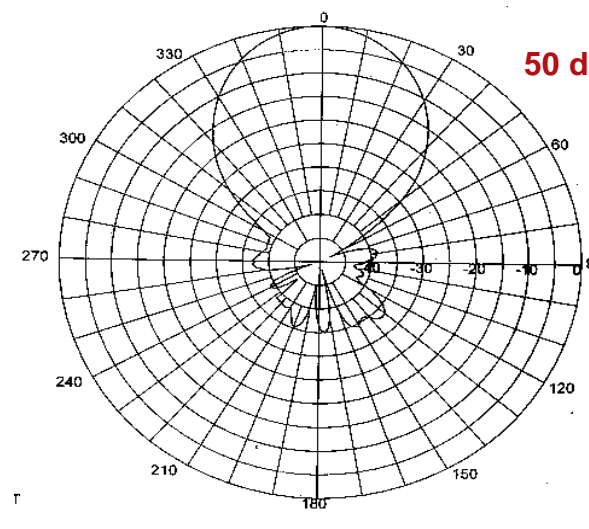


**ULTRAFLEX® SYSTEM**

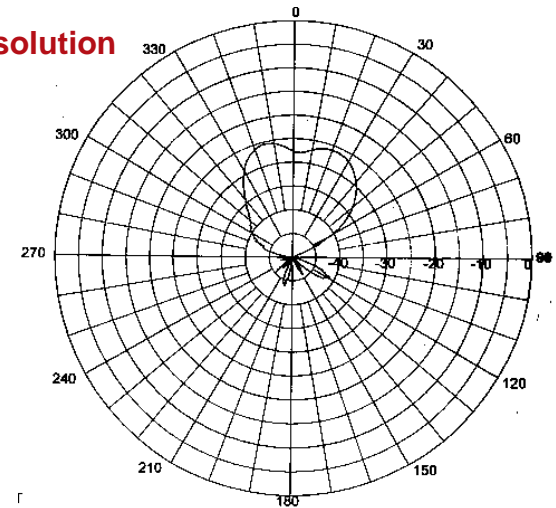
**Wireless Two-Way**

**FCC Certified**

*High Speed Data, Voice and Video Communications*



**Radiation Pattern**



**Cross Pole Rejection**



- **$\pm$ 500 Hz Stability**
- **Superior Throughput (FTP)**
- **Field Proven Performance**
- **5 Watts EIRP Typical**
- **Low Noise Figure**
- **Minimal Bit Error Rate**
- **Optimal Spectral Usage**

- **Optimal data throughput rates due to ultra efficient power amplifier design.**
- **GPS frequency locked oscillator eliminates drift over time and temp allowing implementation of scalable architectures and full system synchronization.**
- **Interdigital filtering/diplexing provides maximum isolation while yielding the industries lowest noise figure.**
- **Enhanced system capacity through frequency reuse with a Conifer engineered directional Hub Antenna.**

**Part Number DS-1000**  
**Mount**

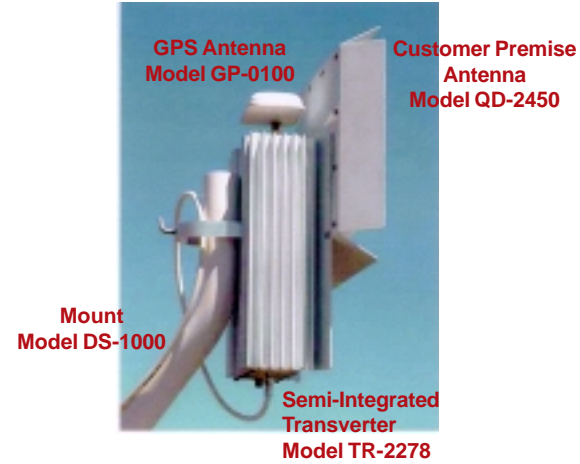
Material	Galvanized Steel
Finish	White Powder Coat
Mount Material	Steel
Finish	JS-600 Zinc

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**At ANDREW CORPORATION**  
**Vision & Ideas Become Tomorrow's Solutions**

**ULTRAFLEX® SYSTEM  
Model UX-2000**



Andrew's development in bidirectional MMDS hardware dates back to 1994. In 1995, two U.S. Patents were granted in recognition of these efforts. Later that same year, digital MMDS transmissions became a reality both with digital TV and Internet access utilizing a Telco return. The regulatory environment then turned favorable with telecom deregulation in 1996 and flexible use of MMDS spectrum in 1998. These Acts, along with the rampant growth of Internet based activities, fueled accelerated development of 2-Way MMDS. The result is the Ultraflex® System which integrates a 16dBi antenna with GPS transverter, power supply, and mounting hardware. These components can be implemented into system architectures featuring the highly directive hub site sector antenna.

**UX-2000 SPECIFICATIONS\***

**Part Number PS-0200 Power Supply**

Downstream Level Adjust 222-408 MHz	0-20 dB
Flatness 222 - 408 MHz	±1 dB
Loss - 27 - 39 MHz	1 dB ±1dB
Flatness 27 - 39 MHz	±0.5 dB
Supply Voltage	18 VDC
Current	1 Amp
Input Voltage Range	90 - 130 VAC
Lightning/Surge Suppression @ Input/Output	Voltages >2000V @ 10nx
Finish	Beige Powder Coat
UL	Certified

**Part Number QD-2450 Antenna**

	<b>Horizontal Polarity</b>	<b>Vertical Polarity</b>
Operating Frequency	2150-2686 MHz	2150-2686 MHz
Antenna Gain	15.0 dBi ±1 dBi	15.0 dBi ±1 dBi
Gain Flatness	±.25 dB	±.25 dB
Polarization Isolation	>35 dB	>25 dB
Maximum Side Lobes	22 dB	17.5 dB
3dB Beam Width	<40° 2150-2162 MHz	<35° 2150-2162 MHz
	<30° 2500-2686 MHz	<30° 2500-2686 MHz
10dB Beam Width	<40° 2150-2162 MHz	<35° 2150-2162 MHz
	<30° 2500-2686 MHz	<30° 2500-2686 MHz
Impedance	50 OHMS	
VSWR	<1.4:1 -16dB	
Operating Temperature	-40° C to +70°	
Output Connector	"N" Type Male	
Connection to Transverters	"N" Type Female - Weather Sealed	
Mounting	Quick Mount to 1-1.5" OD Pipe	
Operational Windload	75 MPH	
Survivable Windload	125 MPH	
Antenna Housing Material	ABS	
Antenna Reflector Material	Aluminum With White Powder Coat Finish	
Mounting Hardware Material	Aluminum With White Powder Coat Finish	
Dimensions	7 1/4" x 10 3/4"	

**Part Number TR-2278 Transverter Transmit**

Input Frequency	27-39 MHz
Output Frequency	2162 - 2150 MHz - Inverted
Gain	20 ±2 dB
Gain Flatness	±0.5 dB
	±.25 dB / 6 MHz Band
Group Delay	<10 ns / 6 MHz Channel
6 MHz Channel Power	+27 dBm
Maximum Input Power	+58 dBm
IP3	+38 dBm

**Downconverter**

Input Frequency	2500 - 2686 MHz
Output Frequency	222 - 408 MHz
Gain	32 ±2 dB
Gain Flatness	±2 dB
	±.25 dB / 6 MHz Band
Noise Figure	4.5 dB
Group Delay	<10 ns / 6 MHz Channel

**Rejection Specifications Pre-LNA**

1870-2056 MHz (Image)	>95 dB Pre-LNA
1960-1990 MHz (PCS Tower Tx)	>95 dB Pre-LNA
2305-2360 MHz (WCS)	>60 dB Pre-LNA
2150-2162 MHz (Upstream Data)	>70 dB Pre-LNA
2400-2483 MHz (ISM/WLAN/Microwave Ovens)	>30 dB Pre-LNA
2705 MHz (Radar)	>25 dB Pre-LNA
2710 MHz (Radar)	>35 dB Pre-LNA
2715 Mhz (Radar)	>40 dB Pre-LNA
2720 MHz (Radar)	>45 dB Pre-LNA
2725 MHz (Radar)	>45 dB Pre-LNA
2735 MHz (Radar)	>45 dB Pre-LNA
2750 MHz & Above	>45 dB Pre-LNA

**Combined RF & IF Filtering @ IF Input Frequency To Tx**

27-82 MHz (WCS)	>100 dB Overall
122-205 MHz (ISM/WLAN)	>35 dB Overall
427 MHz (2705 MHz)	>25 dB Overall
432 MHz (2710 MHz)	>35 dB Overall
437 MHz (2715 MHz)	>40 dB Overall
442 MHz (2720 MHz)	>50 dB Overall
447 MHz (2725 MHz)	>50 dB Overall
457 MHz (2735 MHz)	>50 dB Overall
472 MHz (2750 MHz) & Above	>50 dB Overall

**Common LO**

Frequency	2278 MHz
Set Point Accuracy	±256 Hz
Frequency Stability	±500 Hz
Aging Spec - GPS Lock	0.0 ppm/Hz/year
Phase Noise	65 dBc/Hz @ 100 Hz
	85 dBc/Hz @ 1 KHz
	90 dBc/Hz @ 10 KHz
	105 dBc/Hz @ 100 KHz
	120 dBc/Hz @ 1 MHz

RF Connector	Type "N" Female
RF Impedance	50 OHMS
IF Connector	Type "F" Female
IF Impedance	75 OHMS
Temperature Range	-40° C to +70° C
Housing Material	Aluminum
Housing Finish	White Power Coat
Weight Including QD-2450	6.6 Pounds

\*Specifications subject to change without notice.