



Orion 2300

The Orion 2300 Series from Wireless Interactive is a cost-effective point-to-point / point-to-multipoint solution for wireless backhaul and "last mile" applications.

Designed for the 2.3 GHz range, the Orion 2300 Series has the ability to provide high data throughput in the smallest amount of channel bandwidth, while implementing OFDM technology.

### Effective Spectrum Utility

Orion 2300 Series uses advanced technology to allow for the narrowing of RF channels. Up to 13 non-overlapping channels can be created using the radio's narrowest channel setting.

### Flexibility

The Orion 2300 Series allows for the connection of an external antenna, whenever necessary, for a given application or environment.

### Manageability

The Orion 2300 Series is easily manageable from a web browser or the included Windows-based utility, allowing for administration either locally or remotely. In addition, built-in SNMP support lets the operator expand the network with ease.

### Cost Effective

Best performance and lowest cost product at the 2.3 GHz frequency.

### Reliability

Building on a history of designing reliability into a product with its successful unlicensed radios, Wireless Interactive continues the tradition of robust design and stability with the Orion family, creating one of the most reliable products on the market.

### Security

WEP encryption and MAC filtering provide the highest security mechanisms to prevent intrusion and malicious attacks.

### Built-in Antenna Alignment Tool

The new RedFire Max sports a built-in audio jack. Simply plug in a pair of headphones and use the audible tone to help you find the perfect angle for your antenna. It couldn't be easier.

### WEIGHT

1.8 kg (3.96 lbs)	Orion 2300
2.3 kg (5.07 lbs)	Orion 2300IA

### PHYSICAL DIMENSIONS (W x L x H)

250 x 259 x 75 mm	Orion 2300
9.9 x 10.2 x 3.0 in	

296 x 331 x 105 mm	Orion 2300IA
11.7 x 13.0 x 4.1 in	

This product operates on a frequency that requires a license in the United States. This product is intended for international use only.

### RADIO

Frequency	2302-2482 MHz
Antenna Gain (2300IA only)	18 dBi
Channel Bandwidth	5, 10 or 20MHz
Output Power	21 dBm @ QAM-64/QAM-16 22 dBm @ QPSK/BPSK (+/- 1.5 dBm)
Receive Sensitivity (BER 10 <sup>-6</sup> ) / Output Power	<b>See second page for Output Power Chart</b>
Effective Data Bandwidth	Up to 5.5 Mbps throughput using a 5 MHz channel Up to 11 Mbps throughput using a 10 MHz channel Up to 22 Mbps throughput using a 20 MHz channel
Frequency Stability	+/- 10 ppm
Modulation	QAM-64, QAM-16, BPSK, or QPSK

### INTERFACES

RF (antenna) connector	N-type (Jack)
Ethernet	IEEE 802.3(10Base-T) / IEEE 802.3u(100Base-Tx)

### MANAGEABILITY

Setup	Web-based
SNMP agents	MIB II
Protocol	TCP/IP, IPX/SPX, NetBEUI
Operating System	Windows 98, 2000, NT, XP
Network Architecture	PTP / PTMP

### SECURITY

Data Encryption	64/128 bits WEP encryption
Authorization	MAC Address Access Filter

### POWER INDICATORS

Power Source	24V Power Over Ethernet (POE)
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### ENVIRONMENT

Operating Temperature	-20 C ~ 55 C
Storage Temperature	-30 C ~ 70 C
Humidity	95% non-condensing

### WARRANTY

1 year
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## OUTPUT POWER CHART

20 MHz CHANNEL BANDWIDTH				OUTPUT POWER				
Modulation	Sensitivity (BER 1E10-6)	Data Rate	Effective Data Rate	Full	Half	Quarter	Eighth	Minimum
64QAM	-73 dBm	54 Mbps	22 Mbps	21 dBm	18 dBm	15 dBm	12 dBm	8 dBm
64QAM	-75 dBm	48 Mbps	20 Mbps	21 dBm	18 dBm	15 dBm	12 dBm	8 dBm
16QAM	-79 dBm	36 Mbps	18 Mbps	21 dBm	18 dBm	15 dBm	12 dBm	8 dBm
16QAM	-83 dBm	24 Mbps	12 Mbps	21 dBm	18 dBm	15 dBm	12 dBm	8 dBm
BPSK	-89 dBm	18 Mbps	9 Mbps	22 dBm	19 dBm	16 dBm	13 dBm	8 dBm
BPSK	-92 dBm	12 Mbps	6 Mbps	22 dBm	19 dBm	16 dBm	13 dBm	8 dBm
QPSK	-95 dBm	9 Mbps	4.5 Mbps	22 dBm	19 dBm	16 dBm	13 dBm	8 dBm
QPSK	-98 dBm	6 Mbps	3 Mbps	22 dBm	19 dBm	16 dBm	13 dBm	8 dBm

10 MHz CHANNEL BANDWIDTH				OUTPUT POWER				
Modulation	Sensitivity (BER 1E10-6)	Data Rate	Effective Data Rate	Full	Half	Quarter	Eighth	Minimum
64QAM	-73 dBm	54 Mbps	11 Mbps	21 dBm	18 dBm	15 dBm	12 dBm	8 dBm
64QAM	-75 dBm	48 Mbps	10 Mbps	21 dBm	18 dBm	15 dBm	12 dBm	8 dBm
16QAM	-79 dBm	36 Mbps	9 Mbps	21 dBm	18 dBm	15 dBm	12 dBm	8 dBm
16QAM	-83 dBm	24 Mbps	6 Mbps	21 dBm	18 dBm	15 dBm	12 dBm	8 dBm
BPSK	-89 dBm	18 Mbps	4.5 Mbps	22 dBm	19 dBm	16 dBm	13 dBm	8 dBm
BPSK	-92 dBm	12 Mbps	3 Mbps	22 dBm	19 dBm	16 dBm	13 dBm	8 dBm
QPSK	-95 dBm	9 Mbps	2.3 Mbps	22 dBm	19 dBm	16 dBm	13 dBm	8 dBm
QPSK	-98 dBm	6 Mbps	1.5 Mbps	22 dBm	19 dBm	16 dBm	13 dBm	8 dBm

5 MHz CHANNEL BANDWIDTH				OUTPUT POWER				
Modulation	Sensitivity (BER 1E10-6)	Data Rate	Effective Data Rate	Full	Half	Quarter	Eighth	Minimum
64QAM	-73 dBm	54 Mbps	5.5 Mbps	21 dBm	18 dBm	15 dBm	12 dBm	8 dBm
64QAM	-75 dBm	48 Mbps	5.0 Mbps	21 dBm	18 dBm	15 dBm	12 dBm	8 dBm
16QAM	-79 dBm	36 Mbps	4.5 Mbps	21 dBm	18 dBm	15 dBm	12 dBm	8 dBm
16QAM	-83 dBm	24 Mbps	3.0 Mbps	21 dBm	18 dBm	15 dBm	12 dBm	8 dBm
BPSK	-89 dBm	18 Mbps	2.3 Mbps	22 dBm	19 dBm	16 dBm	13 dBm	8 dBm
BPSK	-92 dBm	12 Mbps	1.5 Mbps	22 dBm	19 dBm	16 dBm	13 dBm	8 dBm
QPSK	-95 dBm	9 Mbps	1.2 Mbps	22 dBm	19 dBm	16 dBm	13 dBm	8 dBm
QPSK	-98 dBm	6 Mbps	0.8 Mbps	22 dBm	19 dBm	16 dBm	13 dBm	8 dBm