

# Wireless

## 500Mbps -5Ghz Point to Point Wireless



## XG Series Wireless System

4.9 to 6.4Ghz Wireless System



The InfiLINK XG from Case Communications is the most recent addition to our wireless portfolio. It is a record breaking innovative Point-to-Point solution in the sub 7Ghz frequency band, boasting the best-in-breed spectral efficiency, higher-than-ever-before processing power and distance vs. performance ratio. Reaching a peak of 500Mbps of net throughput in 40Mhz of spectrum, and more than 130Mbps in just 10Mhz, it is the fastest Point-to-Point system available in the marketplace today

Available with a wide range of integrated antennas, as well as a connectorised version for use with 3<sup>rd</sup> party external antennas, and coupled with improved transmit power and sensitivity, the XG family will fit perfectly into a large array of applications such as backhaul in the telecom market, education, oil and gas, smart cities, video surveillance and public safety. It was designed to meet the exact requirements of the most demanding customers, most complex projects and challenging environments.

### APPLICATIONS

- HIGH CAPACITY SHORT, - MEDIUM AND LONG HAULS FOR 3G/4G OPERATORS AND SERVICE PROVIDERS
- FULL-FLEDGED FIBRE / FSO /MILLIMETRE WAVE REPLACEMENT, EXTENSION OR BACK UP
- LOS AND NLOS MACRO- AND SMALL-CELL BACKHAUL
- VIDEO SURVEILLANCE OVER MEDIUM AND LONG DISTANCES
- BUILDING TO BUILDING CONNECTIVITY
- RURAL / SUBURBAN LAST MILE ACCESS

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### XG Fact Sheet



#### HIGHEST SPECTRAL EFFICIENCY

Best in Breed up to 13Bps / Hz  
Real throughput up to 130Mbps in just 10MHz of spectrum  
Innovative radio technology for NLOS and reflected signal conditions.

#### SUPERIOR PERFORMANCE AND PROCESSING POWER

Unmatched 1 million packets per second processing power  
Full capacity at any packet sizes and for any type of traffic

#### UNMATCHED CAPACITY

Net performance of 250Mbps in 20Mhz and 500Mbps in 40 Mhz

#### LONGEST REACH

Distances in excess of 30km with integrated antennas, and more than 100km with external high gain antennas.  
High power transmitter and good performance in bad conditions even at highest modulations, ensuring maximal link budget  
Unprecedented system gain of 178db even with integrated antennas

#### SEEMLESS INTEGRATION

Extended QoS Support  
Two Gigabit Ethernet Ports  
SFP Optical Port  
IEEE 1588  
Full-Fledged L2 switching

#### FLEXIBILIY

Available in connectorised configuration and with integrated 23 to 28dBi flat panel, dual-polarity antennas.  
Easy-to-align and easy-to-install  
Fully configurable uplink / downlink ratio  
Very small footprint

#### ULTRA-LOW LATENCY

Ultra-low consistent 0.5ms latency at any distance  
Configurable frame size

#### RELIABILITY AND ROBUSTNESS

Rugged aluminium cast IP66 and IP67 enclosure  
Extended temperature range of -40°C to +60°C, with 100% humidity  
No Link degradation even in harsh weather conditions  
Built in surge protection

#### IMPROVED NOISE IMMUNITY / INTERFERENCE AVOIDANCE

On site synchronisation for best spectrum utilisation  
-40db adjacent channel separation

FACT SHEET

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### XG TECHNICAL SPECIFICATIONS

PERFORMANCE	
Throughput	Up to 500Mbps, net aggregate
Packet performance	More than 1 million packets per second (Line rate)
Latency	0.5 – 3ms one way, typical (depending on the air frame period)
RADIO TECHNOLOGY	
Modulation	Cyclic single carrier
Cyclic prefix	1/8 and 1/16 (for 20 and 40Mhz channels width)
Modulation schemes	Eleven modulation / coding schemes from QPSK to QAM 256 as well as QAM 1024
Frequency range	4.9 ~ 6Ghz, 6.0 ~ 6.425Ghz, other frequency bands supported in future releases
Channel widths	10, 20 and 40Mhz
Spectral efficiency	Up to 13Bps / Hz
Transmit power	Up to 27dBm (average, per Tx Chain) @QPSK to QAM 64 Up to 26dBm @QAM 256 up to 18dBm @ QAM 1024
Receiver sensitivity	Down to -95dBm @ 10MHz, QPSK (4.9 ~ 6.0Ghz) Down to -93dBm @ 10MHz QPSK (6.0 – 6.425 GHz)
System gain	Up to 178dB (based on a 28dbi integrated antenna in 10MHz channel width.
Duplex Scheme	TDD, Hybrid-FDD
Antenna	-Integrated: dual polarisation flat panel 23,24,26,27,28dBi (selected at time of ordering and model dependant) -Connectorised: 2 x N-Type (Female) connectors for external dual polarisation antenna.
Maximal range	In excess of 100km in clear line –of-sight conditions, with use of high gain external antennas
AIR PROTOCOL	
Air Frame	Configurable 20 to 10ms
Uplink / downlink ration	Configurable from 50:50 to 90:10 in any direction
Automatic modulation control	Fully Supported
Automatic Ranging	Fully Supported
TDD synchronisation	Fully supported, via built-in GLONASS / GPS receiver or IEEE 1588 PTP
WIRED INTEFRACES	
Ethernet	2 x 10/100/1000-BaseT copper ports, RJ45 GE0 – Data + PoE Input GE1 – Data only SFP Port: Various 3 <sup>rd</sup> party single and multi-mode fibre modules supported Either of the ports can be configured independently for management, user data or hybrid mode
PoE	802.3at of proprietary ‘passive’ PoE
Cable length	Copper Ethernet cable up to 100m between outdoor unit and the network Fibre length dependant on the SFP used
QOS AND NETWORK PROTOCOLS	
QoS	4 Queues
Prioritisation	‘Strict’ and ‘weighted Round Robin’ modes
Packet Classification	802.1p
Network Protocols	VLAN, IGMP, STP
Timing Transport	IEEE 1588 v2, Transparent clock

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### MANAGEMENT AND INSTALLATION

LED Indication	Power Status, Wireless and wired link status, RSSI indication, TDD sync status
Management Protocols	HTTP, telnet, SNMP v1/2c/3 (MIB-II and proprietary MIBs)
Web Gui Tools	Antenna alignment tool, Spectrum Analyser

### PHYSICAL

Weight and dimensions	Please refer to the model matrix below
Operating temperature range	-40°C to +60°C
Dust & Water protection	IP66, IP67
Wind load	160kph operational; 200kph survival
Power Supply	IDU-BS-G: 90-240vac, 50/60Hz, 0°C to +40°C, 125 x 72x 38mm. 0.3Kg
Input DC Range	± 43 to ±56vdc
Consumption	Up to a maximum of 30 W






### ACCESSORIES

Spare Mounting Brackets	MONT-KIT-85 or MONT-KIT-85s
DC Injector	AUX-ODU-INJ-G (Indoor / outdoor installation)
External Lightning protection	AUX-ODU-LPU-G


### COMPLIANCE

Safety	EN 60950-1: 2006, UL 60950-1, 2 <sup>nd</sup> ed
Radio	EN 301 893 v1.8.1, EN 302 502, v1.2.1, FCC part 15.247
EMC	ETSI EN 301 489-1, ETSI 301 489-17, FCC Part 15 Class B
RoHS	Directive 2002 / 95 / EC

### MODEL RANGE – Integrated Antenna Models

Part Number	Frequency	Antenna	Weight & Size	
Xm/5X.500.2x500.2x23	4900-6000Mhz	Flat-Panel 23dBi 10x 10 Degrees	305x305x67mm Weight 2.4Kg	
Xm/6X.500.2x500.2x24	6000-6425 Mhz	Flat panel 24 dBi 9 x9 Degrees		
Xm/5X.500.2x500.2x26	4900-6000 Mhz	Flat-panel 26dBi 8x8 Degrees	371 x 371 x 89mm Weight 3.3Kg	
Xm/5X.500.2x500.2x28	4900-6000 Mhz	Flat-Panel 28dBi 5 x 5 Degrees	600x600x74mm Weight 6.3Kg	
Xm/6X.500.2x500.2x27	6000-6425 Mhz	Flat Panel, 27dBi 5 x 5 Degrees		

### External Antenna Models

Part Number	Frequency	Antenna Connection	
Um/5X.500.2x500	4900-6000Mhz	2 x N-Type Female	
Um/6X.500.2x500	6000-6425 Mhz	2 x N-Type Female	