



+/- 2.5 MHz



## Radio Bridge & Router

MAKSAT MMS balances enterprise-scale security, management and Quality of Service features with high performance.

### Features Benefits

The MAKSAT MMS Radio Bridge & Router is a any Point to Multipoint and Multipoint-to Multipoint OFDM Radio Bridge Equipment for High Bandwidth connectivity of up to 30Mbps in 2.3-2.7GHz band. It has a range of up to 100kms.

### HOTSPOT

Built-in HOTSPOT and SPUTNIK AGENT, plus PPPOE server/client

### *Built-in Router Specifications:*

#### Basic Network Platform

TCP/IP protocol suite

#### Firewall and NAT

Packet filtering, source and destination NAT, source MAC addresses, ports, protocols, protocol options, interfaces.

#### Routing

RIP 1 / 2, OSPF v2, OLSRD, BGP v4, equal cost multi-path routing, Policy based routing, firewall marked packet routing

#### Bridging

Spanning tree protocol, multiple bridge interfaces, bridge firewall

#### Bandwidth Management

Per IP / protocol / subnet / port, CBQ, RED, SFQ, byte limited queue, packet limited queue

#### PPPoE

Access Concentrator (server)

#### Tunnels

PPTP, EoIP (Ethernet over IP)

**OPEN VPN** support for super secrecy

**Multicasting** support (beta available)

**VLAN**, Virtual LAN support

**NTP** Network Time Protocol server and client



### QOS

Full Scale QOS with traffic shaping and user friendly Presets .

### DNS client/Server

Name resolving for local use, Dynamic DNS Client

### Monitoring/Accounting

IP traffic accounting, firewall actions logging

### SNMPV2

read only access

### Administration

#### General

History, undo / redo /display, multiple administrator connections real time updates in, real time Configuration

#### Web/GUI

Uses HTTP/ HTTPS for remote administration, graphing of traffic, statistics, and resource

monitoring multiple internal configuration windows Terminal Console standard keyboard and monitor connection, scripting import /export of configuration scripts to screen / file command history, hierarchical command structure monitoring of interface status and traffic, context specific hints.

#### Telnet/ SSH

All terminal console features, SSH option, cut/paste of configuration

#### FTP

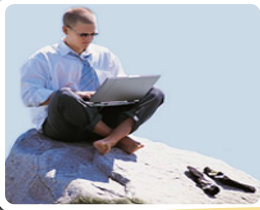
For uploading upgrade packages, uploading and downloading scripts, Hot Spot authorization.

#### Upgrading

Remote Firmware Upgrade

## Features

- Pre WiMAX / OFDM ...5Mhz & 10Mhz
- Any Point to Any point and Multipoint to Multipoint.
- Transmit Power 0-400 Milli Watts
  - IP Routing
  - OLSR & OSPF
  - Ultra Secure Wireless 256 bit AES, WPA and WPA2 encryption, Security, VPN and firewall
- GUI, Telnet, SNMP Remote Management
- QOS with Traffic Shaping
- 3 level Watch Dog Timer
- Sensitivity of (-)105 XR Rate (Best in the Industry)
- Firewall with packet filter & NAT
  - Up to 76 non overlapping Channels in 2.3 to 2.7GHz (14non overlapping in ISM Band)
  - Transmit Power Control
- Dynamic Frequency Select



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## Radio Technical Specifications

Frequency Range	2.3 -2.7 GHz	Bandwidth Management	Yes	
Number of Channels	76 non overlapping	Router	Yes	
Channel Width	(+/-) 2.5 Mhz, 5 Mhz, 10 Mhz	Monitor/Control	Through Ethernet port using http/Telnet	
Pre WiMax	Yes, 5Mhz & 10Mhz	Packet Format	IEEE 802.3 and Ethernet II	
Receive Sensitivity (1e-6 BER)	1 Mbps -98 dBm	Network Connection	10 /100 Base T	
	2 Mbps -96 dBm		RJ Female Ethernet Connection	
	6 Mbps -94 dBm	Bridge Functionality	Intelligent Local Packet Filtering (self-learning), Node by node user configurable data rates (CIR and MBR)	
	9 Mbps -93 dBm		Network Topologies	Any point-to Multipoint
	11 Mbps -92 dBm			Multipoint-to Multipoint
	12 Mbps -91 dBm		Repeater Mode	Built-in Mode
	18 Mbps -90 dBm		RF Collision Management	Combined TDD and FEC
	24 Mbps -86 dBm		Security	256 bit AES, WPA and WPA2 encryption, Security, VPN and firewall
	36 Mbps -83 dBm		Data Security Password	Network attachment is password protected
48 Mbps -77 dBm	Remote Management	http ,Telnet		
54 Mbps -74 dBm	Management Port	Ethernet using http, Telnet		
Max Receive Level	0 dbm (no damage)	SNMP	MIB2	
Transmit Power	0-400 milli watts	Management Port Functionality	Full configuration/management from any station through a command line	
Processing Gain	> 10 dB	Software Management	File download over RF for firmware updates	
Antenna Connector	N Female	Power Adapter Requirement	110 VAC or 220 VAC , 7V - 18V DC	
Option of Additional RF Interface	Yes, up to 2	Power Consumption	Less than 20W (fully loaded)	
Option of Additional Ethernet 10/100 Interface	Yes, up to 3	Height x Width x Depth Weight	7" x 11" x 5" 3Kg	
Wireless Data Rate	54 Mbps	Operational Temperature	(-)40C to (+)80C	
Super fast Mode upto108 Mbps	Yes	Humidity	Humidity 0-95% non condensing, Outdoor weatherproof enclosure	
RF Modulation Scheme	QAM64, QAM16, QPSK, BPSK, CCK (OFDM, DSSS)			
Duplex Format	TDD, FDD			
Certification	FCC,ISO 9001-2000			
Range	Up to 100 Km			
Output Power	0-27dBm			
Software controllable	Yes (Steps of 1 dB)			
Extended Range (XR)	Best in the industry (-) 105 dBm			
Watch Dog Timer	Software/Hardware/Temperature			



# OFDM MAKSAT WINDMAX HP

High Power



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### Features Benefits

The MAKSAT MMS Radio Bridge & Router is a any Point to Multipoint and Multipoint-to Multipoint OFDM Radio Bridge Equipment for High Bandwidth connectivity of up to 70Mbps in 5.7 GHz band. It has a range of up to 100kms.

### HOTSPOT

Built-in HOTSPOT and SPUTNIK AGENT, plus PPPOE server/client

### *Built-in Router Specifications:*

### Basic Network Platform

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  - OLSR & OSPF
  - Ultra Secure Wireless 256 bit AES, WPA and WPA2 encryption, Security, VPN and firewall
- GUI, Telnet, SNMP Remote Management
- QOS with Traffic Shaping
- 3 level Watch Dog Timer
- Sensitivity of (-)105 XR Rate (Best in the Industry)
- Firewall with packet filter & NAT
- Up to 237 non overlapping in 4.9-6.1 GHz
  - Transmit Power Control
  - Dynamic Frequency Select

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## Radio Technical Specifications

Frequency Range	2.30 -2.70 GHz, 4.9 - 6.1 GHz	Bandwidth Management	Yes
Number of Channels	237non overlapping	Router	Yes
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Receive Sensitivity (1e-6 BER)	1 Mbps -98 dBm	Network Connection	10 /100 Base T
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Max Receive Level	0 dBm (no damage)	Network Topologies	Any point-to Multipoint Multipoint-to Multipoint
Transmit Power	0-400 Milli watts	Repeater Mode	Built-in Mode
Processing Gain	> 10 dB	RF Collision Management	Combined TDD and FEC
Antenna Connector	N Female (2 antenna connectors)	Security	256 bit AES, WPA and WPA2 encryption, Security, VPN and firewall
Option of Additional RF Interface	Yes, upto 2	Data Security Password	Network attachment is password protected
Option of Additional Ethernet 10/100 Interface	Yes, upto 3	Remote Management	http ,Telnet
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