MakSat MIMO BTS

Radio Bridge & Router

MakSat MIMO BTS balances enterprise-scale security, management and Quality of Service features with high performance.

Features Benefits

The MakSat MIMO BTS Radio Bridge & Router is a any Point to Multipoint and Multipoint-to Multipoint OFDM Radio Bridge Equipment for High Bandwidth connectivity in 2GHz and 5GHz bands. It has a range of up to 100kms with the possibilities of other interfaces like E1/E2 in addition to Ethernet.

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

L2 MESH (option available)

Tunnels

PPTP, EoIP (Ethernet over IP)

OPEN VPN support for super secrecy

Multicasting support

VLAN, Virtual LAN support

Models:

MIMO 2 : 2.192-2.499

MIMO 5 : 4.9-6.1

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 GUI, 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

MakSat Coral (P) Ltd.
D 10/6 Okhla Industrial Area, Phase-1, New Delhi 110020 INDIA
www.maksat.com

MakSat MIMO BTS

Wireless

Burst Synchronization	Yes with Maksat Cell Site Syncro (CSS)
Media access	TDMA
Radio Operation	2.4Ghz (MIMO 2) 5.8Ghz (MIMO 5)
Channel Width	40Mhz, 20Mhz, 10Mhz,
Receiver Sensitivity	Up to -96dBm
Processing Gain	> 10 dB
Antenna	Sector
Option of Additional Ethernet 10/100/1000 Interface	Yes
RF Modulation Scheme	QAM64, QAM16, QPSK, BPSK, CCK (OFDM, DSSS)
Duplex Format	TDD, FDD
Certification	FCC,ISO 9001-2000
Range	Up to 150Km*
Output Power	Super power MIMO, up to 28dBm
Software controllable	Yes (Steps of 1 dB)
Extended Range (XR)	Best in the industry (-) 105dBm
Watch Dog Timer	Software/Hardware/Temperature
QOS/COS/GOS	Yes
Bandwidth Management	Yes
Router	Yes
packet Format	IEEE 802.3 and Ethernet I

Security

Security	256 bit AES, WPA and WPA2 encryption, Security, VPN and firewall
Data Security Password	network attachment password protected

Network

Network Connection	10/100/1000* Base T (optional) RJ Female Ethernet Connection
Bridge Functionality	Intelligent Local Packet Filtering Node by node user configurable data rates (CIR and MBR)
Network Topologies	Any point-to Multipoint Multipoint-to Multipoint
Repeater Mode	Built-in Mode
RF Collision Management	Combined TDD and FEC

Physical

Power Adapter Requirement	110 VAC or 220 VAC , 7V - 18V DC
Power Consumption	Less than 20W (fully loaded)
Height x Width x Depth Weight	7“ x 11“ x 5” 3Kg
Operational Temperature	(-)40C to (+)80C
Humidity	Humidity 0-95% non condensing, Outdoor weatherproof enclosure

Management

Remote Management	HTTP, HTTPS ,Telnet, SSH
Monitor/Control	Through Ethernet port using HTTP/HTTPS/Telnet
SNMP	V2c
Management Port Functionality	Full configuration/management from any station through a command line
Software Management	Firmware updates downloaded over RF

MCS Index	Spatial Streams	Modulation Type	Coding Rate	Data Rate Mbps			
				20 MHz channel		40 MHz channel	
				800ns GI	400ns GI	800ns GI	400ns GI
0	1	BPSK	1/2	6.50	7.20	13.50	15.00
1	1	QPSK	1/2	13.00	14.40	27.00	30.00
2	1	QPSK	3/4	19.50	21.70	40.50	45.00
3	1	16-QAM	1/2	26.00	28.90	54.00	60.00
4	1	16-QAM	3/4	39.00	43.30	81.00	90.00
5	1	64-QAM	2/3	52.00	57.80	108.00	120.00
6	1	64-QAM	3/4	58.50	65.00	121.50	135.00
7	1	64-QAM	5/6	65.00	72.20	135.00	150.00
8	2	BPSK	1/2	13.00	14.40	27.00	30.00
9	2	QPSK	1/2	26.00	28.90	54.00	60.00
10	2	QPSK	3/4	39.00	43.30	81.00	90.00
11	2	16-QAM	1/2	52.00	57.80	108.00	120.00
12	2	16-QAM	3/4	78.00	86.70	162.00	180.00
13	2	64-QAM	2/3	104.00	115.60	216.00	240.00
14	2	64-QAM	3/4	117.00	130.00	243.00	270.00
15	2	64-QAM	5/6	130.00	144.40	270.00	300.00

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