



POINT-TO-MULTIPOINT CSM 320 SUBSCRIBER MODULE

Service providers need to deliver reliable, high-quality broadband service at a low investment to succeed in today's competitive marketplace.

The CSM 320 is an 802.16e standard fixed, outdoor solution that provides reliable, cost-effective fixed connectivity in the 3 GHz licensed bands. Motorola's wireless broadband access network solution provides carriers, service providers and enterprise network operators a robust wireless broadband portfolio of products to deliver cost-effective, scalable, secure broadband access exactly when and where it is needed. Licensed and unlicensed solutions can be deployed at the same tower location, leveraging infrastructure costs and reducing the total cost of ownership.

APPLICATIONS

Green Field - Extend licensed coverage into new areas that are currently unserved.

Leverage Existing License - Maintain the operator license by offering wireless broadband connectivity in the licensed band.

Network Edge - Extend connectivity into low density areas on the edge of deployed mobile WiMAX coverage areas.

CSM 320 KEY FEATURES

- **Rapid Installation of Connectivity:** Subscriber Modules have easy to use alignment tools and are rapidly deployed.
- **Licensed Spectrum:** CSM 320 products are available in the spectrum.
- **Coverage and Performance:** The CSM 320 uses OFDM and MIMO technology which provides near-line of sight (nLOS) and some non-line of sight (NL0S) coverage especially in multi-path environments.

- **Integrated and connectorized versions** for flexible mounting options and support for omni and high-gain directional applications

MOTOROLA WIRELESS NETWORK SOLUTIONS

Motorola delivers seamless connectivity that puts real-time information in the hands of users, giving customers the agility they need to grow their business or better protect and serve the public. Working seamlessly together with its world-class devices, Motorola's unrivaled wireless network solutions include indoor WLAN, outdoor wireless mesh, point-to multipoint, point-to-point networks and voice over WLAN solutions. Combined with powerful software for wireless network design, security, management and troubleshooting, Motorola's solutions deliver trusted networking and anywhere access to organizations across the globe.



CSM 320 Subscriber Module - Integrated



CSM 320 Subscriber Module - Connectorized

CSM 320

FREQUENCY	3.3 – 3.4 GHz (CSM 33320)	3.4 – 3.6 GHz (CSM 35320)	3.6 – 3.8 GHz (CSM 36320)
PERFORMANCE			
Physical Layer	802.16e-2005 (5 MHz channel: 512 FFT; 7/10MHz channel: 1024FFT)		
MAC layer	802.16e-2005		
Maximum Transmission Power	27 dBm		
Maximum EIRP	41.5 dBm		
Maximum Throughput (75/25 DL/UL ratio)	Aggregate: up to 14Mbps Downlink: up to 14Mbps Uplink: up to 5Mbps		
Latency	40-60ms round trip		
SPECTRUM			
Frequency Range of Band	3.3 – 3.4 GHz	3.4 – 3.6 GHz	3.6 – 3.8 GHz
Channel Width	Configurable to 3.5/5/7/10 MHz		
SECURITY			
Encryption	EAP-TTLS/PKMv2 authentication over RADIUS, AES over-the-air encryption		
LINK BUDGET			
Receive Sensitivity (10 MHz channel)	CTC-QPSK(1/2): -93 dBm CTC-QPSK (3/4): -86 dBm CTC-16QAM(1/2): -83 dBm CTC-16QAM (3/4): -80 dBm CTC-64QAM(1/2): -79 dBm CTC-64QAM (2/3): -75 dBm CTC-64QAM(3/4): -74 dBm CTC-64QAM (5/6): -71 dBm MIMO Matrix B CTC-64QAM(5/6): -69 dBm		
ANTENNA			
Antenna Gain	Integrated 14.5 dBi gain or connectorized		
PHYSICAL			
Temperature Range	-40° F to +131° F (-40° C to +55° C)		
Weight	3.1 lbs. (1.4 kg)		
Wind Survival	118 miles/hr (190 km/hr)		
Wind Loading	26 lbs. (11.9 kg) at 118miles/hr (190km/hr)		
Dimensions	7.9 x 7.9 x 3.2 inches (~200 x 200 x 80mm)		
INTERFACE			
Interface	10/100 Base T, half/full duplex. Rate auto negotiated (802.3 compliant)		
Protocols Used	IPv4, UDP, TCP, IP, ICMP, SNMP, HTTP, FTP, RIP, DHCP Relay		
Network Management	HTTP; SNMP		
CERTIFICATIONS			
FCC ID	n/a	n/a	ABZ89FT7633
Industry Canada Certification Number	n/a	109W-3530SM	109W-3630SM
CE	"CE" marked & compliant to EN300 328. DoCs are available at http://motorola.wirelessbroadbandsupport.com/doc.php		



www.motorola.com/pmp

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