

## Motorola Wireless Broadband

# Point-to-Multipoint CSM 110 Subscriber Module



CSM 110  
Subscriber Module

The Motorola Wireless Broadband Point-to-Multipoint (PMP) CSM 110 Subscriber Module is the ideal solution for developing, enhancing and extending advanced broadband networks and services – and for making Internet access much quicker and much less expensive.

Motorola Wireless Broadband products combine field-proven toughness with exceptional performance, security, ease-of-use and cost effectiveness. CSM 110 modules are available with total throughput of 2 Mbps up to 7 Mbps. Software upgrade keys are available to add throughput as demand requires. Available in frequencies from 2.4 GHz to 5 GHz, with an array of options and accessories, CSM 110 Subscriber Modules are the right choice for building or extending low cost residential broadband connectivity.

### Why Motorola Wireless Access Network Solutions are Superior

- **Industry Leading Interference Tolerance** – Motorola access network solutions provide an industry leading Carrier to Interference (C to I) ratio and utilize GPS synchronization to mitigate self interference.
- **Fast, Simple Installation** – Access Points and Subscriber Modules have easy to use alignment tools and do not require an equipment room or environment controlled area at the AP tower location.
- **Reliable Hardware Performance Over Time** – Motorola access network solutions perform in harsh weather conditions including heat, cold and moisture. Designed without heaters or cooling fans, Motorola equipment performs with high availability and reliability over time.
- **Proven Throughput Performance** – Performance specifications are statements of actual field performance, not performance in an indoor noise free lab environment.
- **Scalable as Subscriber Base Grows** – GPS synchronization enables operators to build networks that grow with demand as new subscribers are added and network density increases or as operators expand the network into new geography.



CSM 110 Subscriber  
Module with optional  
Passive Reflector  
Dish

### PMP Access and Distribution Network



**SPECIFICATION SHEET**  
**Point-to-Multipoint 110 Series Subscriber Module**

**Motorola Wireless  
Broadband Solutions**

Motorola's comprehensive portfolio of reliable and cost-effective wireless broadband solutions together with our WLAN solutions provide and extend coverage both indoors and outdoors. The Motorola Wireless Broadband portfolio offers high-speed Point-to-Point, Point-to-Multipoint, Mesh, WiFi and WiMAX networks that support data, voice and video communications, enabling a broad range of fixed and mobile applications for public and private systems. With Motorola's innovative software solutions, customers can design, deploy and manage a broadband network, maximizing uptime and reliability while lowering installation costs.

**CSM 110 Subscriber  
Modules are  
compatible with CAP  
130 Access Points**

**CSM 110**

<b>FREQUENCY</b>	<b>2.4 GHz</b>	<b>5.2 GHz</b>	<b>5.4 GHz</b>	<b>5.8 GHz</b>
<b>PERFORMANCE</b>				
Signaling Rate	10 Mbps			
Typical Aggregate Useful Throughput	2 Mbps to 7 Mbps			
Range Extender	Passive LENS or Reflector Dish available. Must be used within local EIRP restrictions			
Latency	5 - 7 msec			
Mean Time Between Failure	Greater than 40 years			
Modulation Type	High Index 2-level Frequency Shift Keying (FSK) optimized for interference rejection			
Access Method	Time Division Duplexing/Time Division Multiple Access (TDD/TDMA)			
<b>SPECTRUM</b>				
Frequency Range of Band	2.4-2.4835 GHz	5.25-5.35 GHz	5.47-5.725 GHz	5.725-5.850 GHz
Channel Width	20 MHz			
Non-Overlapping Channels	3	3	Up to 12	6
Channel Spacing	Configurable on 2.5 MHz increments	Configurable on 5 MHz increments		
<b>SECURITY</b>				
Encryption	DES, AES Optional FIPS 197 Certified			
<b>LINK BUDGET</b>				
Carrier to Interference Ratio (C/I)	~3dB @ 10 Mbps			
Nominal Receiver Sensitivity (dBm typical)	-86 dBm			
Antenna Gain (dBi)	8 dBi	7 dBi		
EIRP	Up to 33 dBm	Up to 30 dBm		
DC Power (typical)	8 W			
<b>ANTENNA</b>				
Antenna Beam Width	3 dB antenna beam width 60 degrees, Azimuth and Elevation			
Horizontal Polarized Option	n/a	Yes	Yes	Yes
Connectorized Antenna Option	Yes	n/a	Yes	Yes
<b>PHYSICAL</b>				
Temperature	-40° F to +131° F (-40° C to +55° C)			
Wind Survival	118 miles/hr (190 km/hr)			
Dimensions	11.75 in H x 3.4 in W x 3.4 in D (29.9 cm H x 8.6 cm W x 8.6 cm D)			
Weight	1 lb (.45 kg)			
<b>INTERFACE</b>				
Interface	10/100 Base T, half/full duplex. Rate auto negotiated (802.3 compliant)			
Protocols Used	IPv4, UDP, TCP, ICMP, Telnet, HTTP, FTP, SNMP, PPPoE			
Network Management	HTTP, TELNET, FTP, SNMP Version 2c			
VLAN	802.1Q with 802.1p priority			
<b>CERTIFICATIONS</b>				
FCC ID	ABZ89FC5808	ABZ89FC3789	ABZ89FT7623	ABZ89FT7630
Industry Canada Certification Number	109W-2400	109W-5200	109W-5400	109W-5700G
CE	DoCs are available at: <a href="http://motorola.wirelessbroadbandsupport.com/doc.php">http://motorola.wirelessbroadbandsupport.com/doc.php</a>			



**MOTOROLA**

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