Sierra Wireless AirPrime™ Embedded Wireless Modules MC Series

High-Speed in a Standard Mini PCI Form Factor

Sierra Wireless AirPrime™ MC Series embedded modules deliver high speed connectivity with a variety of advanced air interfaces.

AirPrime MC Series are standard PCI Express MiniCards with a USB 2.0 interface and industrial specifications.

These modules support LTE, HSPA+, HSPA+ and EV-DO networks and are delivered with a comprehsensive set of SDKs and enabling software.

The AirPrime MC Series is a proven technology that can turn any industrial device into a powerful machine-to-machine communication tool.

AIRPRIME MC77x0

These modules support new LTE capable networks with data speeds up to 100Mbps downlink and 50Mbps UPA uplink, in both LTE and EV-DO or LTE and HSPA+ networks.

AIRPRIME MC870x

Developed for applications requiring higher bandwidth and running on fast mobile broadband networks available worldwide, these modules offer up to 21 Mbps download speeds with HSPA+ capabilities. The MC8704 supports voice.

AIRPRIME MC809x

These modules offer tri-band or dual-band HSPA+ connectivity for global deployments, as well as quad-band GSM/GPRS/EDGE and voice support.

AIRPRIME MC5728V

MC5728V provides EV-DO Rev A wireless data access and it is compatible with widely available CDMA EV-DO Rel 0 and 1x networks. It supports voice.

AIRPRIME MC83x5

MC83x5 provides single mode HSPA and multimode HSPA/CDMA functionality for 3G global networks. It features GPS and Gobi application programming interface.

AIRPRIME MC9090

The AirPrime MC9090 offers multimode HSPA+/EV-DO functionality to operate on the main mobile networks in North America with one single product reference. It features industrial temperature rating, voice and supports quad-band GSM/GPRS/EDGE.

KEY BENEFITS:

- Easy to integrate: Standard Mini PCI form factor with industrial specifications
- High-speed cellular connectivity with the latest technologies
- Easy upgrade path to new network technologies

Essential

SIERRA WIRELESS™ | AirPrime™

Sierra Wireless AirPrime™ Embedded Wireless Modules MC Series

	MC77xx	MC870x	MC809x / MC9090	MC5728V	MC83x5
AIR INTERFACE					
	LTE/HSPA+ LTE/EV-DO (MC7750)	HSPA+	GSM/GPRS/EDGE/HSPA+/ EV-DO Rev A(MC9090)/CDMA 1xRTT (MC9090)	EVDO Rev A	HSPA+ (MC8305) HSPA+/EV-DO Rev A (MC8355)
DATA SPEED					
Peak Download Rate	100 Mbps	21.1 Mbps	HSPA+ 14.4Mbps EV-DO 3.1Mbps (MC9090)	3.1 Mbps	HSPA 14.4 Mbps EV-DO 3.1 Mbps (MC8355)
Peak Upload Rate	50 Mbps	5.76 Mbps	HSPA+ 5.76Mbps EV-DO 1.8Mbps (MC9090)	1.8 Mbps	HSPA 5.76 Mbps EV-DO 1.8 Mbps (MC8355)
FREQUENCY BANDS					
LTE	700(B17)/AWS (MC7700) 800/900/1800/2100/2600 MHz (MC7710) 700(B13) MHz (MC7750)				
WCDMA	850/1900/2100 MHz (MC7700) 900/2100 MHz (MC7710)	850/900/1900/2100 MHz	MC8090/MC9090: 850/1900/2100 MHz MC8092: 900/2100 MHz		850/900/1900/2100/AWS
CDMA 1xRTT/EV-DO Rev A	800/1900 MHz (MC7750)			800/1900 MHz	800/1900 MHz
GSM/GPRS/EDGE	850/900/1800/1900 MHz (MC7700) 900/1800/1900 MHz (MC7710)	850/900/1800/1900 MHz	MC9090: 800/1900 MHz		850/900/1800/1900 MHz
APPROVALS					
Regulatory	FCC, IC, NCC (MC7750) FCC, IC, NCC, PTCRB, JATE/TELEC (MC7700) CE, GCF-CC, NCC (MC7710) Planned	FCC, PTCRB (MC8705) CE, FCC, IC, NCC, PTCRB, GCF-CC	MC8090/MC9090: FCC, IC, PTCRB MC8092: CE, GCF-CC	FCC	FCC, IC, CE, PTCRB, GCF-CC, CDG, A-Tick, NCC
Carrier	Verizon (MC7750) AT&T, NTT Docomo (MC7700) T-Mobile (EU) (MC7710)	Bell, AT&T (MC8705) Bell, Telstra (MC8704), Telus (MC8704)	MC809x: AT&T, NTT DoCoMo MC9090 : AT&T, Sprint, Verizon (target)	Verizon, Sprint	AT&T, Verizon, Sprint, Vodafone, Telefonica, Orange, TIM, T-Mobile (Europe)
CPU PERFORMANCES					
IO voltage	1.8V	1.8V (MC8704)	1.8V	2.6V	
AUDIO					
Analog audio				1 x speaker out -1 x micro in	
Digital audio		I2S (MC8704)	PCM	PCM	
Codec		AMR-NB, GSM-EFR, GSM-FR, GSM-HR, GSM CTM (MC8704)		HR, FR, EFR, AMR	
Echo cancellation & noise reduction			✓	✓	
DTMF			✓	✓	
INTERFACES					
UART			1X 4-Wire (8 wire optional)	1X 8-Wire	
USB	USB 2.0 High Speed	USB 2.0 High Speed	USB 2.0 High Speed	USB 2.0 Full Speed	USB 2.0 Highspeed
ON OFF	✓	✓	✓	✓	✓
Vref			1.8V	2.6V	
ADC				1	
GPIO	6	6 (MC8704)	3	4	1
Flash LED output	1	1	1	1	1
SIM interface	1.8V or 3V	1.8V or 3V	1.8V or 3V		1.8V or 3V
ANTENNA					
U.FL Antenna Connectors	3	2	3	2	2
Diversity	✓	✓	✓	✓	✓
MIMO	✓				
GPS Bias	✓				
LOCATION SOLUTION					
	gpsOne™ (MC7700/MC7710) Standalone GPS (MC7750)	gpsOne™	gpsOne™	gpsOne™	gpsOne™
CONTROL OPTIONS					
	AT commands, Gobi API	AT commands, CnS	MC809x: AT commands, CnS MC9090: AT commands, Gobi API	AT commands, CnS	AT commands, Gobi API
TCP/IP					
			TCP/UDP	TCP/UDP	
DRIVERS					
Windows® Mobile 6.5		✓	✓	✓	✓
Windows® CE 6.0		✓	✓	✓	✓
Android	✓	✓	✓		✓
Linux	✓	✓	✓	✓	✓
DEVICE DIMENSIONS					
	51 x 30 x 4.5 mm	51 x 30 x 4.5 mm	51 x 30 x 4.3 mm	51 x 30 x 4.5 mm	51 x 30 x 3.05 mm
OPERATIONAL TEMPERATURE					
Normal (Class A)	-25° to +60°C	-25°C to +60°C	-30°C to +70°C	-30°C to +60°C	-30°C to +70°C
Extended (Class B) *		-25°C to +75°C	-40°C to +85°C	-30°C to +75°C	-30°C to +85°C

* with performance deviations

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