Air Interface: 5G NR Sub-6 and mmWave with 4G and 3G fallback
Region: Global
Planned Carrier: AT&T (FirstNet),docomo,LGU+,Verizon,Telstra

AirPrime® EM9190 5G NR Sub-6 GHz and mmWave Module

Drive IoT innovation with next-generation technology

The EM9190 module is part of the EM Series offering global 5G connectivity. Designed in an M.2 form factor, the EM9190 will soon be compatible with Sierra Wireless's EM7690 4G LTE-A Pro module, to help facilitate the migration and differentiation between 4G LTE and 5G.

This 5G NR Sub-6 GHz and mmWave embedded module delivers up to 5.5Gbps downlink speed and 330Mbps uplink speed. With automatic 4G and 3G fallback networks, and a built-in GNSS receiver, the EM9190 is applicable to a wide range of M2M and IoT applications such as industrial routers, home gateways, industrial and consumer laptops, rugged tablet PCs, video surveillance and digital signage.

Benefits

	CBRS	Certified by the FCC for CBRS private networks to provide reliability, security, flexibility, and cost savings
	Global	Worldwide coverage on a single module with industry and mobile network certifications to get you to market faster
	Onboard SIM	Embedded SIM to simplify and add flexibility to IoT deployments. Carrier profile, M2M eUICC, and consumer eUICC are available based on customer use case
	Location Services	GNSS receiver enables tracking and location-based services with dual L1 and L5 bands for increased accuracy
	Enhanced Coverage	Dual SIM single standby (DSSS) switches between networks quickly to stay connected
	FOTA Upgrades	Firmware over-the-air (FOTA) upgrades future-proof deployments and keep them secure
	Secure Boot	Prevent unauthorized code on the target to keep your connectivity secure
		Tested for harsh environments and extreme temperatures

5G NR

Category	5G NR Sub-6 and mmWave
Frequency Bands	Sub-6: n1, n2, n3, n5, n7, n8, n12, n20, n25, n28, n38, n40, n41, n48, n66, n71, n77, n78, n79, mmWave: n257, n258, n260, n261

4G LTE

Category	Cat-20
Frequency Bands	B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B18, B19, B20, B21, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B43, B46, B48, B66, B71

LOCATION SERVICES

Satellite Systems	Galileo, Glonass, GPS, Beidou (Bands: L1 and L5)

EMBEDDED SOFTWARE

System Drivers	Windows® 10, Linux, Android RIL

INTERFACES

USB	USB 3.1 (Linux)
PCIe	PCIe generation 3 (or 2), 1 lane

HARDWARE

Dimensions	30x52x2.38mm

APPROVALS

Planned Carrier	AT&T (FirstNet), docomo, LGU+, Telstra, Verizon
Regulatory	FCC, GCF, KC, PTCRB, EU RED, JATE/Telec