



IPWireless LTE PCI Express Mini Card



KEY BENEFITS

- Future proof SDR architecture
- High performance throughput
- Ultra-low power consumption
- Custom multi-band design
- Over-the-air software upgradable

APPLICATIONS

The PEM is designed for embedded applications such as notebook PCs with compatible antennas. Other embedded applications of the PEM include routers and public safety devices.

FEATURES

The IPWireless LTE PCI Express Mini (PEM) Card features a state of the art, patented Software Defined Radio (SDR) baseband processor with high degree of programmability, high performance and ultra-low power consumption. The PEM supports all 3GPP defined LTE bandwidths and duplex modes. It delivers maximum Category 3 data rates of 102 Mbps downlink and 50 Mbps uplink in a pair of 20 MHz FDD channels. A high performance radio front-end supports LTE frequency bands from 700 MHz to 2700 MHz in a single design. The flexibility of the design facilitates the support of multiple frequency bands to match the operators' frequency assets and roaming requirements. The IPWireless LTE PEM incorporates advanced filtering techniques to ensure interference free co-existence with other wireless technologies in adjacent frequencies.

The PEM is based on industry standard PCI Express Mini Card form factor. It contains a 52-pin edge connector and uses USB2.0 protocol for interface with the host device. It contains two U.FL connectors for external antennas.

Software upgrades to future LTE releases are done seamlessly over-the-air by network push or download to the PEM via the host device.

LTE PCI EXPRESS MINI CARD SPECIFICATIONS

Operating Frequency	700 MHz to 2700 MHz (Single and multi-band designs, model specific)
Channel bandwidth	1.4, 3, 5, 10, 15 and 20 MHz
Duplex mode	Frequency Division Duplex (FDD) Time Division Duplex (TDD) Half Duplex Frequency Division Duplex (H-FDD) Duplex mode is band plan specific
UE Category	Category 3 UE
Transmit power	23 dBm \pm 2 dB (Power Class 3)
Radio performance	3GPP TS 36.101 compliant
PHY layer peak data rates	Up to 102 Mbps downlink and 50 Mbps uplink for 20 MHz FDD Up to 102 Mbps downlink and 30 Mbps uplink for 20 MHz TDD Actual data rate is bandwidth and duplex mode dependent
Standards compliance	3GPP R8 LTE compliant 3GPP R9 LTE compliant via future software upgrade
Radio configuration	1 Transmit / 2 Receive
Voltage	3.0 – 3.6 VDC
Dimension	PCI Express Mini Card (Full Mini F1) 50.95 x 30.00 x 5.00 mm
Weight	15 g
Antenna connector	U.FL connector (x2 for diversity)
Host interface	52-pin PCI Express Mini Card edge connector
Host interface protocol	USB 2.0
Drivers	Windows XP/Vista/7 Mac OS 10.4 or higher Linux Kernel 2.6.32 or higher
Operating temperature	-30 to +60°C (-22 to +140 °F)
Storage temperature	-40 to +85 °C (-40 to +185 °F)
Humidity	0 to 90% non-condensing
Standards and Regulatory Approvals	Radio: FCC for North America ETSI EN specifications for Europe Other market specific certification upon requests Safety: EN 60950 CE mark RoHS directive 2002/95/EC



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ORDERING INFORMATION

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ABOUT IPWIRELESS

IPWireless is a pioneer in developing and designing 3G and 4G wireless broadband and broadcast solutions, including chipsets, devices and complete network infrastructure solutions, based on 3GPP, the world's preeminent mobile standard. The company's high performance mobile broadband and integrated mobile broadcast (IMB) solutions enable mobile operators, consumer electronics companies, as well as government, public safety and military agencies to deliver a new generation of wireless services and develop compelling new applications using untapped global spectrum bands. The company's mobile broadband and IMB solutions have been deployed by some of the world's largest mobile operators, and government agencies including T-Mobile, Orange, New York City's Department of Information Technology and Telecommunications (DoITT) and more. In Q2 2010, IPWireless and Sony announced an initiative to jointly develop 4G and Beyond Wireless Technologies.

IPWireless is headquartered in San Francisco, California, and operates a technology development center in Chippenham, UK. For more information, visit the company's Web site at

www.ipwireless.com.