

MPCI-L2 series

Standard Professional Automotive

Multi-mode LTE Cat 4 Mini PCIe modules with HSPA+ and/or 2G fallback

Highlights

- Powerful LTE modules in industry-standard Mini PCIe package
- Highest throughput of up to 150 Mb/s with LTE Cat 4
- Variants for Americas, Europe, and APAC
- Deliver critical firmware updates over the air
- Industrial temperature range –40 to +85 °C
- MPCI-L201 switches automatically between AT&T and Verizon



MPCI-L2 series
30.0 x 51.0 x 3.7 mm

Product description

MPCI-L2 series modules support multi-band LTE-FDD, along with DC-HSPA+ and EGPRS.

With 3GPP Rel. 9 and LTE Cat 4, which provides data throughput up to 150 Mb/s, the modules are ideal for both industrial and consumer applications requiring the highest data-rates.

Typical applications are industrial computing, ruggedized terminals, video communication, wireless routers, alarm panels and surveillance, digital signage, and payment systems.

The temperature range of –40 to +85 guarantees operation in harsh environments, making the modules suitable for industrial applications.

The modules support DC-HSPA+ guaranteed connectivity, even in areas that do not yet have LTE coverage.

The industry standard Mini PCIe package enables easy integration onto an application board, and is also ideal for manufacturing of small series.

MPCI-L2 modules are manufactured in ISO/TS 16949 certified sites, with the highest production standards and the highest quality and reliability. Each module is fully tested and inspected during production.

The MPCI-L2 series comes in module variants for North America, Europe/ Asia/ Africa, APAC/ South America, and Japan.

USB drivers and RIL software for Android are free of charge.

Product selector

Model	Region	Access Technology					Interfaces					Audio	Features					Grade				
		3GPP Release	Baseline	LTE FDD Category	LTE Bands	UMTS Bands (MHz)	GSM Bands	MIMO	UART	USB 2.0	DDC	SDIO (Master)	GPIO	Analog audio	Digital audio	Jamming detection	Embedded TCP/UDP	Embedded HTTP, FTP, SSL	FOTA	Dual stack IPv4 / IPv6	Standard	Professional
MPCI-L200	North America	9	4	2, 4, 5, 7, 17	850/900/AWS/1900/2100	Q	2x2		1						<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
MPCI-L201	North America	9	4	2, 4, 5, 13, 17	850/1900		2x2		1						<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
MPCI-L210	Europe/APAC	9	4	1, 3, 5, 7, 8, 20	850/900/1900/2100	Q	2x2		1						<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
MPCI-L220	Japan	9	4	1, 3, 5, 8, 19	850/900/2100		2x2		1						<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
MPCI-L280	S.America/APAC	9	4	1, 3, 5, 7, 8, 28	850/900/1900/2100	Q	2x2		1						<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			

= Available in future firmware

Q = Quad-band

Features

LTE	Cat 4 (150 Mb/s DL, 50 Mb/s UL) 3GPP Rel. 9 FDD Bands: MPCI-L200: 2, 4, 5, 7, 17 (N.America) MPCI-L201: 2, 4, 5, 13, 17 (USA) MPCI-L210: 1, 3, 5, 7, 8, 20 (EU/Asia/Africa) MPCI-L220: 1, 3, 5, 8, 19 (Japan) MPCI-L280: 1, 3, 5, 7, 8, 28 (APAC/S.America) All channel bandwidths: 1.4 - 20 MHz MIMO 2x2 Rx diversity
UMTS/DC-HSPA+	Bands: MPCI-L200: 850/900/AWS/1900/2100 MHz MPCI-L201: 850/1900 MHz MPCI-L210: 850/900/1900/2100 MHz MPCI-L220: 850/900/2100 MHz MPCI-L280: 850/900/1900/2100 MHz 42 Mb/s downlink, 5.76 Mb/s uplink
GSM	Bands: MPCI-L200: 850/900/1800/1900 MHz MPCI-L210: 850/900/1800/1900 MHz MPCI-L280: 850/900/1800/1900 MHz GPRS & EDGE Class 12
SMS	MT/MO PDU / Text mode SMS over IMS and via SMS-C

Software features

Protocols	Dual stack IPv4 / IPv6 Embedded TCP/IP, UDP/IP HTTP/FTP/SSL (Secure Socket Layer)
Network	Jamming detection ¹
Firmware update	Via USB Via FOTA

Electrical data

Power supply	DC 3.0 - 3.6 V
Consumption current	Connected mode LTE max power: 815 mA Idle mode: 1.8 mA

Interfaces

RF (antenna)	2 UFL (50 Ω) Connectors (main and diversity)
Data	1 USB 2.0 (high-speed, 480 Mb/s)
(U)SIM	Supports 1.8 V and 3 V, SIM toolkit

¹ Available in subsequent firmware release

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Package

52-pin PCI Express Full-Mini Card Type F2
30 x 51 x 3.7 mm, 9.7 g
(components on top side only)

Environmental data, quality & reliability

Operating temperature -40 to +85°C (extended range)
RoHS compliant (lead-free)
Manufactured in ISO/TS 16949 certified production sites

Certifications and approvals

MPCI-L200	PTCRB, GCF, FCC, ISED ² , RED ³ , AT&T, Anatel (Brazil)
MPCI-L201	FCC, ISED ²
MPCI-L210	PTCRB, GCF, FCC, ISED ² , RED ³ , NCC, KCC (Korea), Giteki (Japan), Softbank (Japan), RCM (Australia) Operator approvals
MPCI-L220	Giteki (Japan)
MPCI-L280	PTCRB, GCF, FCC, ISED ² , RED ³ , Anatel (Brazil), NCC (Taiwan), RCM (Australia)

² ISED, formerly known as IC

³ RED, formerly known as R&TTE

Support products

RIL software	Available for Android
USB driver	Available for Embedded Windows 6.0, 7, 2013 and Windows 7, 8, 8.1, 10

Product variants

MPCI-L200	LTE Cat 4 modules for North America; 2G and 3G fallback; LTE Bands 2, 4, 5, 7, 17
MPCI-L201	LTE Cat 4 modules for North America; 3G fallback; LTE bands 2, 4, 5, 13, 17
MPCI-L210	LTE Cat 4 modules for Europe and APAC; 2G and 3G fallback; LTE Bands 1, 3, 5, 7, 8, 20
MPCI-L220	LTE Cat 4 modules for Japan; 3G fall-back; LTE Bands 1,3,5,8,19
MPCI-L280	LTE Cat 4 modules for APAC and South America; 2G and 3G fallback; LTE Bands 1, 3, 5, 7, 8, 28

Further information

For contact information, see www.u-blox.com/contact-us.

For more product details and ordering information, see the product data sheet.