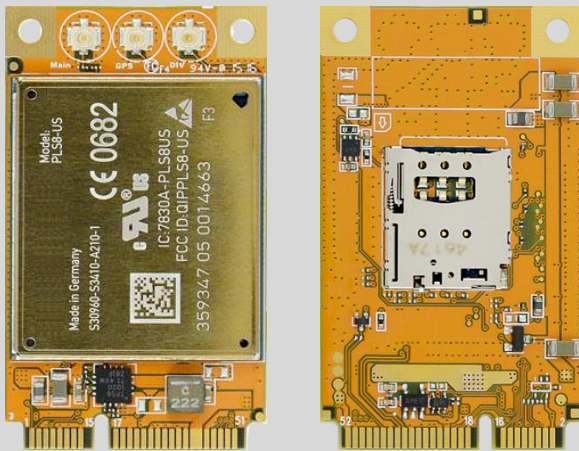




# Z-PLS8-U

## LTE Industrial Wireless Module



### Optimized for the Fastest LTE Networks

The new Zcomax Z-PLS8-U industrial wireless module offers a smart solution for wireless connectivity today and in the future. With the latest LTE technology, the Z-PLS8-U is optimized for high bandwidth computing, enabling the highest available speeds for uploads and downloads in mobile networks.

This Z-PLS8 series of devices are based on the Mini PCI Express standard with a USB 2.0 interface. Supporting a wide variety of advanced air interface protocols, the Z-PLS8-U wireless module enables any mobile computing device to become an outstanding communication tool.

### Highlights

- 100Mbps maximum data rate (LTE Rel. 9)
- Mini PCI Express form factor
- USB 2.0 HS Interface up to 480 Mbps
- Qualcomm MDM9215 chipset
- 3X u.FL antenna connectors
- Multiple OS support
- GPS / GLONASS location solutions
- Perfect for M2M Applications
- Multiple carrier / regulatory approvals
- -40°C ~ 85°C operating temperature
- Optimized for low power consumption

### High-Speed Connectivity for a Wide Range of Solutions

Perfectly suited for a wide array of network applications, including ruggedized mobile computing, security solutions, medical equipment, payment systems, video streaming, mobile routing, and many others.

### Location-Based Services Available

GNSS tracking lets you locate, monitor, and deploy location-based applications and services with model variants supporting GPS and GLONASS.

# Z-PLS8-U Specifications

<b>Hardware</b>			
Chipset	Qualcomm MDM9215		
Application Processor	ARMv7 Cortex A5		

<b>Air Interface</b>	<b>LTE</b>	<b>UMTS / DC-HSPA+</b>	<b>GSM / GPRS / EDGE</b>
3GPP Compliance	Release 9	Release 8	Release 98
UE Category	Category 3	DL Category 24 / UL Category 6	Class 12
Frequency	700 / 850 / AWS (1700 / 2100) / 1900 (MHz)	850 / AWS (1700 / 2100) / 1900 (MHz)	850 / 900 / 1800 / 1900 (MHz)
Bands	Bd17, Bd5, Bd4, Bd2	Bd5, Bd4, Bd2	Quad Band
Data Speed (max)	100Mbps (DL) / 50Mbps (UL)	42.2Mbps (DL) / 5.76Mbps (UL)	237Kbps (DL) / 237Kbps (UL)
MIMO	2x2 Download	-	-
Channel Access	OFDMA / SC-FDMA / FDD	W-CDMA / FDD	TDMA / FDD

<b>RF Characteristics</b>	<b>Category</b>	<b>Transmit Power</b>	<b>Class</b>
Output power (Rel.99)	EGSM 850	33dBm $\pm$ 2dB	Class 4
	EGSM 900	33dBm $\pm$ 2dB	Class 4
	GSM 1800	30dBm $\pm$ 2dB	Class 1
	GSM 1900	30dBm $\pm$ 2dB	Class 1
	GSM 850 8-PSK	27dBm $\pm$ 3dB	Class E2
	GSM 900 8-PSK	27dBm $\pm$ 3dB	Class E2
	GSM 1800 8-PSK	26dBm +3/-4dB	Class E2
	GSM 1900 8-PSK	26dBm +3/-4dB	Class E2
	UMTS 850 WCDMA FDD Bd5	24dBm +1/-3dB	Class 3
	UMTS AWS WCDMA FDD Bd4	24dBm +1/-3dB	Class 3
	UMTS 1900 WCDMA FDD Bd2	24dBm +1/-3dB	Class 3
Output power (Rel.8)	LTE 1900, LTE FDD Bd2	23dBm $\pm$ 2dB	Class 3
	LTE AWS, LTE FDD Bd4	23dBm $\pm$ 2dB	Class 3
	LTE 850, LTE FDD Bd5	23dBm $\pm$ 2dB	Class 3
	LTE 700, LTE FDD Bd17	23dBm $\pm$ 2dB	Class 3

<b>Antenna (Voice/Data)</b>	<b>LTE</b>	<b>UMTS / DC-HSPA+</b>	<b>GSM / GPRS / EDGE</b>
Impedance	50 Ohm	50 Ohm	50 Ohm
Antenna Connector	u.FL	u.FL	u.FL
Antenna port 1	Main Antenna	Main Antenna	Main Antenna
Antenna port 2	MIMO (2x2) / Diversity	Rx Diversity Antenna	-

<b>Interfaces / Form Factor</b>	
Form Factor	Mini PCI Express
Host Interface	USB 2.0 High Speed (480Mbit/s)
UICC / SIM Electrical Interface	1.8V / 3V 4-Wire interface via Mini PCI Express
UICC / SIM Socket <b>(optional)</b>	Micro SIM, 1.8V / 3V
Audio <b>(optional)</b>	PCM digital interface
Reset	Signal line to reset module
Status	Signal line to indicate the network connectivity state
Dimensions	51.0mm (L) x 30.0mm (W) x 4.75mm (H)

# Z-PLS8-U Specifications

## GNSS Location Solution (Optional)

Technology	Qualcomm gpsOneGen8A with GLONASS
GNSS Receiver	GPS / GLONASS
Protocol	NMEA-0183 V2.3
GNSS Antenna	Active / Passive
Modes	Standalone GNSS / Assisted GNSS (CP E911, UP gpsOneXTRA™)

## Electrical

Voltage	3.3V +/- 0.3V
Current Consumption (LTE @ 850MHz)	Sleep mode: 3mA
	Idle (USB active): 95mA
	Data transfer: 740mA

## Audio (Optional)

Operating Mode	Master / Slave
Synchronization	Short / Long
Sample Rate	8kHz / 16kHz
Bit Clock	@8kHz sample rate: 128 / 256 / 512 / 2048kHz, @16kHz sample rate: 256 / 512 / 1024 / 4096kHz

## Control Options

AT Commands	Hayes, TS 27.007, TS 27.005 & proprietary API
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## Driver Support

Windows	Windows 8, Windows 7, Windows Vista, Windows XP, Windows EC
Linux	CDC-ACM compliant mode
Android	RIL driver

## Regulatory & Safety Approvals

Environmental	RoHS, California RoHS and REACH compliant, EuP support
RF & Safety	R&TTE, GFC, CE, FCC, IC, PTCRB, UL
Carrier Certifications	AT&T

## Environmental

Operating Temperature	-40 °C ~ 85°C (board temperature)
Storage Temperature	-40 °C ~ 95°C
Humidity	5 ~ 95% relative humidity non-condensing

## Ordering Information

Z-PLS8-U	Base module
Z-PLS8-U-G	Support for GPS
Z-PLS8-U-S	Integrated SIM card slot
Z-PLS8-U-V	Support for voice
Z-PLS8-U-GS	Support for GPS and Integrated SIM card slot
Z-PLS8-U-GSV	Support for GPS, Integrated Sim card slot and voice

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