

## PLS8



Quad Band LTE,  
Tri Band UMTS/  
DC-HSPA+



LTE Voice  
Support



GPRS/EDGE  
Quad/Dual Band



GPS / A-GPS /  
GLONASS



Multi Design  
Capability (LGA)



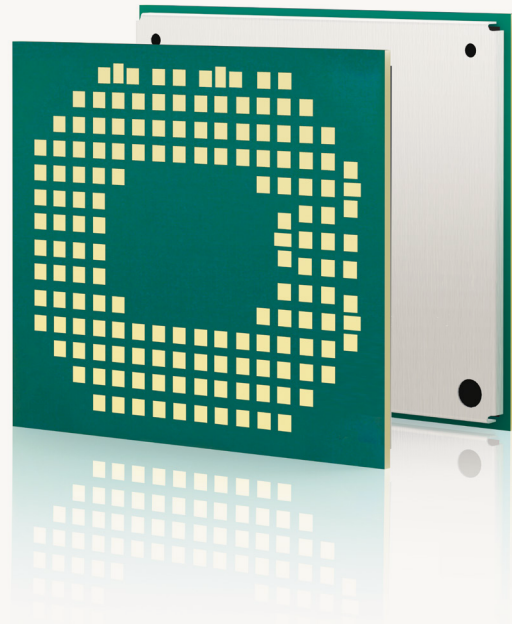
Extended  
Temperature  
Range



USB 2.0



Multi OS  
Support



## LTE

Cinterion® PLS8 Wireless Module  
First Industrial 4G LGA Module in the Market

# Cinterion® PLS8 Wireless Module

## First Industrial 4G LGA Module in the Market

The new Gemalto Cinterion PLS8 LTE cellular machine-to-machine (M2M) module offers a smart solution for wireless connectivity today and in the future. With the newest 3GPP Rel. 9 LTE technology, PLS8 is optimized for high bandwidth computing, enabling speeds up to 100 Mbps for downlink and 50 Mbps for uplink.

PLS8 and its variants, PLS8-E and PLS8-US, provide true worldwide coverage and reliability even while roaming across different wireless networks. For investment protection, PLS8 supports multi designs due to footprint compatibility with Gemalto M2M's 3G/GSM and CDMA Cinterion modules PHS8 and PXS8/PVS8.

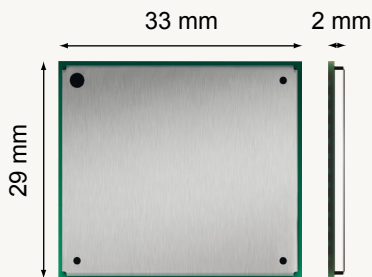
PLS8 offers an ideal communication solution for the challenging requirements of a variety of M2M applications such as ruggedized mobile computing, security solutions, medical equipment, payment systems and gateway routers.

Two antenna pads enable diversity support allowing PLS8 to provide improved data speeds. An optimized GPS antenna path eliminates blanking on GPS and provides more consistent performance.

Gemalto M2M's unique type of LGA technology enables optimized heat dissipation that prevents warping and gives customers the freedom to select the most beneficial soldering paste for each individual application.

Like all Cinterion products, the PLS8 comes with full type approval (FTA) and is certified by the largest global network operators.

### First Industrial 4G LGA Module in the Market



#### Future Proof Design

At just 2 mm in height, PLS8 is ideal for integration in the slimmest and most size constrained M2M solutions. With the latest long-life chipset and a footprint prepared for forthcoming modules, PLS8 provides longevity and a reliable path to the future for any high-bandwidth M2M application.

#### Multi Design Capability

The unique PLS8 footprint, based on LGA technology, offers seamless migration from 3G GSM to CDMA to LTE within a single design footprint. Compatibility with the world's first M2M grade LTE wireless module ensures future-proof design and longevity of M2M applications.

#### Improved Power management

PLS8 features advanced power management technology to preserve battery power necessary for remote M2M devices and to reduce heat generation.

#### Gemalto M2M Support includes:

- > Personal design-in consulting for hardware and software
- > Extensive RF test capabilities
- > GCF/PTCRB conform pretests to validate approval readiness
- > Regular training workshops



Local engineers, a competent helpdesk, a dedicated team of R&D specialists and an advanced development center are the hallmarks of our leading support offer.

# Cinterion® PLS8

## GENERAL FEATURES

- > PLS8-E:  
Quad Band LTE: 800/900/1800/2600 MHz, FDD-Band (20,8,3,7)  
Tri Band UMTS (WCDMA): 900/1800/2100 MHz,  
FDD-Band (8,3,1)  
Dual Band GSM/GPRS/EDGE: 900/1800 MHz
- > PLS8-US  
Quad Band LTE: 700/850/AWS(1700/2100)/1900 MHz,  
FDD-Band (17,5,4,2)  
Tri Band UMTS (WCDMA): 850AWS(1700/2100)/1900 MHz,  
FDD-Band (5,4,2)  
Quad Band GSM/GRPS/EDGE: 850/900/1800/1900 MHz
- > LTE (FDD 3GPP Release 8/9  
2x2 DL-MIMO
- > UMTS/HSPA (FDD) 3GPP Release 8  
Rx diversity
- > GSM/GPRS/EDGE 3GPP Release 6  
DARP/SAIC
- > SIM Application Toolkit, 3GPP release 99
- > Control via AT commands (Hayes, TS 27.007, TS 27.005)
- > Fully integrated GPS/GLONASS solution (Qualcomm  
gpsOne Gen8A)
- > Supply voltage range 3.3 - 4.2 V, highly optimized  
for minimal power consumption
- > Dimension: 29 × 33 × 2 mm
- > Operating Temperature Range: -40 °C to +85 °C
- > RoHS and REACH compliant, EuP support

## SPECIFICATIONS

- > LTE Cat. 3  
DL: max. 100 Mbps, UL: max. 50 Mbps, 2x2 DL MIMO
- > HSPA+ DL Cat.24 / UL Cat. 6, Dual Carrier  
DL: max. 42 Mbps, UL: max. 5.76 Mbps
- > UMTS  
DL: max. 384 kbps, UL: max. 384 kbps
- > EDGE Class 12 data rates  
DL: max. 237 kbps, UL: max. 237 kbps
- > GPRS Class 12 data rates  
DL: max. 85.6 kbps, UL: max. 85.6 kbps
- > Voice Support (HR, FR, EFR, AMR narrowband & AMR  
wideband)
- > Voice Support for LTE via CSFB (circuit-switched fall-  
back), prepared for VoLTE
- > Supplementary services & USSD support
- > SMS text and PDU mode

## SPECIAL FEATURES

- > USB interface supports multiple composite modes  
and a Linux-/Mac- compliant mode
- > Firmware update via USB

## GPS/GLONASS FEATURES

- > Standalone GPS and GLONASS
- > GNSS dedicated AT commands
- > A/GPS support: standalone, XTRA®, CP E911
- > Protocol: NMEA-0183 V2.3
- > Option for temporary NMEA stream buffering
- > Tracking Sensitivity: better than -158 dBm

## INTERFACES

- > 156 pad LGA mount
- > Pad for primary GSM/WCDMA/LTE Antenna
- > Pad for secondary WCDMA Rx Diversity & LTE DL-MIMO  
Antenna
- > Pad for GPS Antenna
- > Digital audio interfaces (PCM or I2S)
- > USB 2.0 HS interface up to 480 Mbps
- > UICC and U/SIM card interface 1.8 V and 3 V

## DRIVERS

- > NDIS/USB driver for Microsoft®  
Windows Vista™, Windows 7™ and Windows 8™
- > RIL driver for devices based on Android OS™
- > USB driver for Microsoft® Windows  
Embedded Compact™
- > CDC-ACM compliant mode for Linux

## APPROVALS

- > R&TTE, FCC, IC, UL
- > GCF, PTCRB
- > AT&T and other local approvals and certifications on  
request

**For more information, please visit**

[m2m.gemalto.com](http://m2m.gemalto.com), [www.facebook.com/gemalto](http://www.facebook.com/gemalto), or Follow @gemaltom2m on twitter.

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