gemalto

security to be free

PLS8

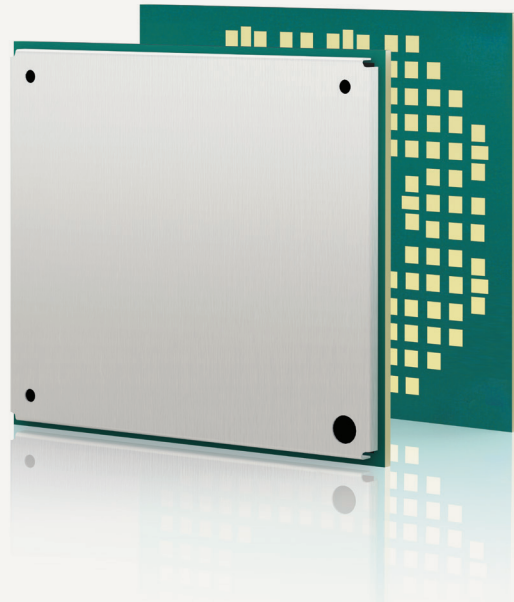|			
4G	Penta Band LTE Tri Band UMTS/ DC-HSPA+		Full voice support
	GPRS/EDGE Quad/Dual Band		GPS / A-GPS / GLONASS
	Multi Design Capability (LGA)		Extended Temperature Range
	USB 2.0 High Speed compatible		Multi OS support
	Embedded TCP/IP Stack	**BIP**	Bearer Independent Protocol

LTE

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

— PRELIMINARY VERSION —

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 highest available speeds for up- and downlink in mobile networks.

PLS8 and its variants, PLS8-E, PLS8-US, PLS8-X and PLS8-V, provide 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. In addition the PLS8 footprint is prepared for future migration to Gemalto's LTE Advanced offering.

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. 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 and stencil hight fitting 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

33 mm   2,9 mm
29 mm
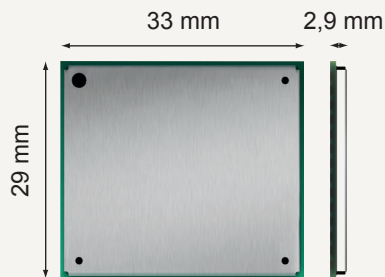
Maximum MNO Flexibility
PLS8-X supports (AT&T, T-mobile and Verizon) in only one variant. Depending on activated SIM/MIM correct network configurations will be automatically detected. 2G/3G is also supported for maximum roaming capability.

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 investment protection.

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:
  Penta Band LTE: 800/900/1800/2100/2600 MHz;
  FDD-Band (20,8,3,7,1); 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): 850/AWS
  (1700/2100)/1900 MHz; FDD-Band (5,4,2)
  Quad Band GSM/GPRS/EDGE: 850/900/1800/1900 MHz
- > PLS8-X:
  Penta Band LTE: 700/700/850/AWS (1700/2100)/1900 MHz;
  FDD-Band (13,17,5,4,2)Tri Band UMTS (WCDMA): 850/AWS
  (1700/2100)/1900 MHz; FDD-Band (5,4,2);
  Quad Band GSM/GPRS/EDGE: 850/900/1800/1900 MHz

- > PLS8-V:
  Tri Band LTE: 700/AWS (1700/2100)/1900 MHz;
  FDD-Band (13,4,2); LTE only
- > LTE (FDD 3GPP Release 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 × 2,9 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
- > 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) (PLS8-US/-E)
- > Handsfree speaking (PLS8-US/-E)
- > Voice Support for LTE via CSFB (circuit-switched
  fallback) (PLS8-US/-E)
- > Supplementary services & USSD support
- > SMS text and PDU mode
- > Verizon APN class handling (PLS8-V /-X)

SPECIAL FEATURES

- > USB interface supports multiple composite modes
  and a Linux-/Mac- compliant mode
- > Firmware update via USB
- > BIP (Bearer Independent Protocol)

- > IP services (Client & server, TCP/IP & UDP,
  transparent & nontransparent)
- > Multiplexer according to 3GPP TS 27.010
- > Automatic Carrier Switching (PLS8-X)

GNSS 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
- > Pads for primary, secondary Antenna and GNSS
- > Digital audio interfaces (PCM or I2S) (PLS8-US/-E)
- > USB 2.0 HS interface up to 480 Mbps

- > 2 UICC (SIM/MIM) interfaces 1.8V / 3V
- > Serial Interface (UART)
- > 10 GPIOs including Network Status and Low Current
  Indication, 2 ADCs

DRIVERS

- > NDIS/USB driver for Microsoft®
  Windows Mobile™, Windows Vista™, Windows 7™ and
  Windows 8™
- > USB driver for Microsoft® Windows Embedded Compact™

- > RIL driver for devices based on Android OS™
- > CDC-ACM compliant mode for Linux

APPROVALS

- > R&TTE, GCF, CE, FCC, IC, PTCRB, UL
- > California RoHS

- > AT&T and Verizon operator approvals
- > Other local approvals and certifications on request

For more information, please visit
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