PLS63-W

Cinterion PLS63-W Series

LTE Cat. 1 with 2G/3G fallback for global and regional IoT connectivity

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Global and Regional LTE coverage with fallback options
▮ LTE Cat 1, Global and multiple Regional variants with latest network bonds grouping
▮ 3G and 2G fallback

Fully Featured modem implementation
▮ Integrated IP connectivity
▮ VoLTE and CS voice
▮ extended set of AT commands

Lower Total Cost of Ownership
▮ Embedded GNSS
▮ Embedded SIM
▮ Embedded Processing

State of the art security
▮ Secure boot
▮ Secure key store
▮ Key life cycle management

Easy Connectivity and Lifecycle Management
▮ Secure enrollment toward main cloud platforms
▮ Remote update and device management

The Cinterion® PLS63-W provides cost-optimized global IoT connectivity delivering 18 Band LTE Cat.1 with 2G/3G fallback for seamless coverage across various wireless networks. When global connectivity is not required, a suite of variants deliver targeted regional connectivity for North America, Europe and APAC, Latin America and Japan. Offering IoT optimized speeds of 10Mbit/s download and 5Mbit/s uplink, the PLS63 IoT module is ideal for industrial smart IoT applications such as vending, point of sales, transportation and industrial automation. All of these applications require the longevity and stability of LTE networks along with continuous coverage in regions where a 4G connection is not present.

Key Features

The Cinterion PLS63-W LTE Cat.1 module delivers 18 Band LTE Cat.1, Eight Band 3G HSPA/UMTS and Quad-Band GSM for seamless global coverage from a single product SKU with regional variants providing more targeted coverage. The feature-packed device includes a comprehensive AT command set for simplified device control along with IP connectivity, voice over LTE (VoLTE) and circuit switched voice. Integrated GNSS support (GPS/BeiDou/Galileo/GLONASS) provides precise positioning and timing data. Optional embedded eSIM technology strengthens security, reduces design complexity and simplifies manufacturing and logistics, while optional embedded processing further streamlines design and development while optimizing total cost of ownership. What's more, advanced security features including a secure boot, secure storage and key lifecycle management protect data and devices.

Offered in the Cinterion Industrial Plus form factor, the PLS63 series offers footprint compatibility with Cinterion IoT modules ranging from 2G to ultra-high-speed LTE. In particular, the PLS63 series offers seamless software and hardware compatibility for all variants with the Cinterion PLS83 LTE Cat.4 IoT module. This greatly improves deployment agility and simplifies migration between technologies. Additionally, all Cinterion modules come with Full Type and carrier approvals plus expert technical support to help speed time to market.

Seamless integration with Cinterion IoT Suite ensures long life solutions

The PLS63-W is supported by the Cinterion IoT Suite, an optional platform that manages the connectivity, lifecycle and security of IoT solutions to ensure continuity and longevity.

Optional eSIM simplifies and secures IoT connectivity

The PLS63 family can be supplied with an optional embedded SIM. It works seamlessly with Thales's subscription management solution to maintain connectivity for the lifecycle of devices. All this simplifies integration, manufacturing and logistics and helps to lower TCO.

Regional variants meet all connectivity needs

When global coverage is not required, regional variants provide targeted coverage: PLS63-EP for Europe/Asia providing 7 Band LTE Cat.1, three Band 3G HSPA/UMTS and Quad-Band GSM; PLS63-J for Japan delivering 6 Band LTE Cat.1 and Quad-Band 3G HSPA/UMTS; PLS63-LA for LATAM delivering a regional approach to IoT connectivity providing 11 Band LTE Cat.1, six-Band 3G HSPA/UMTS and Quad-Band GSM; and PLS63-X for NORAM providing 10 Band LTE Cat.1 and Tri-Band 3G HSPA/UMTS.

General Features

- 3GPP Rel.10 Compliant Protocol Stack
- FDD-LTE: bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 18, 19, 20, 26, 28, 66
- TD-LTE: bands 38, 40, 41
- UMTS (WCDMA/FDD): bands 1, 3, 2, 4, 5, 6, 8, 19
- Quad Band GSM: 850, 900, 1800, 1900 MHz
- Integrated GNSS support (GPS/BeiDou/GLONASS/Galileo)
- SIM Application Toolkit, letter classes b, c, e with BIP and RunAT support
- Control via standardized and extended AT commands (Hayes, TS 27.007 and 27.005)
- Embedded IP stack with IPv4 and IPv6 support
- TCP/IP stack access via AT command and transparent TCP/UDP services
- Secure Connection with TLS/DTLS
- Internet Services TCP/UDP server/client, DNS, Ping, HTTP, SMTP, FTP client
- LGA pad soldering mount, MSL3
- Supply voltage range: 3.0 - 4.5 V
- Dimension: 33 x 29 x 2.6 mm
- Operating temperature: -40°C to +95°C
- RoHS compliant

Specifications

- FDD-LTE Cat.1
  DL: max. 10.2 Mbps, UL: max. 5.2 Mbps
- HSPA+ Cat.8 data rates
  DL: max. 7.2 Mbps, UL: max. 5.76 Mbps
- E/GPRS Class 12
  DL: max. 237 kbps, UL: max. 237kbps
- SMS text and PDU mode support
- Multiple Operator VoLTE support, CSFB (circuit-switched fallback)
- High quality narrow and wideband voice support for handset, headset and hands-free operation (HR, FR, EFR and AMR-WB)

Special Features

- USB Interface features a composite mode, compliant to Windows, Linux and Mac
- Firmware update via USB and ASC
- RLS Monitoring (Jamming detection)
- Informal Network Scan
- Cell ID based Location Support
- Cinterion® IoT Suite Services: firmware updates, trusted identity
- Embedded Processing (optional)
- eSIM

Approvals

- RED, GCF, FCC, PTCRB, IC, UL, CCC, IFETEL, UKCA, Anatel, JATE, TELEC
- AT&T (Firstnet), Verizon, Telstra, NTT Docomo, KDDI

Interfaces

- Power Supply for Baseband, Radio Domain
- Pads for RX-Diversity /MIMO Antennas
- Pads for GNSS antenna
- USB 2.0 interface up to 480 Mbps
- High speed serial modem interface ASC0
- 16 GPIO lines shared with DSR, DTR, DCD (all ASC0), ASC1 (RXD, TXD, RTS, CTS), SPI, Fast-Shutdown, Network-Status-Indication, PWM, Pulse-Counter lines, TX-Indicator, 700MHz-Indicator
- ADC and I2C interface
- Digital audio interface (PCM and I2S modes)
- Dual UICC and U/SIM card interfaces 1.8V/3V
- Lines for Module-On and Reset
- DAI
- SGMII

Drivers

- USB, MUX driver for Microsoft® Windows 7™, Microsoft® Windows 8™ and Microsoft® Windows 10™
- RIL Driver for Android
- Ofono for Linux