

PDS6-J



Five Band 3G
HSPA



Java
embedded



Multi Design
Capability
(LGA)



Advanced
Temperature
Management



USB 2.0
High Speed
compatible



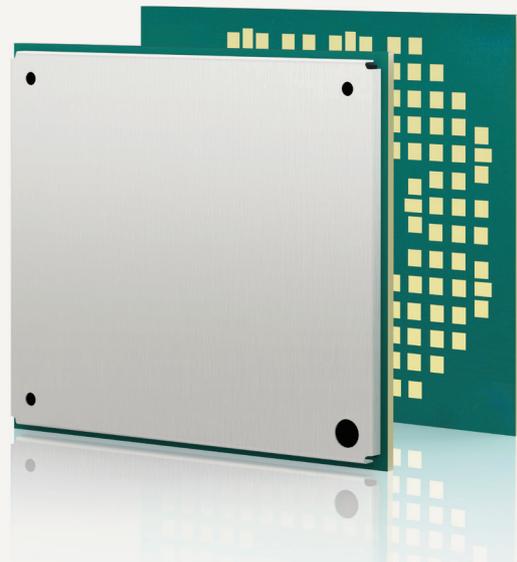
RLS Monitoring
(Jamming
Detection)



Embedded
TCP/IP Stack



FOTA
configurable &
free of charge



3G

Cinterion® PDS6 Wireless Module

3G with Java™ embedded for the Japan market

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Gemalto is proud to introduce the Cinterion® PDS6-J, the 5th generation of Gemalto M2M's Java embedded machine-to-machine (M2M) module, now approved for use in Japan! The PDS6-J offers five band HSPA transmission, an integrated Java Virtual Machine (JVM) running on an ARM11 processor, and is fully certified to support both voice and data traffic. In addition to its wide variety of interfaces, low power consumption, and unique fit within the Industrial Plus family, it is designed to reduce total cost of ownership (TCO) by reducing development time, Bill of Material (BOM), and approval cost.

With its powerful ARM11 processor, embedded Java Virtual Machine (JVM), and large flash file size, PDS6-J is powerful enough to run multiple functional and business applications simultaneously in the module. This internal processing power helps to offload or even replace device application processors, reducing overall Bill of Material (BOM) cost.

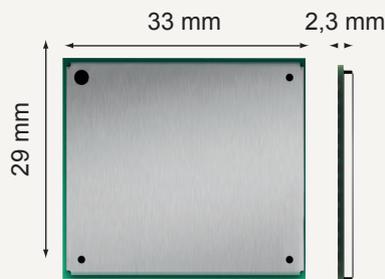
Thanks to open source nature JAVA, many pieces of source code and libraries can be found on the Internet. This can help reduce the development time for engineers to create application and business logic. In addition customers can refer to the Gemalto M2M developers portal (developer.gemalto.com), which provides sample code as well as support and design advice. Once this code is created, it can

be transferred to any other JVM embedded Cinterion module, allowing a technology agnostic future proof software development. An additional benefit to using the JVM is that all code and changes implemented to the module are on the application layer and therefore independent approvals and certifications, ensuring that your changes do not incur new approval costs.

PDS6-J also brings technology flexibility by offering the same footprint as the rest of the Gemalto M2M Industrial Plus family. This includes not only the market recognized quality leader, PHS8-J, but a complete portfolio of global solutions allowing migration across 1xRTT, CDMA, Multimode and LTE. This ensures that a single hardware design can support all global operator and technology requirements.

In addition to its embedded processing and global offering, Gemalto M2M's unique Land Grid Array (LGA) package perfectly suited to the manufacturing needs of small, high-volume M2M devices with a focus on reliable and efficient processes. The compact hardware design incorporates minimal power consumption, optimized heat dissipation (even under harsh operating conditions) and an extended product lifecycle to guarantee long product availability. The PDS6-J is ideal for M2M applications in the Japan market which require safe, reliable connectivity.

Global 3G with Java™ Embedded



BIP (Bearer Independent Protocol)

BIP secures broadband speed to the eUICC (MIM / classic) to enable On-Demand Provision Service (OPS) and Remote Application Management through a direct connection between the eUICC and the network based on internal TCP/IP stack. As a result it enables instant data connectivity on first use of a device, as well as a flexible mobile subscription throughout the lifecycle and a reduced number of customer device variants.

Multi Design Capability

The unique PDS6-J footprint, based on LGA technology, offers seamless migration from 3G GSM to LTE as well as many global variations within a single design footprint. Compatibility with the world's first M2M grade LTE wireless module ensures future-proof design and investment protection.

Java™

Java offers easy and fast application development, a broad choice of tools, high code reusability, easy maintenance, a proven security concept, on-device debugging as well as multi-threading programming and program execution.

Gemalto M2M Support includes:

- > Personal design-in consulting for hardware and software
- > Extensive RF test capabilities
- > 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® PDS6-J Features

GENERAL FEATURES

- > 3GPP Rel.7 Compliant Protocol Stack
- > Five Bands UMTS (WCDMA/FDD)
Bands: 2100 MHz (Band 1), 900MHz (Band 8), 850 MHz (Band 5), and 800 MHz (including Band 6 and 19)
- > SIM Application Toolkit, letter class "b", "c", "e"
- > Control via standardized and extended AT commands (Hayes, TS 27.007 and 27.005)
- > TCP/IP stack access via AT command and transparent TCP services
- > Secure Connection for client IP services
- > Internet Services TCP/UDP server/client, DNS, Ping, FTP client, HTTP client
- > Supply voltage range 3.3 - 4.5 V, highly optimized for minimal power consumption
- > Dimension: 29 x 33 x 2.3 mm
- > Weight: 5 g
- > Operating Temperature: -40 °C to +90 °C

SPECIFICATIONS

- > HSDPA Cat.8 / HSUPA Cat.6 data rates DL: max. 7.2 Mbps, UL: max. 5.76 Mbps
- > SMS text and PDU mode support
- > High quality voice support for handset, headset and hands-free operation via analog and digital interface
- > Integrated TTY modem
- > Speech codec: AMR

SPECIAL FEATURES

- > USB interface supports multiple composite modes and a Linux-/Mac- compliant mode
- > Firmware update via USB and serial interface
- > Real time clock with alarm functionality
- > Multiplexer according 3GPP TS 27.010
- > RLS Monitoring (Jamming detection)
- > Informal Network Scan
- > Customer IMEI/SIM-Lock as variant
- > Integrated FOTA, configurable and free of charge

JAVA OPEN PLATFORM

- > Java™ ME 3.2
- > Secure data transmission with HTTPS/SSL
- > Multi-Threading programming and Multi-Application execution
- > 10 MB RAM and 10 MB Flash File System

INTERFACES (LGA PADS)

- > Pad for WCDMA Antenna
- > USB 2.0 HS interface up to 480 Mbps
- > High speed serial modem interface ASC0
- > SPI interface
- > PC - interface
- > 8 GPIO lines shared with Fast-Shutdown, PWM, USB Host Wakeup and eSE ISO lines
- > ADC interface
- > Pulse-Counter line
- > Digital and analog audio interfaces
- > UICC and U/SIM card interface 1.8 V / 3 V
- > Lines for Module-On, Status-Indication and Reset

DRIVERS

- > USB, MUX driver for Microsoft® Windows XP™, Vista™ and 7™
- > RIL, USB driver for Microsoft® Windows Embedded Handheld™ >= 6.x
- > USB, MUX driver for Microsoft® Windows Embedded Compact™ >= 5.x

APPROVALS

- > Japan Radio Law and Telecommunications Business Law approvals
- > NTT Docomo certifications
- > RoHS and REACH compliant

For more information, please visit

www.gemalto.com/m2m, developer.gemalto.com, www.facebook.com/gemalto,
or follow @gemaltoloT on twitter.

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