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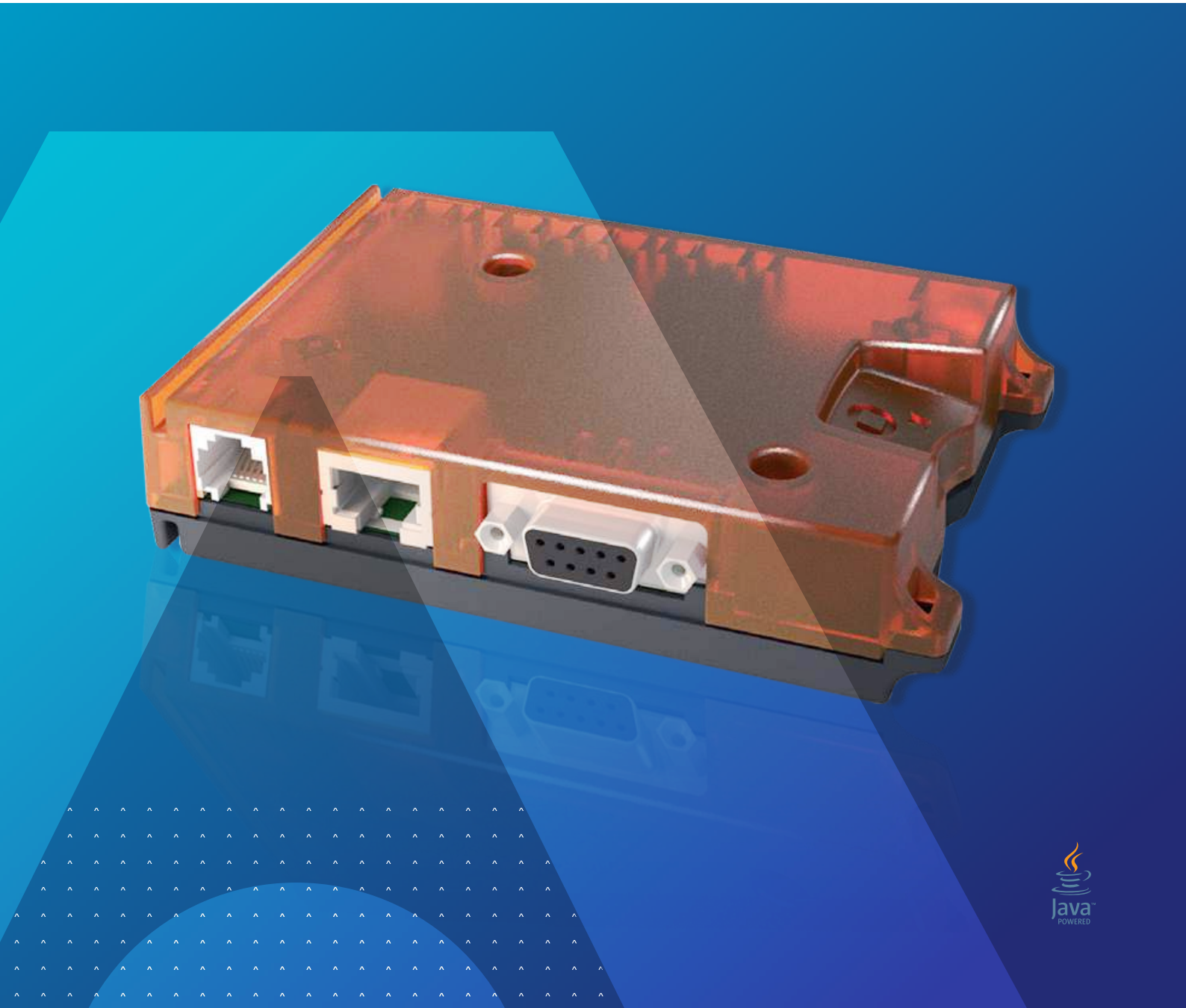
THALES

TERMINALS

Cinterion® EHS6 Terminal

3G Highspeed M2M Gateway powered by Java™



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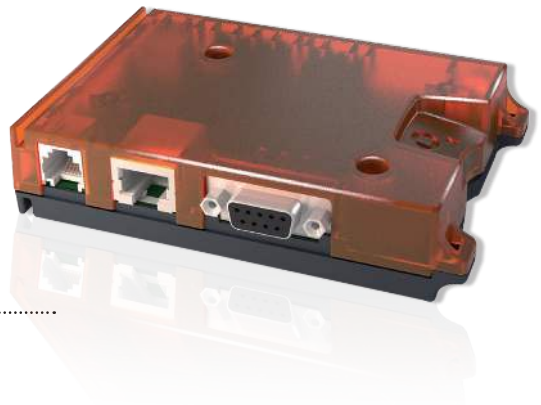
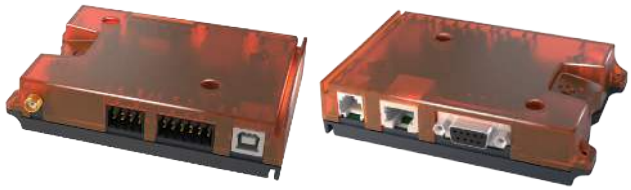


EHS6 Terminal

- Five Band 3G HSPA
- Quad Band GPRS / EDGE Class 12
- Ethernet Interface
- Java Embedded
- USB 2.0 High Speed Compatible
- Advanced Temperature Managment
- Embedded TCP/IP Stack
- RLS Monitoring (Jamming Detection)
- FOTA Configurable & Royalty-Free
- Flexible Mounting

Thales's new suite of Cinterion® 3G Smart Terminals takes M2M simplicity to a whole new level. Leveraging Thales's next-generation Java® embedded technology, the plug-and-play solutions powered by a five-band HSPA+ baseband enable high-speed, secure wireless TCP/IP connectivity anywhere in the world for a variety of industrial applications such as metering, remote monitoring, transportation, security and many more. The Cinterion gateways come in three versions providing universal industrial interfaces e.g. USB or Ethernet are encased in a compact, rugged housing with integrated SIM cardholder and unprecedented mounting options. They provide first-time M2M developers and small-scale implementers with a flexible, cost effective solution to quickly launch enterprise optimization solutions that expand the Internet of Things. Optional features include embedded component SIM (MIM) and a cloud based SensorLogic application enablement platform that enable out-of-the-box M2M communication reducing integration complexity and Total Cost of Ownership. Like all Cinterion products, the SMART 3G terminals comes with full type approval (FTA) and is certified by the largest carriers worldwide.

Plug-and-Play with Most Flexible Mounting



Plug & Play, Power over Ethernet (PoE)

EHS6 Terminals are simple and reliable plug-and-play communication devices that allow new M2M implementers to quickly connect their industrial applications using wireless technology, with very little integration and approval efforts.

Alternative Power over Ethernet (PoE) for the EHS6T-LAN offers two additional benefits: further cost savings and flexibility of device placement. Because PoE runs data and power together over the same cable to each device attached to the local area network (LAN), devices can be installed without additional power supply and without concern for the proximity to individual AC outlets.

Embedded 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.

Highly Flexible Mounting Concept

Encased in robust plastic housing, the miniaturized terminal works in virtually any application providing secure 24-7 connectivity. For quick and easy implementation, the terminal is compatible with a variety of mounting schemes including: DIN rail mounting, C-rail mounting, Screw fixing or use of cable ties.

Terminal Variants

Interface / Productname	RS-232	RS-485	USB 2.0	Ethernet	Frequencies
EHS6T USB	•		•		Five Band 3G, Four Band 2G
EHS6T LAN	•			•	Five Band 3G, Four Band 2G
EHS5T		•	•		Dual-Band 2G/3G

Common to all are multiple GPIO's, I²C and SPI via Weidmüller connector.

Thales 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® EHS6 Terminal Features

General Features

- 3GPP Rel.7 Compliant Protocol Stack
- Five Bands UMTS (WCDMA/FDD)
  Bands: 800, 850, 900, 1900 and 2100 MHz
  EHS5T: Dual Band (900, 2100 MHz)
- Quad-Band GSM
  Bands: 850, 900, 1800 and 1900 MHz
  EHS5T (900, 1800 MHz)
- SIM Application Toolkit, letter class "b", "c", "e"
- Control via standardized and extended ATcommands (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
- PoE - Power over Ethernet, optional (EHS6T-LAN only)
- Supply voltage range 8 – 30 V
- Dimension: 115 x 86 x 26 mm (incl. connectors)
- Weight: approx 130g
- Operating Temperature: -30 °C to +65 °C

Specifications

- HSDPA Cat.8 / HSUPA Cat.6 data rates
  DL: max. 7.2 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
- CSD data transmission up to 9.6 kbps, V.110, non-transparent
- SMS text and PDU mode support

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
- Programmable hardware watchdog
- Flexible mounting concept
- Integrated FOTA, configurable and royalty free
- Embedded SIM as an option (MIM)

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

- Antenna Connector SMA (female) for GSM/WCDMA
- 20 pin header (Weidmüller) with GPIO's, power, SPI, I²C
- Mini SIM card reader, 1,8V and 3,0V
- Embedded SIM as an option (MIM)
- 2 operating status LED's
- 4-wire high speed serial interfaces ASC1
- EHS6-T USB:
  - USB (B) 2.0 HS interface
  - Plug-in power supply connector (6-pole Western jack)
  - V.24/ V.28 RS-232 interface, up to 920kbps, auto-bauding (D-sub 9-pole female socket)
- EHS6-T LAN:
  - add. Ethernet interface (NAPT)
- EHS5T:
  - RS-485 and USB (B) 2.0 HS interface

Drivers

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

Approvals

- R&TTE, GCF, CE, FCC*, PTCRB*, IC*, UL
- AT&T* and other local approvals and provider Certifications*) EHS6-T only
- WEEE, EuP, RoHS and REACH compliant

Thales in IoT: Driving digital transformation with the power of the IoT

Thales delivers innovative IoT technology that simplifies and speeds enterprise digital transformation. For more than 20 years, our customers – in a wide range of industries - trust our IoT solutions to seamlessly connect and secure their IoT devices, maximise field insights, and accelerate their global business success.

Thales solutions:

- **Connect** assets to wireless networks and cloud platforms
- **Manage** the long lifecycle of IoT solutions
- **Secure** devices and their data
- **Analyse** real-time data transforming it into business intelligence that improves decision making

Our 360° approach provides the essential building blocks needed to simplify design, streamline development and accelerate time-to-market.

For more information, please visit **www.thalesgroup.com/IoT** or follow **@ThalesIoT on Twitter**

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