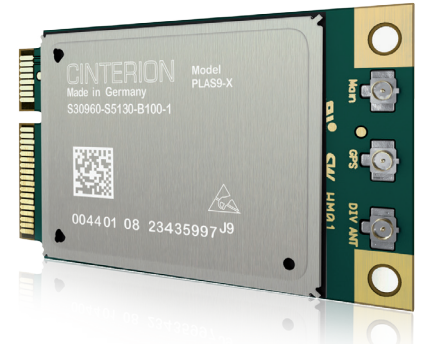THALES

Cinterion® 4G Modem Cards

Global LTE Cat 1, Cat 3 and Cat 6 Connectivity for Industrial Solutions

Cinterion® LTE Modem Cards

Global Connectivity in LTE Cat 1, Cat 3 and Cat 6 Product Variants

LTE Modem Cards

4G — **LTE Advanced Cat 1, Cat 3 and Cat 6 Solutions**

2G /3G Fallback Variants

USB 2.0 Compatible

Incremental FOTA

JAVA Embedded*

RLS Monitoring (Jamming Detection)

GPS/A-GPS/ GLONASS*

SIM card holder

Plug & Play, fits 52-pin express socket

*) Depending on product variant

Thales Cinterion® LTE Modem Cards deliver instant access to cellular networks offering LTE Cat 1, Cat 3, and Cat 6 connectivity with optional 2G / 3G fallback when needed.

The devices are very easy to integrate by simply plugging into an existing 52-pin express card slot. They leverage a variety of Cinterion IoT Modules to meet the diverse needs of industrial solutions. These range from highly efficient LTE Cat 1 with IoT optimized speeds of 10Mbit/s download and 5Mbit/s uplink for applications not dependent on speed, all the way to high performance LTE Cat 6 enabling sizzling data speeds of 300 Mbit/s download and 50 Mbit/s uplink for advanced solutions including industrial routers, kiosk systems and video surveillance applications.

Three Product Variants Have Got You Covered. Globally.

Cinterion LTE Modem Cards provide global coverage and reliability from three product variants:

The Cinterion mPLS62 Modem Card delivers global connectivity from a single device, featuring 12 Band FDD-LTE, seven Band 3G HSPA/UMTS (WCDMA/FDD) and Quad Band 2G GSM. A powerful Java® embedded system enables fast and easy application development. It can simultaneously host and run multiple applications and supports free firmware updates over-the- air (FOTA) when required.

The Cinterion mPLS8 Modem Card offers worldwide coverage and GPS. It delivers Penta Band LTE, Tri- Band UMTS/WCDMA and Dual-Band GSM/GPRS/ EDGE. Two antenna pads enable diversity support for improved data speeds, and an optimized GPS antenna path eliminates blanking for more consistent performance.

The Cinterion mPLAS9 LTE Modem Card delivers eleven Band LTE Advanced, Quad-Band LTE-Advanced TDD plus 2G / 3G fallback for global coverage. It features an innovative RF concept for extreme performance, enhanced sensitivity and connection stability. It enables carrier aggregation for enhanced peak data rates and optimized use of spectrum for improved connectivity performance.
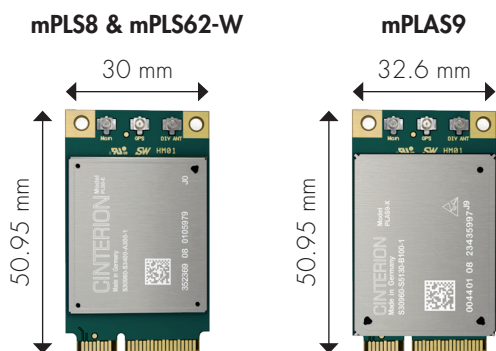
Cinterion Modem cards are ideal for any IoT application that encompasses the commonly used 52-pin express connector in its product design. The cost effective LTE Modem Cards deliver industrial quality and rugged durability while eliminating the need for soldering in small and mid-sized projects.

Industrial Plus Family Benefits

Cinterion Modem Cards feature proven IoT modules from the Industrial Plus product family, which leverage the latest wireless standards to deliver IoT optimized data speeds and Multi Band capabilities for seamless global coverage.

The Modem Cards provide seamless migration to next generation products within in the family to protect your IoT investment. Like all Cinterion products, they come with full type approval (FTA) and they are certified by the largest global network operators. All Cinterion connectivity products are compatible with Thales's comprehensive suite of solutions, services and platforms that help enterprises Connect, Secure and Monetize IoT technology.

Instant LTE with Multi Band Cat 1, Cat 3 and Cat 6 Connectivity

mPLS8 & mPLS62-W
30 mm
50.95 mm

mPLAS9
32.6 mm
50.95 mm

Instant Plug and Play Access to LTE Networks

Cinterion LTE Modem Cards quickly plug into existing 52-pin express sockets card slots to provide instant access to cellular networks for any industrial IoT application.

Complete and Seamless Global IoT Connectivity

The suite of LTE Modem Cards deliver a complete global approach to instant IoT connectivity providing Multi Band LTE, Multi Band 3G HSPA/UMTS and Quad Band GSM for seamless coverage and roaming across different wireless networks.

IoT Optimized Power Management

An advanced power management system ensures Modem Card reliability and provides optimized sleep mode to preserve power end extend battery life.

The Thales Advantage:

Since 1996, Thales has been pioneering market-leading M2M and IoT products that keep our customers on the leading edge of innovation. Unique value added benefits include:

▮ Trusted partner to 450+ global MNOs ensures products evolve in sync with networks and modules are pre-certified for all global mobile networks

▮ Core competency in MIM, SIM and eUICC technology allows simplified integration with modules and lower Total Cost of Ownership

▮ Expert design consulting, local market engineering support and a skilled 24/7 help desk streamline development and deployment

▮ Global leader in digital security solutions and platforms

▮ Experienced provider of software solutions for Quality of Service and product lifecycle management

▮ Extensive RF test capabilities and GCF/PTCRB pretests to validate readiness for solution approval process

Cinterion® Modem Cards Features

	mPLS62-W LTE CAT 1 MODEM CARD	mPLS8 LTE CAT 3 MODEM CARD	mPLAS9 LTE CAT6 MODEM CARD
DIMENSIONS	50.95 x 30 x 5.56 mm	50.95 x 30 x 4.7 mm	50.95 x 32.6 x 5.3 mm
OPERATING TEMPERATURE	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
GENERAL FEATURES	**mPLS62-W:** 3GPP Release 9 **Twelve Bands LTE** 1, 2, 3, 4, 5, 7, 8, 12, 18, 19, 20, 28 **Seven Bands UMTS** 1, 2, 4, 5, 8, 9, 19 **Four Bands GSM:** 850, 900, 1800 and 1900 MHz	**mPLS8-US Variant:** **Four Bands LTE** 2, 4, 5, 17 **Three Bands UMTS** 2, 4, 5 **Four Bands GSM** 850, 900, 1800 and 1900 MHz **mPLS8-E Variant:** **Five Bands LTE** 20, 8, 3, 1, 7 **Three Bands UMTS** 8, 3, 1 **Two Bands GSM** 900, 1800 MHz	**mPLAS9-X Variant:** **Seven LTE-Advanced FDD** 12, 13, 17, 29, 5, 4, 2 **Three Bands UMTS** 2, 4, 5 **Four Bands GSM** 850, 900, 1800 and 1900 MHz **mPLAS9-W Variant:** **Eleven Bands LTE-Advanced FDD** 1, 3, 5, 7, 8, 18, 19, 20, 26, 28A/B **Four Bands LTE-Advanced TDD** 38, 39, 40, 41 **Five bands UMTS** 5, 6, 8, 3, 1 **Two bands GSM** 900, 1800 MHz
MODULE 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 Full & Incremental Firmware update via USB	LTE Cat. 3 DL/UL max: 100 Mbps / 50 Mbps HSPA+ DL Cat. 24 / UL Cat. 6, Dual Carrier DL/UL max: 42 Mbps / 5.76 Mbps UMTS DL/UL: max. 384 kbps EDGE Class 12 DL/UL: max. 237 kbps GPRS Class 12 DL/UL: max. 85.6 kbps Multiple Operator VoLTE support, CSFB (circuit-switched fallback)	LTE Cat. 6, DL CA up to 40MHz, DL/UL max: 300 Mbps / 50 Mbps HSPA+ Dual Carrier DL Cat. 24/ UL Cat. 6, DL/UL max: 42 Mbps / 5.76 Mbps UMTS DL/UL: max. 384 kbps EDGE Class 12 DL/UL: max. 237 kbps GPRS Class 12 DL/UL: max. 85.6 kbps
SPECIAL FEATURES	USB Interface features a composite mode, compliant to Windows, Linux and Mac Firmware update via USB RLS Monitoring (Jamming detection) Informal Network Scan Cell ID based Location Support	2x2 DL-MIMO support RX diversity support Integrated GPS / GLONASS / GALILEO solution Multiplexer according to 3GPP TS 27.010 USB interface supports multiple composite modes and a Linux-/Mac- compliant mode Full & Incremental Firmware update via USB	Intra-Band-Contiguous and Inter-Band Carrier Aggregation (CA) in Downlink (DL) 2x2 DL-MIMO support Antenna diagnostics

Cinterion® Modem Cards Features

	mPLS62-W LTE CAT 1 MODEM CARD	mPLS8 LTE CAT 3 MODEM CARD	mPLAS9 LTE CAT6 MODEM CARD
REGULATORY APPROVALS*	RED, GCF, FCC, PTCRB, IC, CE, RoHS, REACH and Regulatory approvals	RED, GCF, FCC, PTCRB, IC, CE, RoHS, REACH and Regulatory approval	RED, GCF, FCC, PTCRB, IC, CE, RoHS, REACH and Regulatory approvals
DRIVERS	USB, MUX driver for Microsoft® Windows® RIL Driver for Android RIL, USB driver for Microsoft® Windows Embedded Handheld™	NDIS USB, MUX driver for Microsoft® Windows®; Microsoft Windows mobile® Android™ RIL driver USB & MUX driver for Linux®	NDIS USB driver for Microsoft® Windows® Android™ RIL driver USB for Linux®

*) based on module approvals

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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