

SGX31

Smart LTE-M, NB-IoT Gateway for Edge Computing



Key Features

The Cinterion® SGX31 Smart Gateway builds on the proven EGX81 IoT gateway solution and adds a GPIO connector for applications requiring sensor interfacing, actuator control, data processing or protocol translation at the edge.

Offering out-of-the-box worldwide Cat-M or NB-IoT connectivity with 2G fallback, the SGX31 Smart IoT Gateway provides a flexible, cost-effective platform for connecting industrial assets using the latest LPWA technology. The smart gateway adds support for USB, a dedicated GNSS antenna and embedded processing via the Cinterion ThreadX SDK.

The 20-pin GPIO connector (GPIOs, SPI, I2C, PWM) enables a wider range of applications, making the SGX31 ideal for industrial monitoring, industrial sensors, asset tracking, security and agricultural applications. The gateway connects sensors, IoT modules and smart devices to the cloud, giving devices access to the Internet with edge computing. The plug-n-play SGX31 provides reliable and efficient global coverage and is ideal for low-power applications.

Flexible, Cost-Efficient LTE Smart Gateway for industrial monitoring, sensors and more

The Cinterion SGX31 offers affordable LTE connectivity with data speeds of up to 300 kbps for applications that require cost-effective, efficient data speeds.

The next-generation gateway is designed to operate in an extended temperature range of -30°C to +75°C for industrial applications and features integrated GNSS (GPS/GLONASS/Beidou/Galileo), a USB2.0 interface, drivers for Windows® 10/11 and Linux distributions, as well as Trusted Identity for AWS and Azure and an optional eSIM.

The SGX31 reduces time to market by simplifying integration, manufacturing and logistics for a wide range of applications. Remote management via the Cinterion IoT Suite helps keep your fleet secure and up to date.

AVAILABLE FOR

Global



General Features

- LTE Cat. M1/NB1/NB2
 - FDD-LTE Bands for LTE Cat M1: 1, 2, 3, 4, 5, 8, 12, 13, 18, 19, 20, 25, 26, 27, 28, 66, 85
 - FDD-LTE Bands for LTE Cat NB1/NB2: 1, 2, 3, 4, 5, 8, 12, 13, 18, 19, 20, 25, 26, 28, 66, 71, 85
 - Quad-Band GSM: 850, 900, 1800 and 1900 MHz
 - Data only
- GNSS support (GPS, GLONASS, BeiDou, Galileo)
- SIM Application Toolkit with BIP
- Control via standardized commands (Hayes, TS 27.007 and 27.005) and Gemalto M2M AT commands
- Embedded IPv4 and IPv6 TCP/IP stack access via AT command and transparent TCP/UDP services
- Internet Services: TCP server/client, UDP client, DNS, Ping, HTTP client, FTP client, MQTT client
- Secure Connection with TLS/DTLS
- Supply voltage range: 5 - 30 V
- Dimension: 191 x 143 x 44 mm (excluding connectors)
- Operating temperature: -30°C to +75°C
- Weight: 130g (approx.)

Specifications

- LTE-M, NB-IoT with 2G fallback
 - 3GPP Rel.14 Compliant ProtocolX
 - Compliant to GSM phase 2/2H 3GPP Release VV
 - E/GPRS Class 10
- LTE Cat. M1 Class 5(H20dBm i2dB) for all supported LTE Cat. M1 bands
- LTE Cat. NB1/NB2 Class 5(H20dBm i2dB) for all supported LTE Cat. NB1/NB2 bands
- LTE Cat. M1 (HD-FDD)
- DL: max. 300kbps, UL: max. 1.1Mbps
 - LTE NB1 (HD-FDD)
- DL: max. 27kbps, UL: max. 63kbps
 - LTE NB2 (HD-FDD)
- DL: max. 124kbps, UL: max. 158kbps
 - Mobile Station class B
- SMS support (via NAS, via GSM)

Approvals

- RED, CE, FCC, UKCA, IC, UL, CCC
 - GCF, PTCRB
- Local approvals and major MNO certifications
 - REACH, RoHS and EuP compliant

Interfaces

- USB2.0
- 2 Antenna Connectors SMA (female) – Cellular and GNSS
- Mini-SIM card reader, 1.8V and 3.0V
- Plug-in power supply connector (6-pole Western jack)
- V.24 / V.28 RS-232 interface (D-sub 9-pole female socket)
- Operating status and Watchdog operation indication LED's

Drivers

- Windows® 10 and 11
- Linux®

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