

MTX-65i-ULP modem

Ultra Low Power Java enabled GSM/GPRS M2M Modem



Java programmable



GSM/GPRS Quad Band



RS232 port



USB 2.0 High Speed Port



Analog inputs & outputs



I2C GPIO



Extended Temperature Range



Automatic restart after shutdown



Audio handset connector



Ultra Low Power



The MTX-65i-ULP modem is an all-in-one solution consisting of a **Java J2ME programmable** modem that enables **GSM Voice, SMS, Fax and Data (GPRS class 12)**. The Quad Band functionality allows it to operate at all relevant GSM frequencies. It has an intrinsic and powerful TCP/IP communication stack with Internet Services such: TCP, UDP, HTTP, FTP, SMTP, and POP3.

The MTX-65i modem is a powerful GSM/GPRS radio system with **USB + RS232 + I2C** serial communication ports. It also includes **Analog-to-Digital** converters and **GPIOs**. You can develop and embed your **Java J2ME** code directly onto the modem to shorten time to market and reduce costs by avoiding external components.

The MTX-65i modem also has a new **Ultra Low Power** mode that only requires **2.5µA**. In this mode the GSM modem is completely powered-off: only the real time clock and wake-up logic are powered, allowing the modem to power on at a precise date/time or by an external event.

Industrial features: the modem can be used in industrial applications due to its extended operating temperature range. It also features an automatic restart after shutdown in case of faulty power conditions.

It is manufactured following ISO-9001 & ISO-14001 Quality certifications and it is RoHS/WEEE compliant.

General features

- Quad-Band GSM 850/900/1800/1900MHz
- GPRS multi-slot class 12
- SIM Application Toolkit, 3GPP release 99
- Control via AT commands (Hayes, TS 27.007, TS 27.005)
- TCP/IP stack access via AT commands
- Internet services: TCP, UDP, HTTP, FTP, SMTP, POP3
- Supply voltage range:
 - Maximum: 6.5 to 10VDC (typ. 7.2VDC)
- Average power consumption (at 12V) modes:
 - Ultra Low Power: 2.5µA
 - Power down: 10mA
 - Sleep mode (registered DRX=6): 12mA
 - Idle mode (registered DRX=6): 17mA
 - Speech mode and GPS tracking: 109mA
 - GPRS class 12 and GPS tracking: 202mA
- Operating temperature range: -30°C to +80°C
- Dimensions, excluding connectors: 78.1 x 66.8 x 37.2mm
- Weight: <190 g
- IP30 enclosure
- Powered by Cinterion TC65i FW2.0 module

Interfaces

- GSM FME M antenna connector
- USB 2.0 High Speed port up to 480Mbps
- SIM card interface 1.8V/3V
- DB9 female connector: complete 8-wire RS232 modem interface
- HD-Dsub15 female connector:
 - 1x RS232 (4-wire) port
 - 1x I2C port
 - 4x GPIO
 - 1x TTL input/output GPIO
 - 2x analog inputs
 - 1x analog output (PWM)
- 2 status LEDs (GSM status and user programmable)
- Handset audio interface
- Plug-in RJ12 power supply connector

Ordering information

MTX-65i-ULP: 199801119

Specification

- **GPRS**
 - GPRS class 12
 - Mobile station class B
 - PBCCH support
 - Coding schemes CS 1-4
- **CSD data transmission**
 - Up to 14.4kbit/s
 - V.110
 - Non-transparent mode
 - USSD support
- **SMS**
 - Point-to-point MO and MT
 - SMS cell broadcast
 - Text and PDU mode
- **Fax**
 - Group 3, class 1,2
- **Voice**
 - Triple-rate codec for HR, FR and EFR
 - Adaptive multi-rate AMR
 - Basic hands-free operation
 - Echo cancellation
 - Noise reduction

Open application resources

- ARM® Core, Blackfin® DSP
- Memory: 400KB (RAM) and 1.7MB (Flash)
- Improved power-saving mode

Java™ features

- CLDC 1.1 HI
- J2ME™ profile IMP-NG
- Software watchdog for applications
- Additional accessible periphery for Java applications:
 - I/O pins, I2C, SPI interfaces, ADC/DAC
 - Serial interfaces (API): ASC0, ASC1

Over-the-air update

- Application SW: OTAP