

# MTX-65+G-V5 +B Terminal

## Enhanced Combined GSM/GPRS + GPS Location Modem

Powered by CINTERION Wireless Module XT65 rel.2



Quad Band GSM  
GPRS Class12

16 Channels GPS  
Receiver

1 RS232 serial  
port

USB port  
SPI-I2C bus

Opto isolated  
Inputs/Outputs

Integrated  
TCP/IP Stack

JAVA applications

Automatic Restart  
after shutdown

Hardware  
Watchdog

Internal battery

Accelerometer

1 Mbit EEPROM

### MTX-65+G V5 TERMINAL

#### Communicate

The MTX-65+G terminal is an all-in-one solution enabling GSM Voice, SMS, Fax and Data (GPRS class 12). The Quad Band functionality allows operation in all relevant GSM frequencies.

Has intrinsic powerful TCP-IP stack communication with Internet Services: TCP, UDP, HTTP, FTP, SMTP, POP3

#### Locate

The MTX-65+G-V5 includes a 16-channels high sensitivity (-158dBm) GPS receiver with a logical integration into the GSM engine. AGPS, DGPS and SBAS (EGNOS, WAAS) techniques are enabled. GPS JAVA APIs can be used.

#### Intelligence

The MTX-65+G-V5 terminal is a powerful combination of GSM/GPRS radio system and a GPS receiver, including a range of I/Os and USB/SPI-I2C/RS232 ports.

The MTX-65+G compact self-contained unit can host and control your Java J2ME application, allowing developing and embedding your code directly onto the MTX-65+G, shortening time to market and reducing costs.

Together with its small size and all the standardized connectors -USB and RS232 port interfaces, internal SIM card reader-, allow connectivity to PC's, control boards and other peripherals minimising the need for further hardware components and makes it easy to integrate.

MTX-65+G-V5 incorporate an accelerometer which can be used to power-on the internal XT65 when a non volatile programmed acceleration trigger is reached. Can also be used to get the acceleration measure.

A 1Mbit EEPROM in same I2C bus can be used to store any parameter, GPS location routes, or any log.

MTX-65+G-V5 is CE marked and it is RoHs & WEEE compliant, manufactured with the ISO 9001 & ISO 14001 Quality certifications.

MTX-65+G V5 B incorporate internal Li-Ion Battery 1600 mA/h. Switching between external supply or internal battery, as well as charging method/time is internally done by specific integrated circuit.

### General features:

- Quad-Band GSM 850/900/1800/1900 MHz
- GPRS multi-slot class 12
- Control via AT commands
- SIM Application Toolkit (release 99)
- TCP/IP stack access via AT commands
- Internet Services: TCP, UDP, HTTP, FTP, SMTP, POP3
- Supply voltage range: 9 ... 28 V
- Power consumption (at 12 V):
  - Power down TBD mA
  - Sleep mode (registered DRX = 6) TBD mA
  - Speech mode (average) 360 mA
  - GPRS class 12 (average) 680 mA
- Temperature range
  - Operation\*: -30°C to +85°C
- Dimensions. Excluding connectors: 78,1 x 66,8 x 37,2 mm
- Weight: < 190 g (without battery)

### Interfaces:

- GSM FME M antenna connector
- GPS SMA F antenna connector
  - 3 Opto isolated Inputs (1 for pulse counter)
  - 3 Opto isolated Outputs
  - 1 TTL input/output GPIO
  - 2 Analog Inputs
  - 1 x I2C/SPI bus
  - 1 x 2-wires RS232 UART
- USB 2.0 port
- 2 Operating status LED: GSM status and user programmable
- SIM card interface 3 V, 1.8 V
- Handset audio interface

### Open application resources

- ARM© Core, Blackfin© DSP
- Memory: 400 KB (RAM) and 1.2 MB (Flash)
- Improved power-saving mode

### Java™ features :

- CLDC 1.1 HI
- J2ME™ profile IMP-NG
- Watchdog

### Over-the-air update :

- Application SW: OTAP
- Firmware: FOTA (OMA compliant)

### Specification for GPS

- Receiver 16 channel, L1 1575.42 MHz
- Accuracy Position: 2.5 m CEP; 5.0 m SEP
- Position with DGPS/SBAS: 2.0 m CEP; 3.0 m SEP
- GPS dedicated AT commands
- Support of SBAS (WAAS/EGNOS) data
- GPS active antenna supply: 3.0 V
- A-GPS enabled
- Tracking sensitivity: -157 dBm (with external antenna)
- Date WGS-84
- Start-up Time
  - Hot start: < 3.5 s
  - Warm start: 33 s
  - Cold start: 34 s
- Protocols: NMEA-0183 V2.3, RTCM protocol V2.2, UBX binary protocol

### Specification for GPRS data transmission:

- GPRS class 12
- Mobile station class B
- PBCCH support
- Coding schemes CS 1-4

### Specification for CSD data transmission:

- Up to 14.4 kbit/s
- V.110
- Non-transparent mode
- USSD support

### Specification for SMS:

- Point-to-point MO and MT
- SMS cell broadcast
- Text and PDU mode

### Specification for fax:

- Group 3, class 1, 2

### Specification for voice:

- Triple-rate codec for HR, FR, and EFR
- Adaptive multi-rate AMR
- Basic hands-free operation
- Echo cancellation
- Noise reduction

### Internal Battery specification

Ion-lithium 3,7V 1600mA/h

Ordering information: MTX-65+G-V5 B (BATTERY INSIDE): 199.801.084

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