

# TC65 Terminal

## Plug into the wireless M2M market



The TC65 Terminal sets unprecedented standards in the field of machine-to-machine communication. Based on the advanced TC65 module the intelligent Terminal version combines the most powerful and universally accepted Java™ open software platform with a wide range of industrial interfaces, to produce a smart plug & play solution in a growing M2M market.

Having the latest Information Mobile Profile NG embedded the TC65 Terminal offers the opportunity to control M2M applications by using internal resources such as a powerful processor as well

as the ability to simplify over-the-air software updates (OTA) for reliable e-maintenance of applications. Furthermore the future proved standard allows secure data transmission using https and PKI encryption. Last but not least Quad-Band technology allows applications to be used globally and the software development kit included is license free.

A wide range of industrial interfaces and the plug & play functionality included allow quick and easy implementation, reduces your costs significantly and lowers the entry barriers to a wide

number of business fields such as: fleet management, security, vending machines or remote control. With its extended temperature range it is also the perfect stand-alone device for sophisticated M2M solutions.

Thanks to its full type approval (FTA), there is no worry about obtaining appropriate certification anymore – the TC65 comes with approvals from major mobile network carriers across the globe, including those from US operators.



Quad-Band



Industrial Interfaces



GPRS Class 12



Fax Functionality



JAVA™ IMP-NG



Powerful Processor/  
Large Memory Profile



TCP/IP Connectivity



SIM Access Profile



Not original size

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Not original size

### General features:

- Quad-Band GSM 850/900/1800/1900 MHz
- GPRS multi-slot class 12
- GSM release 99
- Output power:
  - Class 4 (2 W) for EGSM850
  - Class 4 (2 W) for EGSM900
  - Class 1 (1 W) for GSM1800
  - Class 1 (1 W) for GSM1900
- Control via AT commands (Hayes 3GPP TS 27.007 and 27.005)
- SIM Application Toolkit (release 99)
- TCP/IP stack access via AT commands
- Internet Services: TCP, UDP, HTTP, FTP, SMTP, POP3
- Supply voltage range: 8 ... 30 V
- Power consumption (at 12 V):
  - Power down 0,5 mA
  - Sleep mode (registered DRX = 5) 29 mA
  - Speech mode (average) 184 mA
  - GPRS class 12 [Power reduction = 6dB] (average) 330 mA
- Temperature range
  - Normal Operation: -30°C to +70°C
  - Restricted Operation: -30°C to +75°C
  - Switch off: +80°C
  - Storage: -40°C to +85°C
- Dimensions: 90 x 130 x 38 mm
- Weight: < 190 g

### Specification for GPRS data transmission:

- GPRS class 12: max. 86 kbps (DL & UL)
- 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

### Specification for 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: 400 KB (RAM) and 1.7 MB (Flash)
- Improved power-saving modes

### Java™ features:

- CLDC 1.1 HI
- J2ME™ profile IMP-NG
- Secure data transmission with HTTPS, SSL and PKI

### Special features:

- RLS Monitor (Jamming Detection)
- Character framing 7E1 and 8E1 at serial interface
- Programmable terminal reset
- SIM Access Profile integrated

### Over-the-air update:

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

### Interfaces:

- SMA 50 Ω antenna connector
- 24 pin Micro-N-Lok connector
  - I<sup>2</sup>C bus and SPI bus
  - 2 x analog in (ADC)
  - VDD (2.9 V)
  - Multiple GPIOs
- 9 pin sub-D connector for serial interfaces (ITU-T V.24 protocol)
- Operating status LED
- ON/OFF button
- SIM card interface 3 V, 1.8 V
- Plug-in power supply
- Handset audio interface

### Approvals:

- R&TTE, FCC, IC, GCF, PTCRB, e-mark, CE
- Local approvals and network operator certifications

*Global thinking,  
local understanding.*



U.K. ← Football → USA

### Here, there and everywhere

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### Technical Support

Our application engineers support you from the design-in phase over the integration of the module into the application to the certification process.

### We protect your business

Profit from our strong Intellectual Property Rights position (IPR) – guarded by our legal professionalism you secure the fruits of your business effort.

Our technology portfolio covers → +++ Java™ Open Platform +++ EDGE +++ GPS +++ HSDPA +++