

# Sony Ericsson



## M2mpower package



Comprehensive training & support included

# A total solution for rapid, cost-effective application development

- 1 x Dual Band GSM/GPRS Radio Device (EGSM 900/1800 MHz [GR47] or GSM 850/1900 MHz [GR48])
- Software Developer's Kit:
  - CD-ROM including M2mpower IDE: Editor, Interpreter, Example Code Suites, Documentation
- Hardware Developer's Kit:
  - 1 x Antenna: GSM quad band antenna
  - 1 x Headset: Microphone and ear-piece
  - 1 x 9-way RS232 Cable
  - 1 x Power supply:
    - Input: AC 90V-264VAC, 50-60 Hz 45VA
    - Output: DC 12V - 1.9A
  - Mains lead
  - Developer's Board
- Training and Support

The M2mpower package provides a powerful support environment designed to facilitate the development of cost-effective wireless M2M applications.

M2mpower enables you to develop innovative new applications and embed them directly onto Sony Ericsson's M2M products, using specifically designed developers' tools. M2mpower is introduced with the GR47 and GR48 programmable radio devices for GSM/GPRS applications. Embedding your application onto the GR47/GR48 allows you to streamline development, shorten time to market and reduce total solution costs.

The M2mpower package includes a radio device, software and hardware developer's tools, everything required to get wireless applications to market fast. The software includes a scripting language based on the industry standard ANSI C language which allows you take existing applications and make a smooth transition to M2mpower. The developer's tools include application function libraries and reference applications. The Hardware Developer's Kit contains the hardware elements required to become operational. The M2mpower package also provides comprehensive training and support.

M2M Com Product Unit of Sony Ericsson Mobile Communications is ISO-9001 Certified.

# M2mpower package

## Preliminary requirements

To develop your application using M2mpower, you need:

- 1 x PC: minimum Pentium 300 MHz, 64 MB of RAM, 500 MB free on the hard disk, 2 or 3 serial ports available
- Windows 95 or higher
- Microsoft Visual C++ V6.0 or higher
- SIM card
- M2mpower package including 1 x GR47 or GR48 radio device, software developer's kit and hardware developer's kit

## GR47/GR48 Radio device

- Dual Band EGSM 900/1800 MHz (GR47) or GSM 850/1900 MHz (GR48)
- Data, Fax, SMS and Voice
- Tricodec (HR/FR/EFR)
- GPRS Class B (4+1) - P Channel Support
- GPS interoperability
- Access to embedded controller for hosting applications
- Extensive range of I/Os
- Ideal for use in Telemetry and Telematics applications

**Note:** Please refer to the GR47/GR48 datasheet for further information.

## Software Developer's Kit

- CD-ROM including:
  - M2mpower IDE containing:
    - Editor
    - Interpreter
    - Intrinsic Function Library (IFL)
    - Selection of example code suites
    - Comprehensive help files
  - M2mpower Application Guide

## Hardware Developer's Kit

### External connectors

- Data: 9 pin D-type socket, switchable between:
  - UART 3 – 3 line (TX-RX-GND) serial port RS232 levels
  - UART 2 – 3 line communications connector RS232 levels
  - UART 1 – RS232 communications port

- Audio:
  - AFMS – Audio output (unbalanced) or Audio From Mobile Station (AFMS), 2.5mm jack socket
  - ATMS – Audio input (unbalanced) or Audio to Mobile Station (ATMS), 2.5mm jack socket
  - Handset – RJ9 socket for a standard telephone handset
- ON/OFF
- VIO indicator
- Status indicator
- Service indicator
- VDC Power supply, 2.1mm miniature power jack socket
- External VCC connector
- SMA RF connector
- 40 pin, 2 row, 0.1 pitch (0.05 ribbon) IDC

### Internal connectors

- Series of jumpers, switches and connectors for routing signals including:
  - Holder for SIM card
  - SIM test connector – connector for testing of the SIM card signals, connected in parallel with the SIM card holder
  - 40 pin, 2 row, 0.1 pitch (0.05 ribbon) IDC
  - 1 x buzzer
  - I<sup>2</sup>C GPIO expander
  - Matrix Keypad Connector

## Training and Support

The M2mpower package provides access to comprehensive group/one-to-one training. The training is aimed at engineers that are already conversant in 'C'. The training comprises the implementation of the application together with the device, and includes support during the development phase. Ongoing support will also be available after the implementation phase.

The key outcomes of the course will be:

- To understand the concept of embedded applications and the use on the GR47/GR48
- To become conversant with the IDE (Integrated Developers Environment)
- To be able to write, debug and download embedded applications onto the GR47/GR48
- To manage TCP/IP communications using an embedded application

**Note:** All training and support must be pre-booked. To find out how you may take advantage of the training please contact your local Area Manager or email [modules.info@SonyEricsson.com](mailto:modules.info@SonyEricsson.com)



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