

Sony Ericsson





Accelerate integration development

- 1 x Dual band GSM radio device (EGSM 900/1800 MHz (GM47) or GSM 850/1900 MHz (GM48)
- 1 x CD containing:
 - Integrator's Manual: Technical overview of the GM47/GM48
 - Software Developer's Kit: DLL library, Source codes, Software manual, Sample application
- 1 x Encased evaluation board: PCB board to evaluate and test radio device
- 1 x Antenna: Tabletop free standing 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 1.0A
- 1 x Mains lead UK, 1 x Mains lead European

The Sony Ericsson GM47/GM48 Developer's Kit enables system integrators to develop and test an application on a limited scale, before ordering a large quantity of radio devices. The GM47/GM48 radio device is compact (just 50 x 33 x 7.2mm) but it really packs a punch, with all the features you need at the heart of your M2M communications solution. It can be used in many application areas including fleet and asset management, vending machines, security and alarm monitoring and more \dots

With dual GSM bandwidth (EGSM 900/1800 MHz or GSM 850/1900 MHz) and the ability to send and receive data by SMS, CSD, HSCSD or GPRS, as well as handle voice calls, the GM47/GM48 is compatible with GSM communications standards worldwide.

The GM47/GM48 Developer's Kit comes equipped with a radio device, an encased evaluation board, power supply, antenna, headset, cables, CD ROM with Integrator's Manual and software – everything you need for a quick start!

The same levels of excellence that have been trademarks of Sony and Ericsson worldwide go into the design of every machine-to-machine communications product. Sony Ericsson applies the same R&D and manufacturing expertise in these products as it does in its world-class mobile telephones.

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

GM47/GM48 Developer's Kit

GM47/GM48 Radio device

Product features

- Dual band GSM radio device (EGSM 900/1800 MHz (GM47) or GSM 850/1900 MHz (GM48)
- · Data, SMS, and voice
- Tricodec (HR/FR/EFR)
- · GPRS P Channel support
- GPS Interoperability
- · Compliant with 3GPP GSM Phase 2+ standards (Small MS)
- · Operating temperature range: -25°C to +55°C
- Storage temperature range -40°C to +85°C
- · Weight of radio device: 18.5g (including shielding)

Interfaces

- · Single antenna interface (MMCX)
- Single 60 pins board-to-board connector including:
- Power supply connection
- 3/5V SIM interface with SIM detection
 - 2 microphone inputs and 2 speaker outputs
 - 4 x General Purpose I/Os
- RS232 serial link (2.7V) supporting:
- Remote control by AT commands (GSM 07.07 and 07.05)
- Serial baud rate (DCE, DTE) from 1200 to 460, 800 bits/s
- 2 x General Purpose Serial Interface
- 3 x Analogue to Digital Converter
- 1 x Digital to Analogue Converter
- 1 x buzzer output

Data features

- Data circuit asynchronous, transparent and non transparent up to 9.6 kbps
- HSCSD (2+1), up to 19.2 kbps
- GPRS Class B (4+1) up to 85.6 kbps
- P Channel support
- Coding schemes CS1-CS4
- GSM 07.10 Multiplexing Protocol

Short Messages Services (SMS) features

- Text and PDU
- · Point to point (MT/MO)
- Cell Broadcast
- Concatenation up to 6 SMS

Voice features

- Telephony
- · Emergency calls
- Full Rate, Enhanced Full Rate and Half Rate (FR/EFR/HR)
- · Echo Cancellation and Noise Reduction
- Dual Tone Multi Frequency function (DTMF)

GSM Supplementary Services

- · Call forwarding
- · Call hold, waiting and multiparty
- · Calling/called number identification
- · Advice of charge
- USSD
- · Alternate line service
- · Customer service profile
- Preferred networks
- Operator selection
- · Network registration
- · Calling cards
- Call barring
- Call transfer

Other features

- ME + SIM phone book management read/write/find, call screening, groups, personal rings, settings
- · SIM Application Toolkit Class 2
- · Real Time Clock
- Alarm management
- Software upgradeable
- · Audio control
- · Fixed dialling number
- · UCS2 character set supported

Developer's Kit

External connectors

- Data: 9 pin D-type socket:
- 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
- PCM connector 9 pin miniDIN socket that carries PCM signals
- Handset RJ11 socket for a standard telephone handset
- ON/OFF
- VIO indicator
- Status indicator
- Service indicator
- VDC Power supply, 2.5mm miniature power jack socket

Internal connectors

- · Series of jumpers, switches and connectors for routing signals
- SIM mount
 - Connector for SIM card
 - SIM test connector connector for testing of the SIM card signals, connected in parallel with the SIM holder
- Application connector for flat cable connection between a host application and the engine, throughout the development board
- Test connector 60 pins 2.54mm pitch dual row pin header that carries all signals present at system connector of engine
- System connector for flat cable connection between engine and development board
- 1 x buzzer

