



Sony Ericsson

GM47/GM48 GSM/GPRS Radio Device



Universal Developer's Kit

Product Features:

- Compact Size
- Dual Band
900+1800
850+1900
- GSM/GPRS Class 8
- Integrated TCP/IP Stack
- Fully Type Approved
CE/R&TTE/GCF + FCC/PTCRB

Broad Spectrum:

- Emergency Services
- Healthcare
- Industrial Systems
- Information Display
- Metering & Monitoring
- Power & Energy
- Security & Surveillance
- Traffic Control
- Vending & Retail

Benefits

- Save time and space with a compact GSM/GPRS unit
- Wireless GPRS Internet access
- Industry standard reliable connectors

The Sony Ericsson GM47/GM48 GSM/GPRS Radio Device comes fully-loaded with a range of GSM/GPRS voice and data features, and all in a compact unit. Optimized for M2M communications, the GM47/GM48 features an intrinsic TCP/IP stack enabling effective use of GPRS. The GM47/GM48 is configurable, to enable optimum usage of the extensive range of input/output pins provided, making it easy to adapt your M2M solution.

The GM47/GM48 was designed to be integrated. With dimensions of 50 mm x 33 mm x 7.2 mm, the GM47/GM48 will fit into the smallest of spaces.

Applications can include the monitoring and control of any electronically controlled system, industrial processes, electronic payment terminals and meter readings in areas such as gas, water, electricity and power networks. They also extend into service and maintenance in areas such as lifts, escalators, vending machines and point-of-sale equipment. The GM47/GM48 with its proven quality, performance and reliability comes with low integration costs, and is guaranteed to give many solutions the wireless edge that will set them above the competition.

Sony Ericsson's Universal Developer's Kit can be used with the GM47/GM48 to simplify application development. The Kit provides everything required to design and develop innovative automotive applications and to bring them to market in record time.

GM47/GM48 GSM/GPRS Radio Device

Radio Features

- Dual Band GSM/GPRS Radio Device (EGSM 900/1800MHz [GM47] or GSM 850/1900MHz [GM48])
- Compliant with 3GPP GSM phase 2+ (GCF-CC v3.8.1 [GM47]/NAPRD v.2.7.2 [GM48] standard) (small MS)
- Output power:
 - Class 4 (2W) @ 850/900MHz
 - Class 1 (1W) @ 1800/1900MHz
- Overall dimensions (excluding connectors):
 - 50 x 33 x 7.2mm
- Weight: 18.5g (including shielding)

Environmental

- Power supply:
 - 3.4 – 4VDC
 - 250mA average current in voice communication (CS, average)
 - 350mA average current in data communication (GPRS 4+1)
 - <5mA average current in idle mode
- Temperature range:
 - -30°C to +75°C (operational functionality)
 - -40°C to +85°C (storage temperature)
 - -10°C to +55°C (full specification)

Interfaces

- Single antenna interface (50Ω MMCX)
- Single 60 pin board-to-board connector including:
 - Power supply connection
 - 3/5V SIM interface with SIM detection
 - 2 x microphone inputs and 2 speaker outputs
 - RS232 serial link (2.7V) supporting:
 - Control by AT commands (GSM 07.07 and 07.05) and Sony Ericsson proprietary commands
 - Serial baud rate from 1200 to 460,800 bits/s
 - 2 x other general purpose serial interfaces (in addition to serial link used for AT commands)
 - 1 x buzzer output

Data I/Os

- Up to 9 x general purpose I/Os, 4 x digital outputs, 1 x digital input*
- Up to 5 x analog to digital converter*
- 1 x digital to analog converter

Data/GPRS Features

- CSD asynchronous – non transparent up to 9.6kbps
- HSCSD (2+1), up to 19.2kbps
- MS class B, GPRS class 8, up to 85.6kbps
 - P channel support
 - Coding schemes CS1-CS4
- GSM 07.10 multiplexing protocol

Short Messages Service (SMS) Features

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

*See GM47/GM48 Technical Description for pin-out details

Voice Features

- Telephony
- Emergency calls
- GSM vocoder support:
 - Full Rate, Enhanced Full Rate and Half Rate (FR/EFR/HR)
- Dual Tone Multi Frequency function (DTMF)
- GM48 supports AMR

Fax Features

- Fax group 3, class 1 & 2

TCP/IP

- AT command access to TCP/IP stack
- Universal Datagram Protocol (UDP)

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
- Call barring
- Call transfer

Additional 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 16 bit data supported
- Voltage output reference

Universal Developer's Kit

- Our Universal Developer's Kit is available for rapid evaluation of products and applications on a limited scale

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