Industrial GSM-GPRS

[WM200]

M2M

Industrial
Base / Plus

Industrial
I/O

BUSINESS FIELDS :

- Metering
- Alarms
- Videosurveillance
- Environmental monitoring
- Vending machines
- Automotive
- Thermal and solar power plants

CAN BE CONNECTED WITH :

- PC / PLC / Microcontrollers
- Electrical panels
- Meters, data loggers
- Cameras, alarms, GPS trackers
- Sensors, relays (I/O vers.)

Industrial GPRS Base – Plus – I/O Modems

PRESENTATION

Urmet has developed a family of wireless **quad-band GSM-GPRS modems** optimized for industrial applications.

The Industrial modem can connect any system or equipment to the **2G mobile network** (GSM and GPRS) in order to use the related services (data communication, SMS, TCP/IP etc.).

Robust, reliabile and easy to install, it's the ideal solution for every **M2M** (Machine to Machine) application.

MODELS

- **Base** with voice, data, fax, sms functions
- **Plus** with tele-management and tcp/ip stack functions
- **I/O** with an industrial interface including I/Os

FLEXIBILITY OF USE

Urmet modems can be used for industrial, extra-industrial and civil applications.

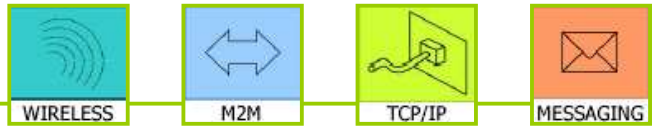
With a low power consumption and extended input voltage range, they can be employed in a wide range of business fields and installed worldwide (thanks to quad-band).

Some examples:

- **Monitoring**: Environmental control, water quality, traffic conditions, video surveillance, heating control. Ordinary and extraordinary maintenance are allowed in real time.
- **Metering / Remote control**: Remote data reading for public utilities (electric, water & gas), solar power plants. Industrial process control, home automation etc.
- **Configuration / Programming**: Remote upload of operational profiles and firmware updates.
- **Data Logging**: Data collection for post-processing operations (statistics, billing, vending machines etc.).

COST EFFECTIVENESS

The GPRS technology allows to be **always on line** with a remarkable cost reductiion at the same time. In fact, transfer costs on GPRS only apply to the amount of transferred data – while transfer costs on GSM depend on connection time and number of calls.



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INCLUDED ACCESSORIES

DIN and Omega rail fixing element

Wall fixing element

Power supply cable (except I/O mod.)

User guide (quick reference)

OPTIONAL ACCESSORIES

External power supply 230/12V (EU plug)

Serial cable RS-232

Vertical stick antenna / Magnetic base ant.

Vehicular antenna
External omnidir. antenna, high gain
External directive antenna, high gain
Voice cable
Further accessories on demand

MODELS

INDUSTRIAL GPRS BASE
Quad-band GSM/GPRS modem providing every basic function:
- GSM: data / fax / voice / SMS services
- GPRS: class 10 / mobile station class B

INDUSTRIAL GPRS PLUS
In additon to the Base model features, provides:
- Integrated management of the TCP/IP stack, through specific AT command set
- Tele-management functions:
  - Self-diagnostics with automatic restore in case of faults
  - Remote control of radio parameters (RSSI etc.)
  - Remote configuration of the operating parameters
  - Remote upload of firmware updates
- Embedded microcontroller supporting custom applications (development on demand)

INDUSTRIAL GPRS I/O
Provides the same functions as Plus model, along with an industrial interface (18 pole terminal board) wired as follows:
- power supply, RS-232 serial port, voice
- 4 I/O lines (2 inputs + 2 outputs)

FUNCTIONAL FEATURES
- GSM/GPRS modem
  Quad Band 850/900/1800/1900 MHz
- Data, SMS, Voice and Fax services
- GPRS class 10
- Wireless engine: Cinterion BGS3
- AT command control
- Output power:
  - class 4 (2w) @ GSM850/900
  - class 1 (1w) @ GSM1800/1900
- Power supply: 8 - 32Vcc (15w)
- Power consumption: idle 20mA @ 12V, talk 150 mA GSM900 @ 2w, talk 130mA GSM1800 @ 1w

GSM PERFORMANCES
- VOICE: voice and emergency calls (TCH/FS)
- SMS: text/PDU mode, cell broadcast
- DATA: asynchronous non transparent GSM data transmission (2400, 4800, 9600 bit/s), CSD up to 14.4Kbps, USSD, V.110 full PBCCH support
- FAX: group 3, class 1

GPRS CONNECTIVITY
- GPRS multislot class 10
- GPRS mobilestation class B
- Downlink max 85.6 Kbps
- Uplink max 42.8 Kbps
- Coding schemes 1 to 4
- PPP-Stack

AT COMMANDS
- V.25/ter • ETSI GSM 07.05 e 07.07
- Siemens/Cinterion proprietary
- Urmet proprietary (PLUS and I/O only)
  TCP/IP, maintenance and I/O managmt. oriented

CONFORMITY
- CE • R&TTE • RoHS

PHYSICAL / MECHANICAL FEATURES
- Dimensions: 69,5x80x24mm (BASE and PLUS)
- Dimensions: 79,5x80x24mm (I/O)
- Weight: about 120gr
- Wall, DIN and OMEGA rail fixing elements
- Temperature range: -20°C / +55°C (operational)

INTERFACES	Base	Plus	I/O
- Serial port connector RS232/ V.24, type DB9-F	•	•	–
- 4 pins microfit connector [1]	•	•	–
- 6 pins microfit connector [2]	•	•	–
- 18 pole terminal board	–	–	•
- SMA-F ext. antenna conn.	•	•	•
- 3V SIM card reader plugin	•	•	•
- Modem status LED	•	•	•

[1] Base: power, IGN, PDN – Plus: power, I2Cbus
[2] Base: voice, SYNC – Plus: voice

SPECIFIC FEATURES (PLUS and I/O models)
- Embedded microcontroller
  8-bits RISC µC @8 MIPS 2Mb data_flash and 64Kb SRAM
- TCP/IP stack: WebServer, HTTP, FTP, SMTP, DHCP, TCP, IP, ARP, UDP, ICMP, PPP
- API collection
- 18 pole terminal board (I/O model only):
  - Power supply
  - Voice [3]
  - 4 I/O lines (expandable through I2Cbus) made up of:
    2 optoisolated inputs (12-24 Vcc, 8,5-30 Vac; input current 3,2-10 mA)
    2 optoisolated outputs(60Vcc 1A,40Vac 700mA)
  - V.24/RS232 serial port
    with extended signals (TX, RX, RTS, CTS, GND) or reduced signals (TX, RX, GND) + voice sign. [3]

[3] (only for I/O model, voice version)

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