



# G24 GSM Family of Modules

Delivering seamless mobility to the M2M world



- Quad Band
- EDGE Class 10
- GPRS Class 10
- Compact Size
- RoHS
- Ext. Temperature
- Ext. RF
- Fully Type Approved
- OverThe Air
- Internal TCP/IP, UDP
- SMTP/POP3 - e-mail
- FTP - File Transfer
- SSL - Secure Connection
- 24 Family Form Factor

## Hello reliability.

When machines are communicating with machines, there is nothing more important than knowing you can trust the interaction. Motorola has spent more than 80 years developing the expertise to create a world of seamless mobility. We don't rely on trust. We meticulously develop and test our products so that we know they will continue to shine over time.

## Powering non-stop Moto2Moto wireless communication.

G24 is the small engine that does. Powering connectivity in every type of M2M application, the G24 GSM is made to meet your needs: you get a high-speed, quad band GSM/GPRS/EDGE module, with rich functionality. All this with a strong software platform, open to multiple configurations - including Java. G24 has been certified by all the major international bodies and conforms to the strictest industry standards. With exceptional RF performance, you are connected virtually anywhere and everywhere. Traditional performance obstacles don't stand in our way.

## We are devoted to you.

Maintaining a relationship with you is part of our game. Motorola is devoted to excellence in customer service and support. We are here from the moment you begin your design and provide maintenance throughout the product's life. As an industry pioneer, Motorola has deep relationships with certification institutions and draws on these to assist customers with industry approvals.

## Saving you money.

G24 is designed to shorten expensive processes and get you to market in a flash. With built-in internet and security protocols and a design that allows the host



to leverage its CPU and memory, G24 is easy to integrate. The G24 GSM is one of a family of same form factor engines, enabling you to design your system with simple modularity.

## Taking Quality to Heart.

True quality products and service are developed through careful attention. At Motorola, we've created new standards to judge quality by. In addition to holding our products and manufacturing processes up to the harshest industry standards, we've created the proprietary Accelerated Life Test, which introduces prototypes into real-world scenarios to test their mettle before they hit the streets. We've created for ourselves strict guidelines of quick service so that you can get what you want.

## How do you know if we are for you?

If you need M2M connectivity, count yourself in. We power any M2M application - Telematics, Fleet Management and Tracking, Security, Automated Metering, Point of Sales, and more. We work with you to deliver a solution tailored to your needs.

# G24 Product Specifications

## Product Features

### Supported Bands

- Quad Band  
850/900/1800/1900 MHz

### Physical

- Size: 24.4 x 45.2 x 6.0 mm  
(6mm stacking height)
- Mounting: two 2.4 mm holes
- Weight: 10.1 gram

### Environmental

- Operating temperature:  
-30°C to +85°C
- Storage temperature:  
-40°C to +85°C

## Performance

### Operating Voltage

- Voltage: 3.3 - 4.2V

### Current Consumption

- < 2.5mA @DRX9 (Sleep mode)

### TX Power

- 850/ 900 MHz – Class 4 (2 Watt)
- 1800/1900 MHz – Class 1 (1Watt)

### Typical RX sensitivity

- -106dBm  
(4dB margin on top of spec)

## Interfaces

### Connectors

- Single 70 pin board to board
- RF MMCX

### SIM Card

- 3.0V
- STK 3.1

### Connectivity

- USB 2.0 full speed
- UART: BR from 300 bps to 460 Kbps  
Auto BR
- Two physical UARTs for AT  
commands & Data
- MUX 27.010 Support

## Regulatory and Approvals

- FCC, IC
- ANATEL (Brazil)
- COFETEL (Mexico)
- CMII (China)
- PTCRB
- R&TTE/CE
- GCF
- QS9000 manufacturing
- RoHS/WEEE/CCC

## JAVA FEATURES -

### Model Dependent

- JSR 185 JTW1 compliant:  
JSR 139 CLDC 1.1  
JSR 118 MIDP 2.0  
JSR 135 MMAP 1.1  
JSR 120 WMA 1.1
- JSR 75 compliant:  
File connection API  
PIM API
- Proprietary API  
15 GPIO's  
A2D converters  
3 simultaneous serial connections  
(2 UART & USB)  
CSD/Voice call  
General operations and settings
- OTA Midlet download
- Midlet auto start
- 10 MB of Java application memory
- 1.8 MB RAM
- On-device debugging

## Data Features GPRS

- Multi-slot class 10  
(4 Down; 2 Up; 5 Total)
- Max BR Downlink 85.6 Kbps
- Class B GSM 07.10 multiplexing  
protocol
- Coding Scheme CS1-CS4
- Embedded TCP/IP and UDP/IP  
protocol stack
- Embedded FTP
- Embedded SMTP/POP3 - e-mail
- SSL - Secure Connection

## EDGE - Model Dependent

- Multi-slot class 10  
(4 Down; 2 Up; 5 Total)
- Max BR Downlink 236.8 Kbps  
(Over RS232)
- Coding Scheme MCS1-MCS9

## CSD

- Max BR 14.4 Kbps

## SMS

- MO / MT Text and PDU modes
- Cell broadcast

## FAX Class 1

## Voice Features

- Telephony
- Digital audio
- Differential analog audio lines
- Vocoders EFR/HR/FR/AMR
- DTMF support
- Audio control: echo suppression;  
noise suppression; side tone;  
gain control

## GSM Supplementary Service

- USSD phase II
- Call forwarding
- Call hold; waiting; multiparty
- Call diverting
- Missed call indicator
- AOC
- Call barring

## Character Set

- UTF8
- UCS2
- GSM
- IRA
- HEX

## Control / Status Indications

- 8 GPIO's
- 3x A2D general purpose converters
- GSM/GPRS coverage
- Wake up in/out
- Antenna presence detect
- Temperature sensor
- Voltage sensor
- Jamming Detection

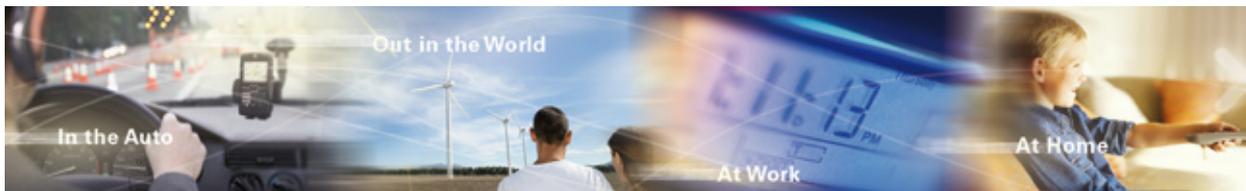
## AT Command Set

- GSM 07.05
- GSM 07.07
- GSM 07.10
- Motorola proprietary AT commands

## Accessories

- Firmware data loader over serial  
connection
- OTA - Firmware upgrade over the air
- Data logger
- Developer Kit
- SDK

For more information contact us at: [M2M.Sales@motorola.com](mailto:M2M.Sales@motorola.com)



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