



# G30 GSM/GPRS Series

## Delivering M2M Solutions in Zero Time, Zero Effort

-  Quad Band
-  GPRS Class 10
-  Ext. RF
-  Internal TCP/IP: UDP
-  Over The Air
-  Ext. Temperature
-  RoHS
-  Fully Type Approved
-  Compact LGA Package
-  Embedded C Application Space
-  Embedded SIM

### Introducing the G30 Series.

Motorola presents an ultra reliable, compact, wireless module. The G30 GSM/GPRS Series is the first of Motorola's new Surface Mount Technology (SMT) family, allowing you to benefit from small dimensions and cost effective design due to its Land Grid Array (LGA) form factor. LGA allows efficient and scalable automated manufacturing, making the G30 an ideal choice for any M2M segment, demanding small host devices like AMR, telematics, security, and ePOS.

### Optimized For the Most Demanding Applications.

With an extended temperature range, and robust design, the G30 is designed to stand up to the harsh industrial environments found in telematics and AMR deployments. The G30 features Motorola's industry leading RF performance, ensuring reliable network connectivity for real-time communication – a critical requirement for M2M solutions. In addition, the G30 supports firmware upgrade over-the-air (FOTA), allowing your solution to stay up-to-date for the long run.

### A 3-Tiered Solution.

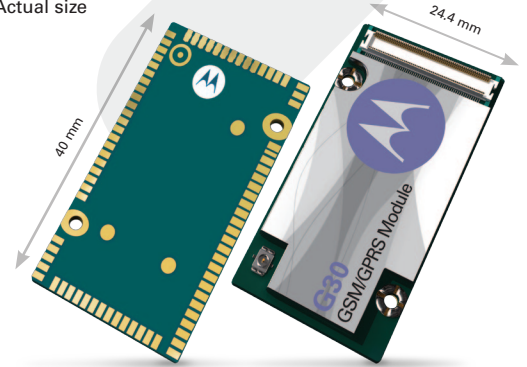
The G30 Series is offered in three tiers, providing you with the ideal feature set for your M2M needs.

The **G30basic** is a true cost-effective M2M solution with a rich set of features like quad-band GSM/GPRS, an extended operating temperature, UART MUX, jamming detection, FOTA and embedded data protocols.

The **G30advanced** improves on the G30basic with enhanced audio and embeddedSIM technology for increased reliability and security.

The **G30premium** is our most efficient solution yet, featuring the M2Mzone, an embedded application space enabling easy M2M development with industry standard C code. The M2Mzone lets you eliminate the need for an external CPU further reducing size and cost.

Actual size



Now Available in 2 configurations!

LGA or Connectorized

### One of a Kind Flexibility.

The G30 series was designed for Zero time, Zero effort integration, getting you to market faster than ever. The G30 features both an LGA form factor and an optional 70-pin B2B connector for various design possibilities. The optional connectorized platform maintains the same mounting design as the award-winning G24 module, so you can leverage the G30's rich feature set but remain with your connectorized design. The G30 Series also shares a unified software interface with the G24 family, including compatible AT commands and TCP/IP stacks.

### Taking Quality to Heart.

Motorola is known for its culture of quality for more than 80 years. This heritage is reflected in the G30 which is designed for Digital Six Sigma quality standards. Harsh layout rules and accelerated life tests are part of Motorola's relentless efforts to ensure the best outcome that will give you the peace of mind you need when rolling out your product to market.

### Supporting You All the Way.

At Motorola we offer our customers devoted support throughout the deployment process including initiation, development, integration and certification, as well as ongoing technical support during and after implementation. Our dedicated team carry out particular efforts, aimed to meet your needs with the utmost satisfaction.



**MODULES**  
Zero time, Zero effort

# G30 Series Technical Specifications

## Product Features

### Supported Bands

- GSM Quad-band  
850/900/1800/1900MHz

### Physical

- 24.4 x 40.0 x 3.5mm
- Weight <6g
- Mounting: LGA device with 81 pins, Pitch 1.27mm
- Optional 70-pin Board 2 Board connector

### Environmental

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

## Performance

### Operating Voltage

- 3.3 – 4.2 V

### Current Consumption

- <2.0mA (Idle Mode)
- <350mA (GSM call)
- <450mA (GPRS data call)
- <90µa (Power Off Mode)

### TX Power

- 850/900MHz class 4 (2 Watts)
- 1800/1900MHz class 1 (1 Watt)

### Typical RX Sensitivity

- -108dBm

## Interfaces

### Connectors

- Antenna 50Ω solder pad (via LGA only)
- Antenna RF U.FL Connector (Optional)
- Serial interface
- SIM card interface
- Multiple GPIOs
- 70-pin Board 2 Board connector “24” Family compatible (Optional)

### Connectivity

- UART Multiplexer (GSM 07.10)
- UART: BR up to 230.4Kbps
- Auto BR
- Flash Mode BR: up to 920Kbps

## SIM Card

- 1.8V / 3V
- SIM Toolkit R99

## Data Features

### General

- Internal TCP/IP & UDP/IP
- Embedded FTP

### GPRS

- Multislot Class 10
- DL up to 85.6 kbit/s
- UL up to 42.8 kbit/s
- Coding Scheme CS1 - CS 4

### CSD

- CS data calls (transparent / Non-transparent) up to 9.6kbps
- Modem type V.32, V.110

### SMS

- PDU /Text mode
- Cell broadcast

## Control / Status Indications

- 2 A/D converters
- 9 dedicated GPIOs (8 when using Board 2 Board connector)
- Wake up & Sleep mode mechanism
- RTC supply output
- Ext. Reset In
- Antenna Detection

## Voice Features

- Telephony
- Digital / Analog audio in & out
- Vocoders HR/FR/EFR/AMR
- DTMF support
- TTY (Telephone Typewriter)

## Audio Control

- Echo cancellation
- Noise reduction
- Side tone

## GSM Supplementary Service

- Call hold/resume; waiting; multiparty
- Call forwarding/diverting
- Explicit call transfer
- Call barring
- Call completion to busy subscriber
- AOC (Advance of Charge)
- Calling identification presentation / restriction
- Connected line identification presentation / restriction
- USSD
- Network identity and time zone

## AT Command Set

- Subset of GSM 07.05, GSM 07.07
- MUX 07.10
- Proprietary AT commands

## Regulatory and Approvals

- R&TTE
- GCF
- FCC/CE
- PTCRB
- IC
- RoHS
- IOT

## Accessories

- Developer Kit
- Firmware data loader over serial connection
- Data logger

## Additional Features per G30 Model

### G30basic

- + UART MUX
- + Jamming Detection
- + Firmware over-the-air (FOTA)

### G30advanced

- G30basic, plus:
- ++ EmbeddedSIM (eSIM)
- ++ Full-duplex Audio:
  - Full gain control
  - Up to 6 audio settings

### G30premium

- G30advanced, plus:
- +++ M2M Programming Zone:
  - Programming language: C
  - Embedded Application Space: 2MB
  - Embedded File System: 2MB
  - Supports: GPIOs, I<sup>2</sup>C, UART, A2D

For more information please visit [www.motorola.com/m2m](http://www.motorola.com/m2m)  
Contact us at: [M2M.Sales@motorola.com](mailto:M2M.Sales@motorola.com)



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