











GSM | GPRS

G30
 Embedded/Compact



-  **Quad Band GPRS**
-  **Extended RF Sensitivity**
-  **Embedded TCP/IP Stack**
-  **Extended Temperature Range**
-  **RoHS Compliant**
-  **LGA Package**
-  **Programming in C**
-  **Embedded SIM**

Telit presents an ultra reliable, compact, wireless module. The G30 GSM/GPRS Series is a 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. 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 Telit's industry leading RF performance, ensuring reliable network connectivity for real-time communication – a critical requirement for M2M solutions. 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, and embedded data protocols. The G30 advanced improves on the G30basic with enhanced audio and embedded SIM 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. 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.

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: -40°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

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Telit® wireless solutions

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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: baud rate up to 230.4Kbps
- Auto baud rate
- Flash Mode baud rate: up to 920Kbps

SIM Card

- 1.8 /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

Additional Features

- Proprietary AT commands
- Control via AT commands according to 3GPP TS 27.005, 3GPP TS 27.007 and customized AT commands
- MUX 27.010

Regulatory and Approvals

- Fully type approved conforming with R&TTE directive
- CE, GCF, FCC, PTCRB, IC

Additional Features per G30 Model

G30basic
+ UART MUX
+ Jamming Detection

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, I²C, UART, A2D

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