C16-G25Q

Reference Design

WIRELESS

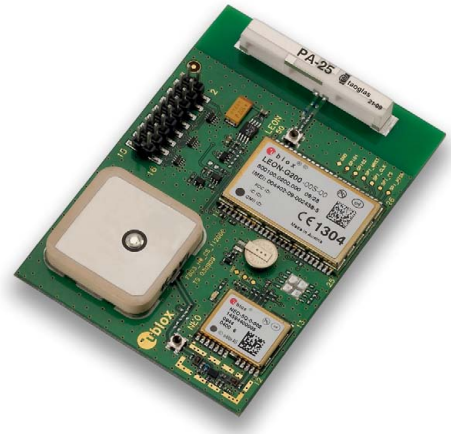
locate, communicate, accelerate

GPS and GSM solution with integrated SMT antennas and chip SIM

Product description

The C16-G25Q GSM/GPS reference design is a complete and integrated solution for telematics applications such as fleet management, asset tracking, road pricing, and security/surveillance. It demonstrates the integration of u-blox' NEO-5Q GPS receiver with a LEON-G200 GPRS/GSM module. This 100% SMD solution uses SMT passive GPS and GSM antennas and an on-board SIM Chip with activated phone number (SIM holder optional for mechanical SIM).

This reference design supports full access to the NEO-5X GPS module via the LEON-G200 module. Thus GSM and GPS can be controlled through a single serial port from any host processor. The LEON-G200 module features Quad Band GSM/GPRS data, voice and class 10 data transmission. The high performance u-blox 5 GPS engine enables navigation even in weak signal environments.



Reference Designs are intended to facilitate system integrators develop their own end products quickly with fast time-to-market. On request, u-blox provides comprehensive technical documentation including schematics, layouts BOM and design recommendations.

GPS receiver performance

The GPS solution integrates a 25 x 25 mm SMT antenna on a 65 x 55 mm effective ground plane. Please refer to the documentation on our website for NEO-5x and u-blox GPS antenna application note.

Ordering information

C16-G25Q-00S	LEON-G200 & NEO-5Q reference design with SMT antennas and SIM chip including 10 MB data and 50 SMS. Sold in sample quantity only.

Environmental Data

Power Supply	3.35 to 4.2 V
Supply Current	< 450 mA GPRS Class 10 & GPS
Operating Temp.	–20 °C to 65 °C
Serial Ports	1 UART to GSM/GPRS module

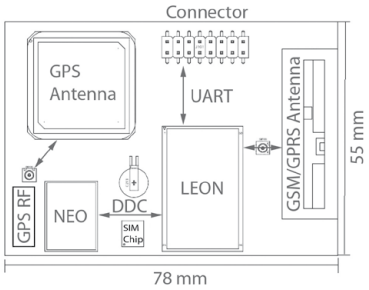
Characteristics

GPS antenna	25 x 25 mm ceramic patch SMT
GSM/GPRS antenna	Hexaband Cellular SMT
Dimensions	78 x 55 x 6 mm (12 mm with connector)
Connector	2-Rows SMD-PCB 16pin. Pitch: 2.54 mm

Pin Assignment

1	V_Charge	I	Charger supply input
2	Charge_sense	I	Charger sense input
3,4	VCC	I	Power Supply
5,6	GND	I	Ground
7	DSR	O	UART data set ready
8	RI	O	UART ring indicator
9	DCD	O	UART data carrier detect
10	DTR	I	UART data term. ready
11	RTS	I	UART ready to send
12	CTS	O	UART data term ready
13	TxD	I	UART transmitted data
14	RxD	O	UART received data
15	Power On	I	Power-on input
16	Reset_N	I	External reset input

Block Diagram



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