



WisLink-Cellular™ RAK2011

Arduino Shield Package

Package Contents:



BG96 LPWA IoT Cellular Arduino Shield



Cellular Antenna

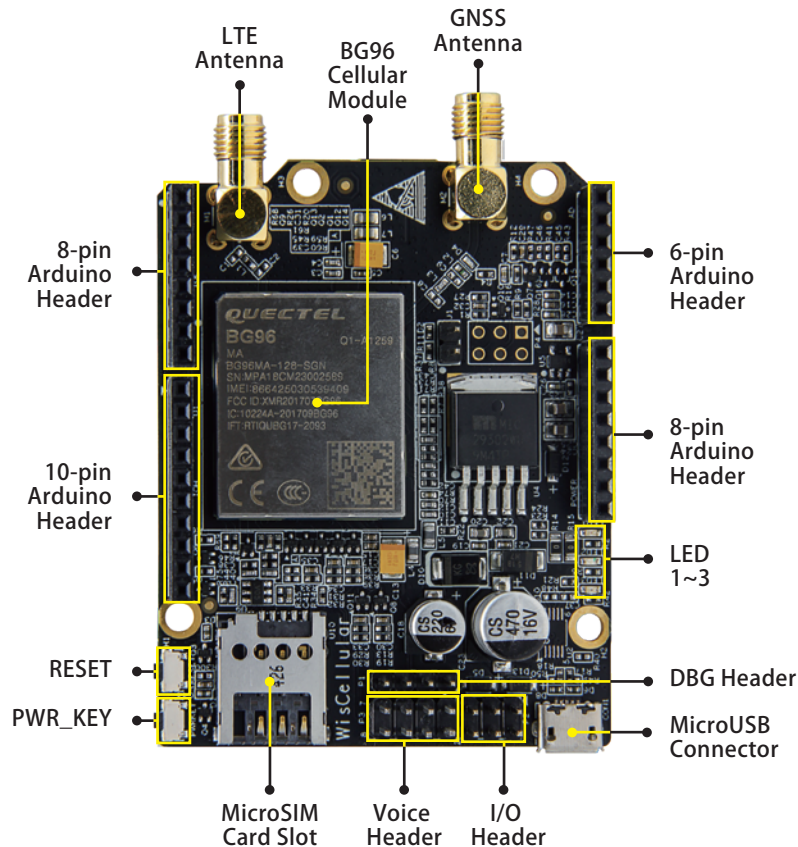


GPS Antenna



1ft MicroUSB Cable

Product Overview:



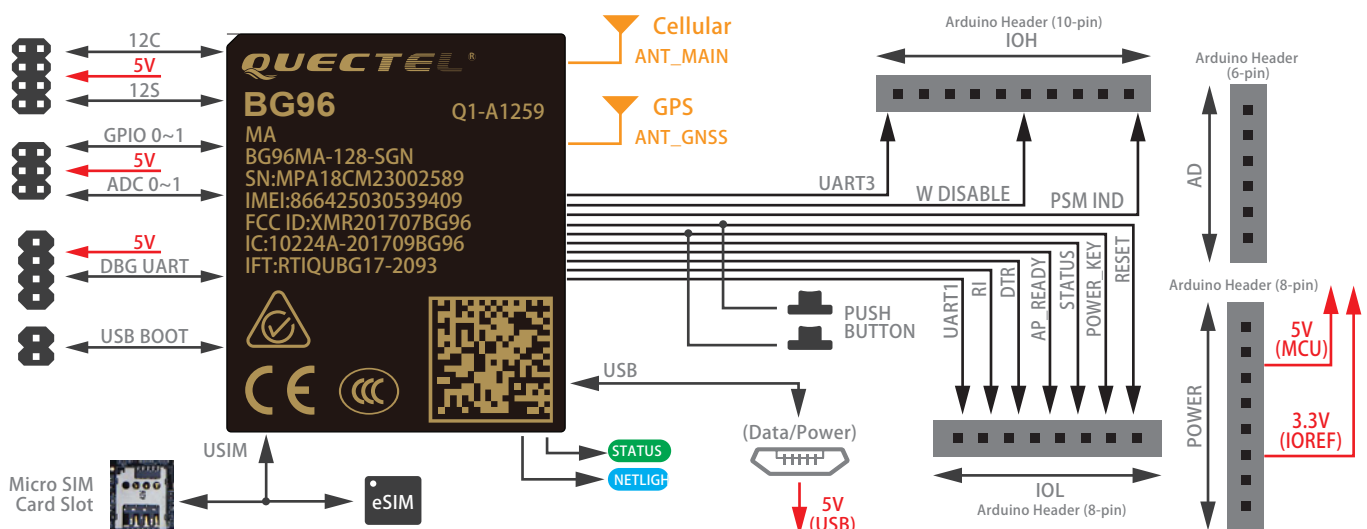
With Quectel BG96 and Qualcomm MDM9206 LTE modem chipset at its core, WisLink-Cellular BG96 is the industry leading compact embedded cellular modem that simultaneously supports three cellular standards – 2G(GPRS/EGRPS), 4G/LTE-M(Cat M1) and NB-IoT(Cat NB1) as well as GPS. Packed in Arduino shield form factor to leverage well-established Arduino ecosystem, it provides LPWA IoT cellular connectivity for MCU/MPU base boards with Arduino headers in the market. This gives IoT application developers desired flexibility to choose most suitable MCU/MPU for diverse IoT applications that require LPWA IoT cellular connectivity.

Built-in tri-mode cellular network support allows IoT developers to jump start deployment of IoT applications with 2G GPRS/EGPRS network that is mature and widely available and to seamlessly migrate to 4G/LTE Cat M1 and Cat NB1 networks that are being deployed and maturing across the globe without any hardware change.

Added GPS support to couple with LPWA cellular connectivity allows easy adaptation to popular IoT applications such as tracker, location base services (LBS), etc.

Enhanced AT commands, built-in core protocol support and availability of basic drivers for major operating systems (Windows, Linux, Android) significantly facilitate software development and system integration into any IoT applications.

Functional Diagram:





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Key Features:

Cellular Module	Quectel BG96 (based on Qualcomm MDM9206)
Cellular Network	2G/GSM (GPRS/EPGRS) 4G/LTE-M (Cat M1) NB-IoT (Cat NB1)
Global Bands	EDGE/EGPRS: 850/900/1800/1900MHz LTE FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28 LTE TDD: B39 (For Cat M1 Only)
Data Rate	Cat M1: Max. 300Kbps (DL), Max. 375Kbps (UL) Cat NB1: Max. 32Kbps (DL), Max. 70Kbps (UL) EDGE: Max. 296Kbps (DL), Max. 236.8Kbps (UL) GPRS: Max. 107Kbps (DL), Max. 85.6Kbps (UL)
Voice	VoLTE (Cat M1 Only)
SMS	Point-to-point MO and MT SMS Cell Broadcast Text and PDU Mode
GNSS (optional)	GPS
Peripheral Interface	Micro USB Arduino Headers 8-pin PCM Audio Header 6-pin Digital/Analog I/O Header 4-pin Debug Header Micro SIM Card Slot
LED	Red: Board Power-on Indication Green: Cellular Module Power-on Indication Blue: Network Status Indication
Power Consumption	Min 10uA @Power Saving Mode (PSM) for 4G/LTE Cat M1 and Cat NB1 Max 190mA @23dBm for 4G/LTE Cat M1 and 78mA @23dBm for 4G/TE Cat NB1
Software	Enhanced AT Commands Protocol: PPP/TCP/UDP/SSL/TLS/FTP(S)/HTTP(S)/NITZ/PING/MQTT Driver Support for Windows, Linux and Android
Physical Dimension	Dimension: 68.58 x 53.34 x 21 mm (LxWxH) Weight: Approximately 1.17 oz
Temperature Range	Operation Temperature: -35° C ~ +75° C Extended Temperature: -40° C ~ +85° C Storage Temperature: 40° C ~ +90° C
Standards	3GPP E-UTRA Release 13
Compliance	FCC, CE, WEEE, RoHS, Japan TELEC/JATE

Order Information:



Part Number	Package
RAK2011-00-R01	Single piece retail package
RAK2011-00-C10	10-piece board and cellular/GPS antenna carton package



About RAKwireless:

RAKwireless is a pioneer in providing innovated and diverse cellular and LoRa connectivity solutions for IoT edge devices. It's patented, modularized, simplified design significantly help address diverse IoT applications and accelerate their time-to-market. For more information, please visit Rakwireless website at www.rakwireless.com.

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