Smart wireless **M2M SOLUTIONS**

- Transportation & Logistics
- Industrial & Remote Asset Monitoring
- Smart Cities & Environmental Monitoring
- Healthcare
| WWAN Modem | Supported frequency bands | Max. connectivity speeds | | LTE | | 3G Americas | | 3G EMEA | | 3G JP/APAC | | Ethernet |
|---|---|---|---|---|---|---|---|---|---|
| WWAN Modem | • UMTS/HSPA/HSUPA/HSPA+ | 100Mbps down, 50Mbps up (Cat3) Theoretical LTE data rates | | • UMTS/HSPA/HSUPA/HSPA+ | | • UMTS/HSPA/HSUPA/HSPA+ | | • UMTS/HSPA/HSUPA/HSPA+ | | • UMTS/HSPA/HSUPA/HSPA+ |
| LTE | 850/900/1900/2100 MHz and AWS band (1700/2100 MHz) | 10/100Mb/s RJ45 | | 800-850/900-1900 MHz and AWS band (1700/2100 MHz) | | 800-850/900-1900 MHz and AWS band (1700/2100 MHz) | | 800-850/900-1900 MHz and AWS band (1700/2100 MHz) | | 800-850/900-1900 MHz and AWS band (1700/2100 MHz) |
| 3G/2G | • GSM/GPRS/EDGE: | | | • GSM/GPRS/EDGE: | | • GSM/GPRS/EDGE: | | • GSM/GPRS/EDGE: | | • GSM/GPRS/EDGE: |
| | 850/930/1800/1900 MHz | | | 850/930/1800/1900 MHz | | 850/930/1800/1900 MHz | | 850/930/1800/1900 MHz | | 850/930/1800/1900 MHz |

**WWAN Antenna**

- **Antenna connector**
  - 1 x SMA: WWAN Main
  - 1 x SMA: WWAN Div/GPS

**GPS**

- High sensitivity A-GPS (A-GLONASS) receiver (SPL 1.0 & SPL 2.0)
- Standalone GPS, Assisted GPS, gpsOne™
- Wideband GPS processing (20MHz) for improved measurement accuracy

**SIM**

- UMTS/GSM connection – Class B and Class C

**CPU**

- ARM966E-S @ 450MHz
- Memory avail. for customer apps
- Up to 13MB developer image size
- 20MB R/W flash shared with system
- 85MB free RAM
- 4MB Configuration data

**Power**

- DC Power in, 9-33 V DC
- Connector type Micro-FT
- Dual mix, 4 circuits

**Case**

- Weight
- 304g
- 294g
- 294g
- 282g

**Environments**

- Operating temperature
- -30°C to +70°C
- Storage temperature
- -40°C to +85°C
- Humidity operational:
- 5% - 95%

**Certifications**

- CE, FCC, IC, PTCRB, E-mark, EN50155, AT&T, T-Mobile, Verizon, Bell Mobility, Telus, Airis, Telcel, Entel, US Cellular, Latam
- CE, E-mark, RCM
- JATE, Telco, Softbank, NTT docomo
- CE, FCC, IC

**Std. compliance**

- ROHS, Reach

**CloudGate Universe**

- Device can be configured OTA using CloudGate Universe

**Expansion cards**

- 2 x expansion slots for adding cards: MILAN expansion card, Low cost serial card, Industrial serial card, Ethernet switch, Telematics card

**Developers**

- Support CloudGate development kit
- Developer board, Breadboard, SDK, SDK

**In the box**

- All other accessories (i.e. power cable, antennas etc.) sold separately

**Product Code**

- CG 0114-11987
- CG 0192-11897
- CG 0112-11938
- CG 0122-11978
- CG 0102-11955
Expansion Cards

**Wireless cards**

**WLAN** CG 2101-11921
- 802.11 a/b/g/n
- Simultaneous client and access point mode (10 users)
- Fallback to Wireless LAN client for WLAN connectivity
- Dual SSD

**WLAN access point** CG 2102-11994
- 802.11 a/b/g/n
- Access point, up to 32 simultaneous users

**Xbee/Bluetooth** 1008826
- Xbee or XBee Pro compliant
- Bluetooth LE option available

**Ethernet cards**

**4-port Ethernet**
- 4 port 10/100 Base-T, μSD card CG 1104-11936
- 4 port 10/100 Base-T, μSD card with 2 ports Class 4 PoE or 4 ports up to Class 3 Power Over Ethernet (PoE) to allow you to power external devices, requires special power supply CG 1103-11936 with PoE

**1-port Ethernet** CG 1109-11991
- 1 port 10/100 Base-T, μSD card

**Development cards**

**Developer** CG 1105-11937 for software developer
- Extended format card with headers for all interfaces
- Includes headers for access to USB, USB on the go, RS-232, I2C, SPI, SD and GPIO lines
- On board temperature sensor, relay, SD card slot and RS232 serial port

**Breadboard** CG 1108-11980 for hardware developer
- Ideal for prototyping your own expansion card
- Supports 3 types of connections:
  - 3.5mm pitch connectors can be soldered on front two rows to provide a more reliable and long-term connection
  - 2.54mm pitch components can be soldered on main breadboard area
  - All signals on the back connector can be tapped off on breadboard area near this connector
- On board Real Time Clock and μSD socket
- KNX Twisted Pair TP1 interface and 80mA DPSU
- Two Analog Inputs, selectable as 4-20mA, 0-5V or 0-10V
- Two RS-232 serial ports, and one RS-485 port as MODBUS master or slave

**Accessories**

**Power Supply**
- Standard 9-33vDC power supply
- Output voltage 12V DC
- Max output current 1A
- Number of spots: 4
- Molex Micro-Fit 3.0 connector (GXX-43025-0400)
- Can also be delivered as a DC power cable with Micro-Fit connector (3m)

**3G WWAN Antenna**
- 800-2200MHz for 3G (EGSM or CDMA)
- SMA male connector
- Rotatable hinge design
- 3” length
- Recommended: Taoglas TG.09.0113

**4G WWAN/GPS Antenna**
- 698-2690 MHz for 2G/3G/4G/GPS
- SMA male connector
- Hinged design
- 6” Length
- Recommended: Taoglas TG.10.0113

**WLAN Antenna**
- 2.4 and 5 GHz for Wi-Fi
- RP-SMA male connector
- Hinged design
- 6” Length
- Recommended: Taoglas UW.58.3153

**Torx T6 Screwdriver**
- A Torx T6 screwdriver is needed when installing/removing an expansion card or SIM card

**CloudGate UNIVERSE** [http://cloudgate.option.com]

- Device and Radio Settings: Auto Recovery Settings, APNs, Connection Monitoring Settings, Username/password, etc.
- Drivers for expansion modules
- Applications
- Visually configurable device agent for design and deployment of smart M2M Solutions
- Easy-to-use graphical, “drag and drop & visual wiring” configuration environment for CloudGate Gateway devices
- Configuration with minimal programming
- Application development in only minutes
- Rapid application prototyping, testing and deployment
- Supports a wide variety of sensors, aka “node sets”
- Reduced risk/lower cost
- Shorter sales cycles
- Drives innovation by enabling “risk taking”
CloudGate is the carrier-approved M2M solution platform that delivers device connectivity, security and processing power for global M2M applications. Quick and cost-effective to implement, each device comes with CloudGate Universe, Option’s cloud-based configuration and deployment platform, as well as the CloudGate SDK for rapid application development and the CloudGate HDK for prototyping custom expansion cards and LuvitRed, a visually configurable device agent with an easy-to-use graphical, “drag and drop” visual wiring” configuration environment for CloudGate Gateway devices. A pre-built library of software applications and a selection of modular hardware extensions means that CloudGate solutions deliver ease of deployment and maximum flexibility. Only Option delivers a complete M2M ecosystem.

1. Select a CloudGate model with expansion cards and/or accessories to suit your needs

2. Configure CloudGate Universe, the provisioning server

3. …and start to CONNECT THINGS to the Cloud