CloudGate 4.0 NEXT GENERATION

IoT gateways designed with Option CloudGate signature features

- Ruggedized design
- Industrial grade temperature ranges
- Timed wake-up & ignition sensing
- Passive & active GPS antenna support
- SIM connection

option.com
## CloudGate Universe

**Device can be configured OTA using**

- ROHS, Reach, WEEE
- CE, FCC, PTCRB, ESD, AT&T, VZW, US Cellular
- CE, FCC, PTCRB, IS0, AT&T, VZW, US Cellular

**Device can be configured OTA using**

- CloudGate Universe
- CloudGate Gateway

**For developers**

- CloudGate development kit, developer board, iot.hub
- CloudGate Gateway

**In the box**

- Accessories are available (i.e., Power cable, antenna’s etc…)

<table>
<thead>
<tr>
<th>OPTION</th>
<th>CloudGate LTE WW REV4</th>
<th>CloudGate mini</th>
<th>CloudGate micro</th>
</tr>
</thead>
<tbody>
<tr>
<td>WWAN Modem</td>
<td><strong>LTE</strong></td>
<td><strong>LTE</strong></td>
<td><strong>LTE</strong></td>
</tr>
<tr>
<td>Supported frequency bands</td>
<td>LTE FDD: B1, B3, B5, B7, B8, B13, B18, B20, B26, B28</td>
<td>LTE FDD: B1, B3, B5, B7, B8, B13, B18, B19, B20, B26, B28</td>
<td>LTE FDD: B1, B3, B5, B8, B13, B18, B19, B20, B26, B28</td>
</tr>
<tr>
<td>Max. connectivity speeds</td>
<td>LTE: DL 150 Mbps, UL 50 Mbps</td>
<td>LTE: DL 150 Mbps, UL 50 Mbps</td>
<td>LTE: DL 150 Mbps, UL 50 Mbps</td>
</tr>
<tr>
<td>WWAN Modem</td>
<td><strong>3G/2G</strong></td>
<td><strong>3G/2G</strong></td>
<td><strong>3G/2G</strong></td>
</tr>
<tr>
<td>Supported frequency bands</td>
<td>DC-HSPA+ DL 42 Mbps, UL 5.76 Mbps</td>
<td>DC-HSPA+ DL 42 Mbps, UL 5.76 Mbps</td>
<td>DC-HSPA+ DL 42 Mbps, UL 5.76 Mbps</td>
</tr>
<tr>
<td>Max. connectivity speeds</td>
<td>Rx Diversity</td>
<td>Rx Diversity</td>
<td>Rx Diversity</td>
</tr>
<tr>
<td>Supported frequency bands</td>
<td>GSM/GPRS/EDGE: 850/900/1800/1900 MHz (B2, B3, B5, B8)</td>
<td>UMTS/HSPA/HSDPA/HS+PA: 800-850/900/900/1900/2100 MHz (B1, B2, B4, B5, B6, B8, B19)</td>
<td>UMTS/HSPA/HSDPA/HS+PA: 800-850/900/900/1900/2100 MHz (B1, B2, B4, B5, B6, B8, B19)</td>
</tr>
<tr>
<td>GPS</td>
<td>Standalone GPS, Assisted GPS, GPS OneXTRA™</td>
<td>Standalone GPS, Assisted GPS, GPS OneXTRA™</td>
<td>Standalone GPS, Assisted GPS, GPS OneXTRA™</td>
</tr>
<tr>
<td>Antenna connector</td>
<td>1 × SMA: WWAN Main</td>
<td>1 × SMA: WWAN Main</td>
<td>1 × SMA: WWAN Main</td>
</tr>
<tr>
<td>SIM</td>
<td>USIM/SIM connection – Class B and Class C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPU</td>
<td>i.MX280 (ARM926EJ-S @ 450 MHz)</td>
<td>i.MX280 (ARM926EJ-S @ 450 MHz)</td>
<td>i.MX280 (ARM926EJ-S @ 450 MHz)</td>
</tr>
<tr>
<td>Memory</td>
<td>512 MB Flash (20 MB for data, 30 MB for application, 372 MB extra data partition)</td>
<td>256 MB Flash (20 MB for data, 30 MB for application, 0 MB extra data partition)</td>
<td>256 MB Flash (20 MB for data, 30 MB for application, 0 MB extra data partition)</td>
</tr>
<tr>
<td>Ethernet (IEEE 802.3)</td>
<td>10/100Mbps RJ45 Connector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>microSD card holder</td>
<td>on main PCB</td>
<td>on main PCB</td>
<td>on main PCB</td>
</tr>
<tr>
<td>Power control</td>
<td>Timed Wakeup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery</td>
<td>Optional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power input</td>
<td>DC input voltage: 9-33 V DC</td>
<td>DC input voltage: 9-33 V DC</td>
<td>DC input voltage: 9-33 V DC</td>
</tr>
<tr>
<td>USB</td>
<td>with optional expansion card</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rear Expansion card</td>
<td>with optional expansion card</td>
<td>with optional WAN or LoRa expansion card</td>
<td></td>
</tr>
<tr>
<td>Front Expansion card</td>
<td>with optional expansion card</td>
<td>fixed functionality: I2C, 3 x GPIO, RS485 or RS232 and CAN bus port (up to 1 Mbps)</td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>115 × 106 × 45 mm</td>
<td>115 × 106 × 45 mm</td>
<td>115 × 106 × 45 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>285 g / 10.05 oz</td>
<td>285 g / 10.05 oz</td>
<td>285 g / 10.05 oz</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-30°C to +70°C / -22°F to to 158°F</td>
<td>-30°C to +70°C / -22°F to to 158°F</td>
<td>-30°C to +70°C / -22°F to to 158°F</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-40°C to +85°C / -40°F to to 185°F</td>
<td>-40°C to +85°C / -40°F to to 185°F</td>
<td>-40°C to +85°C / -40°F to to 185°F</td>
</tr>
<tr>
<td>Product Code</td>
<td>CG0124</td>
<td>CM1123</td>
<td>CM0125</td>
</tr>
</tbody>
</table>

**工业级，高度可定制化蜂窝连接**

**工业级**

- ROHS, Reach, WEEE
- CloudGate Universe
- For developers: CloudGate development kit, developer board, iot.hub

**工业级，高度可定制化蜂窝连接**

- TDD: 38/39/40/41
- GSM/GPRS/EDGE: 850/1900 MHz (B8, B5, B18)
- UMTS/HSPA/HSDPA/HS+PA: 800-850/900/900/1900/2100 MHz (B1, B2, B4, B5, B6, B8, B19)
- Standalone GPS, Assisted GPS, GPS OneXTRA™
- Wideband GPS processing (20MHz) for improved measurement accuracy
- Passive/active GPS antenna support

**工业级，高度可定制化蜂窝连接**

- CloudGate Gateway
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- CloudGate Gateway
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CloudGate

Smart IOT Gateway

- Transports & Logistics
- Industrial & Remote Asset Monitoring
- Smart Cities & Environmental Monitoring
### World Wide Antenna (WWAN)

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

**Max. connectivity speeds**
- DC-HSDPA: 42 Mbps (Cat 4) down
- DC-HSDPA: 42 Mbps (Cat 4) up
- HSPA+: 14.4 Mbps (Cat 10) down
- HSPA+: 14.4 Mbps (Cat 6) up
- HSUPA+: 7.76 Mbps (Cat 6) up
- HSUPA+: 5.76 Mbps (Cat 6) up

**Simultaneous Equalization and Rx Diversity on all bands**
- Not included

**Supported frequency bands**
- UMTS/HSDPA/HSUPA/HSPA+:
  - 850/900/1900/2100 MHz

**GPS**
- High sensitivity A-GPS /A-GLONASS receiver (SPL 1.0 & SUPL 2.0)
- Active GPS antenna support
- Standalone GPS, Assisted GPS, GPS OneTouch™
- Wideband GPS processing (20MHz)
- Improved measurement accuracy
- Passive/active GPS antenna support

**SIM**
- USIM/SIM connection – Class B and Class C
- Not applicable

### CloudGate Models

<table>
<thead>
<tr>
<th>Model</th>
<th>LTE WW</th>
<th>CG LTE US rev 3</th>
<th>3G EME rev 3</th>
<th>Ethernet 2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LTE</strong></td>
<td>Supported frequency bands</td>
<td>700/800/850/900/1800/2100/2600 MHz</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Max. connectivity speeds</td>
<td>100 Mbps down, 50 Mbps up (Cat 3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>WWAN Modem</strong></td>
<td>Supported frequency bands</td>
<td>UMTS/HSDPA/HSUPA/HSPA+: 850/900/1900/2100 MHz and AWS band (1700/2100 MHz)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Max. connectivity speeds</td>
<td>100 Mbps down, 50 Mbps up (Cat 3)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Accessories**
- Telematics card IO connector (9x2)
- Telematics IO break-out board and cable
- AC power supply 12V/1.5A class 6
- EU interchangeable plug for power supply
- AU interchangeable plug for power supply
- UK interchangeable plug for power supply
- Prestrung cables for Telematics card IO connector (300mm, 20 AWG)

**Product Code**
- CG0114-12019
- CG0119-12102
- CGL18-2043
- C102-11972
### STANDARD CARDS

<table>
<thead>
<tr>
<th>Front slot</th>
<th>Back slot</th>
<th>Front slot</th>
</tr>
</thead>
</table>
| **STANDARD SERIAL CARD**<br>CG1101-11919  
- One RS-232 serial port 921,6 Kbaud maximum speed | **MOBILE CARD**<br>CG2103-12048  
- Bluetooth 4.2 LE | **ETHERNET OPTION**<br>CG1108-11980  
- 3.5 mm pitch connectors can be soldered on two front rows to provide a more reliable and accessible connection |
| **DEVELOPER CARD for SW developer**<br>CG1105-11937  
- Extended format card for with headers for all interfaces. | **BLE Bluetooth Low Energy CARD**<br>CG1119-12096  
- Bluetooth 4.2 LE | **BREADBOARD CARD for HW developer**<br>CG1108-11980  
- Ideal for prototyping your own expansion card. |
| **BiPOM - 2-RS232 & USB card** | **Telematics CARD - extended IO & CAN**<br>CG2119-12079  
- 802.11 a/b/g/n | **BREADBOARD CARD**<br>CG1121-12080  
- Supports 3 types of connections: |
| **BiPOM - nano-WiPom card** | **Telematics CARD**<br>CG1102-11956  
- 2.54 mm pitch components | All signals on the back connector can be tapped off on breadboard area near this connector. |
| **BiPOM - SiFlex card** | **Telematics CARD**<br>CG1106-11983  
- Enables 3 axis accelerometer for movement detection and other applications | 2.54 mm pitch connectors can be soldered on main breadboard area. |
| **USRobotics - Modemulator card** | **Telematics CARD with extended IO (4-port current loop)**<br>CG2110-12012  
- Ethernet card - 1 port | **Telematics CARD**<br>CG1110-11931  
- Ethernet card - 2 port with PoE |
| **USRobotics - Modemulator card** | **Telematics CARD with CAN (4-port current loop)**<br>CG2111-12092  
- Ethernet card - 2 port | **Telematics CARD**<br>CG1106-11957  
- Ethernet card - 4 port with PoE |
| **USRobotics - Modemulator card** | **BLE Bluetooth Low Energy CARD**<br>CG1119-12096  
- Bluetooth 4.2 LE | **Telematics CARD**<br>CG1109-11919  
- Ethernet card - 4 port with PoE |
| **USRobotics - Modemulator card** | **Telematics CARD**<br>CG1106-11957  
- Bluetooth 4.2 LE | **Telematics CARD**<br>CG1110-11931  
- Ethernet card - 2 port |
| **USRobotics - Modemulator card** | **Telematics CARD**<br>CG1110-11931  
- Ethernet card - 4 port with PoE | **Telematics CARD**<br>CG1106-11957  
- Ethernet card - 4 port with PoE |

### PARTNER CARDS

<table>
<thead>
<tr>
<th>Front slot</th>
<th>Back slot</th>
<th>Front slot</th>
</tr>
</thead>
</table>
| **AICOM - Industrial grade IO card** | **ATM - LoRa card**<br>CG5221-12023  
- Smart city card | **AICOM - Industrial grade IO card**<br>CG5106-11983  
- Ethernet card - 1 port |
| **BiPOM - SIFlex card**<br>CG2104-12048  
- 5A - MicroSD holder card | **BiPOM - Multiwireless card**<br>CG5220-12022  
- Ethernet card - 2 port | **BiPOM - Multiwireless card**<br>CG5220-12022  
- Ethernet card - 2 port |
| **BiPOM - RF card**<br>CG2103-12047  
- 5A - MicroSD holder card | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 1 port | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 1 port |
| **BiPOM - Monnit card**<br>CG2102-11994  
- 5A - MicroSD holder card | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 1 port | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 1 port |
| **BiPOM - BoilerConnect - GPIO card**<br>CG2102-11994  
- 5A - MicroSD holder card | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 1 port | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 1 port |
| **BiPOM - Ethernet card - 1 port**<br>CG2102-11994  
- 5A - MicroSD holder card | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 1 port | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 1 port |
| **BiPOM - Ethernet card - 2 port**<br>CG2104-12047  
- 5A - MicroSD holder card | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 2 port | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 2 port |
| **BiPOM - Ethernet card - 3 port**<br>CG2105-12053  
- 5A - MicroSD holder card | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 3 port | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 3 port |
| **BiPOM - Ethernet card - 4 port**<br>CG2106-12053  
- 5A - MicroSD holder card | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 4 port | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 4 port |
| **BiPOM - Ethernet card - 6 port**<br>CG2107-12065  
- 5A - MicroSD holder card | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 6 port | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 6 port |
| **BiPOM - Ethernet card - 10 port**<br>CG2108-12065  
- 5A - MicroSD holder card | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 10 port | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 10 port |
| **BiPOM - Ethernet card - 20 port**<br>CG2109-12065  
- 5A - MicroSD holder card | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 20 port | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 20 port |
| **BiPOM - Ethernet card - 30 port**<br>CG2110-12065  
- 5A - MicroSD holder card | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 30 port | **BiPOM - Monnit card**<br>CG5106-11983  
- Ethernet card - 30 port |

### CloudGate Universe

With CloudGate Universe Option supports its partners by providing the easiest and most cost-effective deployment mechanism for their software solutions. A provisioning system dedicated to delivering Option and third party software and product configuration to CloudGate gateways. CloudGate Universe is part of the CloudGate solution with no registration cost or yearly fees and no competition with system integrator or software developers services and products. Configure just one, some or all your devices for a particular site, application or customer and configure all your devices to the same device setting.

www.cloudgateuniverse.com
Option Wireless Technology’s CloudGate is the carrier-approved IoT solution platform that delivers device connectivity, security and processing power for global IoT applications. It includes the world-wide carrier-approved intelligent CloudGate gateway that comes with CloudGate Universe, Option’s cloud-based configuration and deployment platform, as well as the CloudGate SDK for rapid application development, the CloudGate HDK for prototyping custom expansion cards and award-winning LuvitRed, a visually configurable device agent with easy-to-use graphical, “drag and drop & visual wiring” configuration. LuvitRed overcomes complexities of the vast variety of protocols used in different IoT verticals and delivers true IoT Edge Computing capabilities on CloudGate in an easy way. A pre-built library of software applications and modular hardware extensions ensure ease of deployment and maximum flexibility. Only Option delivers a complete M2M ecosystem.

As part of the continual product improvement process, OPTION reserves the right to alter the specifications of this product.

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