

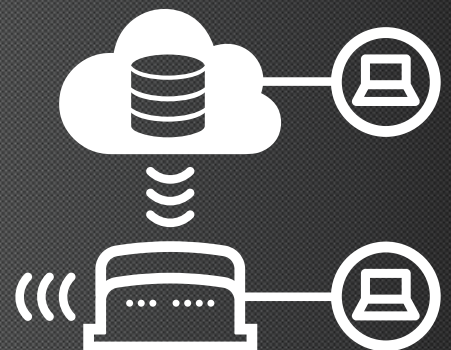


# CloudGate



## CONNECTING THINGS to the Cloud

- Simple, value priced WWAN M2M IP connectivity
- Automatic connection monitoring and error recovery
- Secure, redundant firmware and configuration images
- Unique software and hardware configuration flexibility
- Automatic provisioning of custom middleware



## Simple, value priced WWAN M2M IP connectivity

The CloudGate provides competitively priced LAN to WWAN routing and GPS functionality in a single basic unit certified on all major US cellular operators. The CloudGate is simple to configure locally or remotely from your PC, tablet or SmartPhone.

## Reliable and secure

CloudGate automatically resolves common problems associated with wireless M2M connectivity. Built in software and hardware watchdogs continuously monitor each component of the product and the product's connectivity to home servers. In the event an issue is detected, the product proactively takes steps to re-establish connectivity. All software and configuration images are protected with digital signatures and have dual rollback images that allow the product to revert to previous working settings if an issue is detected. All management functions are protected by certificate and/or password based security mechanisms and all management actions take place over hardware assisted encrypted links.

## Flexible and cost effective to integrate and deploy

CloudGate provides unique flexibility that allows customers and system integrators to tailor the product to their solution or even site specific requirements. CloudGate incorporates two hardware expansion slots that allow the CloudGate to be enhanced with additional radio and/or wired interfaces. The expansion cards are simple and quick to install, allowing the field upgrade of the device when new functionality is required. All the design details of the expansion card are available to partners allowing you to add value with your own hardware products. CloudGate allows simple integration and provisioning of customer or third party middleware and applications. The automated cloud provisioning system means that each device can be set with its own custom configuration and image that is automatically loaded from the cloud when it initially connects to the internet.

## Also available



Features	Sub Feature	Description
WWAN Modem	Supported frequency bands	<ul style="list-style-type: none"> <li>GSM/GPRS/EDGE: 850/900/1800/1900 MHz</li> <li>UMTS/HSDPA/HSUPA/HSPA+: 800-850/900/1900/2100 MHz and AWS band (1700/2100 MHz) (B1, B2, B4, B5, B6, B8)</li> <li>CDMA 1xRTT/EV-DO rev0/EV-DO revA: 800/1900 (BC0, BC1)</li> </ul>
	Max. Connectivity speeds	<ul style="list-style-type: none"> <li>HSPA+: 14.4 Mbps (Cat 10) down 5.76 (Cat 6) up</li> <li>EV-DO RevA mode: 3.1 Mbps FL/1.8 Mbps RL</li> </ul>
	Rx Diversity	<ul style="list-style-type: none"> <li>Simultaneous Equalization and Rx Diversity on all bands, except for GSM/GPRS/EDGE</li> </ul>
	Connectors	<ul style="list-style-type: none"> <li>1 x SMA: WWAN Main</li> <li>1 x SMA: WWAN Div/GPS</li> </ul>
GPS	Visual feedback	<ul style="list-style-type: none"> <li>Seven 3 color LEDs showing system status and signal strength</li> </ul>
	Assisted/Standalone GPS	<ul style="list-style-type: none"> <li>Standalone GPS, Assisted GPS, gps OneXTRA™</li> <li>Wideband GPS processing (20MHz) for improved measurement accuracy</li> </ul>
CPU	Current consumption	<ul style="list-style-type: none"> <li>ARM926EJ-S @ 450MHz</li> <li>Memory available for customer applications:                             <ul style="list-style-type: none"> <li>- 30 Mb R/O flash for executables</li> <li>- 30 Mb R/W flash shared with system</li> <li>- 40 Mb free RAM</li> <li>- 1 Mb Configuration data</li> </ul> </li> </ul>
	Ethernet (IEEE 802.3)	<ul style="list-style-type: none"> <li>10/100 Mbps RJ45 Connector</li> </ul>
SIM	USIM/SIM connection	<ul style="list-style-type: none"> <li>USIM/SIM connection – Class B and Class C</li> </ul>
Expansion Slot 1 & 2		<ul style="list-style-type: none"> <li>Expansion board for IO functions such as serial, USB, GPIO, WiFi</li> </ul>
Power	DC Power in	<ul style="list-style-type: none"> <li>9-33 V DC</li> </ul>
	Connector type	<ul style="list-style-type: none"> <li>Micro-Fit 3.0™, Dual Row, 4 Circuits</li> </ul>
Case	Dimensions (w x d x h)	<ul style="list-style-type: none"> <li>115 mm x 105 mm x 45 mm</li> </ul>
	Weight	<ul style="list-style-type: none"> <li>294 g</li> </ul>
Mounting		<ul style="list-style-type: none"> <li>6 through holes for M4 bolts - 2 x 2 compatible with VESA Mount MIS-D 75 (Optional standard DIN rail mounting interface)</li> </ul>
	Current consumption	<ul style="list-style-type: none"> <li>All measurements at 12V DC</li> <li>CloudGate attached to 2G network, no Ethernet: 121mA.</li> <li>CloudGate attached to 2G network, Ethernet connected: 136mA</li> <li>CloudGate attached to 2G network, no Ethernet, 2G call (2Tx, 32dBm): 270mA, peak = 772mA</li> <li>CloudGate attached to 3G network, no Ethernet, 3G call @ 2100MHz (band I): 341mA</li> </ul>
Environmentals	Operating temperature	<ul style="list-style-type: none"> <li>-30°C to 70°C</li> </ul>
	Storage temperature	<ul style="list-style-type: none"> <li>-40°C to +85°C</li> </ul>
	Humidity operational	<ul style="list-style-type: none"> <li>5% - 95% non condensing</li> </ul>
Certification		<ul style="list-style-type: none"> <li>FCC</li> <li>IC</li> <li>PTCRB</li> <li>IFETEL</li> </ul>
	Standards compliance	<ul style="list-style-type: none"> <li>ROHS, Reach</li> </ul>

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1. Configure CloudGate provisioning server



2. Configuration & middleware are automatically installed



3. Device is ready to connect things to the Cloud!



# CloudGate

## ACCESSORIES



## EXPAND THE FUNCTIONALITY of CloudGate

- Reducing stocking and deployment costs
- Unique software and hardware configuration flexibility
- As simple or full featured as you need it to be

The CloudGate is an Intelligent M2M gateway from Option which provides LAN to WWAN routing and GPS functionality in a single basic unit. On top of the basic functionality the CloudGate can be tailored to meet your specific requirements by adding additional software and hardware, going from wired and wireless modules to designing your own expansion module, now or when a future need arises. Just make it as simple or full featured as you need it to be.

## WiFi expansion card



- 802,11abgn
- Simultaneous access point and client mode
- Failover to Wireless LAN client for WAN connectivity
- Dual SSID

## Low cost serial card



- 1 serial port RS-232 921,6Kbaud maximum speed

## Industrial serial card



- One RS-232 serial port. 921,6 Kbaud maximum speed
- One 2KV isolated RS-485 serial port. 921,6 Kbaud maximum speed, Full duplex or half duplex, 2 wire or 4 wire. Switchable termination.

## Ethernet switch



- 4 port 10/100 Base-T, μSD card
- 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)

## Developer card



- 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

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dataSheet\_v1.0

1. Configure CloudGate provisioning server



2. Configuration and customized middleware are automatically installed



3. Device is ready to connect things to the cloud

