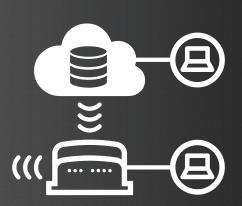# CloudGate

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 M2M Gateway from Option provides competitively priced LAN to WWAN routing and GPS functionality certified on all major US cellular operators (CDMA/EvDO and WCDMA/HSPA+). 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.

A range of accessory cards including wireless LAN Access Point and Client, RS-232 and RS-485, Ethernet switch are available from Option and all the design details of the expansion card can be licensed free of charge to partners allowing you to add value with your own hardware products.

CloudGate also allows simple integration and provisioning of customer or system integrator middleware and applications on the device. 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

Summary

The Option CloudGate M2M Router has the basic, simple to use functionality for most applications along with the unique flexibility for meeting specific requirements that makes it the ideal choice for use with your solution.

Features	Sub Feature	Description
WWAN Modem	Supported frequency bands	• GSM/GPRS/EDGE: 850/900/1800/1900 MHz • UMTS/HSDPA/HSUPA/HSPA+: 800-850/900/1900/2100 MHz and AWS band (1700/2100 MHz) (B1, B2, B4, B5, B6, B8) • CDMA 1xRTT/EV-DO rev0/EV-DO revA (GTM689 only): 800/1900 (BC0, BC1)
	Max. Connectivity speeds	• HSPA+: 14.4 Mbps (Cat 10) down 5.76 (Cat 6) up • EV-DO RevA mode: 3.1 Mbps FL/1.8 Mbps RL • HSPA+ Rel 7 SW features CPC (DTX/DRX), HS-SCCH-less operation, Enhanced CELL_FACH, Enhanced L2, EF-DPCH
	Rx Diversity	• Simultaneous Equalization and Rx Diversity on all bands, except for GSM/GPRS/EDGE
	Connectors	• 1 x SMA: WWAN Main • 1 x SMA: WWAN Div / GPS
	Antenna connector	• 2 x SMA
	Visual feedback	• Seven 3 color LEDs showing system status and signal strength
GPS	Assisted/Standalone GPS	• Standalone GPS, Assisted GPS, gps OneXTRA™ • Wideband GPS processing (20MHz) for improved measurement accuracy
CPU		• ARM926EJ-S @ 450MHz • Memory available for customer applications • 30 Mb R/O flash for executables • 30 Mb R/W flash shared with system • 40 Mb free RAM • 1 Mb Configuration data
Ethernet (IEEE 802.3)		• 10/100Mb/s RJ45 Connector
SIM	USIM/SIM connection	• USIM/SIM connection – Class B and Class C
Expansion Slot 1 & 2		• Expansion board for IO functions such as serial, USB, GPIO, WiFi
Power	DC Power in	• 9-33 V DC
	Connector type	• Micro-Fit 3.0™, Dual Row, 4 Circuits
	Current consumption	• All measurements at 12V DC • CloudGate attached to 2G network, no Ethernet: 121mA. • CloudGate attached to 2G network, Ethernet connected: 136mA • CloudGate attached to 2G network, no Ethernet, 2G call (2Tx, 32dBm): 270mA, peak = 772mA • CloudGate attached to 3G network, no Ethernet, 3G call @ 2100MHz (band I): 341mA
Case	Dimensions (w x d x h)	• 115 mm × 105 mm × 45 mm
	Weight	• 180 g
	Mounting	• 6 through holes for M4 bolts - 2 x 2 compatible with VESA Mount MIS-D 75 (Optional standard DIN rail mounting interface)
Enviromentals	Operating temperature	• -30°C to 70°C
	Storage temperature	• -40°C to +85°C
	Humidity operational	• 5% - 95% non condensing
Certification		• FCC • IC • PTCRB
Standards compliance		• ROHS, Reach

1. Configure CloudGate provisioning server

2. Configuration & middleware are automatically installed

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