

CloudGate



Smart wireless M2M SOLUTIONS

- Transportation & Logistics
- Industrial & Remote Asset Monitoring
- Smart Cities & Environmental Monitoring
- Healthcare

CloudGate models



LTE WW

3G Americas

3G EMEA

3G JP/APAC

Ethernet

WWAN Modem	Supported frequency bands	700/800/850/900/1800/1900/2100/2600/AWS (B 1-5, 7, 8, 13, 17, 18, 19, 20)	Not applicable			
	LTE	Max. connectivity speeds	100Mbps down, 50Mbps up (Cat3) Theoretical LTE data rates	Not applicable		
WWAN Modem 3G/2G	Supported frequency bands	<ul style="list-style-type: none"> UMTS/HSDPA/HSUPA/HSPA+: 850/900/1900/2100 MHz and AWS band (1700/2100 MHz) (B 1, 2, 4, 5, 8) GSM/GPRS/EDGE: 850/900/1800/1900 MHz 	<ul style="list-style-type: none"> UMTS/HSDPA/HSUPA/HSPA+: 800-850/900/ 1900/2100 MHz and AWS band (1700/2100 MHz) (B1, 2, 4, 5, 6, 8) CDMA 1xRTT/EV-DO rev0/ EV-DO revA: 800/1900 (BC0, BC1) GSM/GPRS/EDGE: 850/900/1800/1900 MHz 	<ul style="list-style-type: none"> UMTS/HSDPA/HSUPA/HSPA+: 800-850/900/ 1900/2100 MHz and AWS band (1700/2100 MHz) (B1, 2, 4, 5, 6, 8) GSM/GPRS/EDGE: 850/900/1800/1900 MHz 	<ul style="list-style-type: none"> UMTS/HSDPA/HSUPA/HSPA+: 800-850/900/ 1900/2100 MHz (B1, 2, 5, 6, 8) GSM/GPRS/EDGE: 850/900/1800/1900 MHz 	Not included
	Max. connectivity speeds	<ul style="list-style-type: none"> DC-HSPA+: 42 Mbps (Cat 24) down 5.76 (Cat 6) up 	<ul style="list-style-type: none"> HSPA+: 14.4 Mbps (Cat 10) down 5.76 (Cat 6) up EV-DO RevA mode: 3.1 Mbps FL/1.8 Mbps RL 	<ul style="list-style-type: none"> HSPA+: 14.4 Mbps (Cat 10) down 5.76 (Cat 6) up 	<ul style="list-style-type: none"> HSPA+: 14.4 Mbps (Cat 10) down 5.76 (Cat 6) up 	Not included
	Rx Diversity	Simultaneous Equalization and Rx Diversity on all bands	Simultaneous Equalization and Rx Diversity on all bands	Simultaneous Equalization and Rx Diversity on all bands	Simultaneous Equalization and Rx Diversity on all bands	Not included
WWAN Antenna	Antenna connector	<ul style="list-style-type: none"> 1 x SMA: WWAN Main 1 x SMA: WWAN Div/GPS 	<ul style="list-style-type: none"> 1 x SMA: WWAN Main 1 x SMA: WWAN Div/GPS 	<ul style="list-style-type: none"> 1 x SMA: WWAN Main 1 x SMA: WWAN Div/GPS 	<ul style="list-style-type: none"> 1 x SMA: WWAN Main 1 x SMA: WWAN Div/GPS 	Not included
GPS		High sensitivity A-GPS /A-GLONASS receiver (SUPL 1.0 & SUPL 2.0)	Standalone GPS, Assisted GPS, gps OneXTRA™ Wideband GPS processing (20MHz) for improved measurement accuracy	Standalone GPS, Assisted GPS, gps OneXTRA™ Wideband GPS processing (20MHz) for improved measurement accuracy	Standalone GPS, Assisted GPS Wideband GPS processing (20MHz) for improved measurement accuracy	Not included
SIM	USIM/SIM connection – Class B and Class C	✓	✓	✓	✓	Not applicable
CPU		ARM926EJ-S @ 450MHz Memory avail. for customer apps 30MB R/O flash for executables 20MB R/W flash shared with system 40MB free RAM 4MB Configuration data	ARM926EJ-S @ 450MHz Memory avail. for customer apps 30MB R/O flash for executables 20MB R/W flash shared with system 40MB free RAM 4MB Configuration data	ARM926EJ-S @ 450MHz Memory avail. for customer apps 30MB R/O flash for executables 20MB R/W flash shared with system 40MB free RAM 4MB Configuration data	ARM926EJ-S @ 450MHz Memory avail. for customer apps 30MB R/O flash for executables 20MB R/W flash shared with system 40MB free RAM 4MB Configuration data	ARM926EJ-S @ 450MHz Memory avail. for customer apps 30MB R/O flash for executables 20MB R/W flash shared with system 40MB free RAM 4MB Configuration data
Ethernet (IEEE 802.3)	10/100Mb/s RJ45 Connector	✓	✓	✓	✓	✓
microSD card reader		✓	Not included	Not included	Not included	Not included
Power control	Timed Wakeup	✓	Not included	Not included	Not included	Not included
Power	DC Power in, 9-33 V DC	✓	✓	✓	✓	✓
	Connector type Micro-Fit, Dual row, 4 circuits	✓	✓	✓	✓	✓
Case	Dimension (115x105x45mm)	✓	✓	✓	✓	✓
	Weight	304g	294g	294g	294g	282g
	Mounting - Bulkhead - 4x M4 holes - DINrail - with adapter	✓	✓	✓	✓	✓
Environ-mentals	Operating temperature	-30°C to +70°C	-30°C to +70°C	-30°C to +70°C	-30°C to +70°C	-30°C to +70°C
	Storage temperature	-40°C to +70°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
	Humidity operational.: 5% - 95%	5% - 95%	5% - 95%	5% - 95%	5% - 95%	5% - 95%
Certifications		CE, FCC, IC, PTCRB AT&T, T-Mobile, Verizon, Bell Mobility, Telus	FCC, IC, PTCRB, IFETEL AT&T, T-Mobile, Sprint, Verizon, Bell Mobility, Telus, Aeris, Telcel	CE, E-mark	JATE, Telec Softbank, NTT docomo	CE, IC, FCC
Std. compliance	ROHS, Reach	✓	✓	✓	✓	✓
CloudGate Universe	Device can be configured OTA using CloudGate Universe	✓	✓	✓	✓	✓
Expansion cards	2 x expansion slots for adding cards: WLAN expansion card, Low cost serial card, Industrial serial card, Ethernet switch, Telematics card	✓	✓	✓	✓	✓
Developers	Support CloudGate development kit: Developer board, Breadboard, SDK, HDK	✓	✓	✓	✓	✓
In the box	All other accessories (i.e. power cable, antennas etc.) sold separately	CloudGate + Quickstart Guide	CloudGate + Quickstart Guide	CloudGate + Quickstart Guide	CloudGate + Quickstart Guide	CloudGate + Quickstart Guide
Product Code		CG 0114	CG 0192-11897	CG 0112-11938	CG 0122-11978	CG 0102-11955

Expansion Cards

WLAN expansion card



- 802.11 a/b/g/n
- 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 or
- 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)

Telematics card



- Adds flexible I/O and connectivity for industrial telematics applications to CloudGate
- Built in 3 axis accelerometer for movement detection and other applications
- Dual SIM card reader for backup or roaming SIM
- Built in microcontroller offloads all I/O from CloudGate

Accessories

Power Supply



- Standard 9-33VDC power supply, 1.5m
- Output voltage 12V DC
- Max output current 1A
- Number of pins: 4
- The power connector is a Micro-Fit 3.0 connector from Molex (MX-43025-0400)
- Can also be delivered as a DC power cable with Micro-Fit connector (3m)

WWAN Antenna + Diversity/GPS (Option 1)



- Recommended for all bands including GPS
- Can be used as main antenna but very large
- 698MHz to 960MHz, 1575.42MHz 1710MHz to 2700MHz
- Typical 70%+ Efficiency and 3dBi+ Peak Gain Dipole Swivel Terminal Antenna
- Recommended: Taoglas TG.30.8113

WWAN Antenna + Diversity/GPS (Option 2)



- Not recommended for the main antenna (marginal low band performance)
- Recommended for high band diversity antenna
- Acceptable as low band (700-800-850-900MHz) Diversity antenna
- Dipole Terminal Antenna
- Hinged
- Recommended for GPS antenna
- Recommended: Taoglas TG.10.0113

WWAN Antenna + Diversity



- 800 MHz to 2200MHz GSM/CDMA/HSPA/UMTS
- Rotatable hinge design for optimal reception
- Recommended: Taoglas TG.09.0113

WLAN Antenna



- To be used with the WLAN expansion card
- RP-SMA male straight connector
- Hinged
- IP-65
- TPU Housing
- Length 156mm
- Frequency range: 2.4 Ghz/5Ghz
- Recommended: Taoglas GW.59.3153

Torx T6 Screwdriver

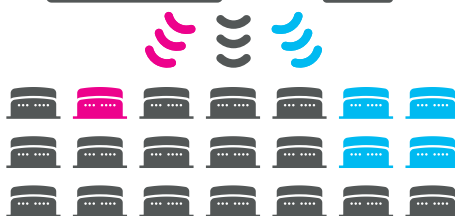


- The front and the back panels of CloudGate are secured with Torx T6 screws
- A Torx T6 screwdriver is needed when installing/removing an expansion card

<http://cloudgateuniverse.com>

CloudGate UNIVERSE

- Device and Radio Settings:
 - Auto Recovery Settings
 - APNs
 - Connection Monitoring Settings
 - Username/password, etc.
- Drivers for expansion modules
- Applications



- CONFIGURE ONE** of your devices for a specific site.
- CONFIGURE SOME** of your devices for a particular application or customer.
- CONFIGURE ALL** of your devices to the same settings.

For Developers

Developer card 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

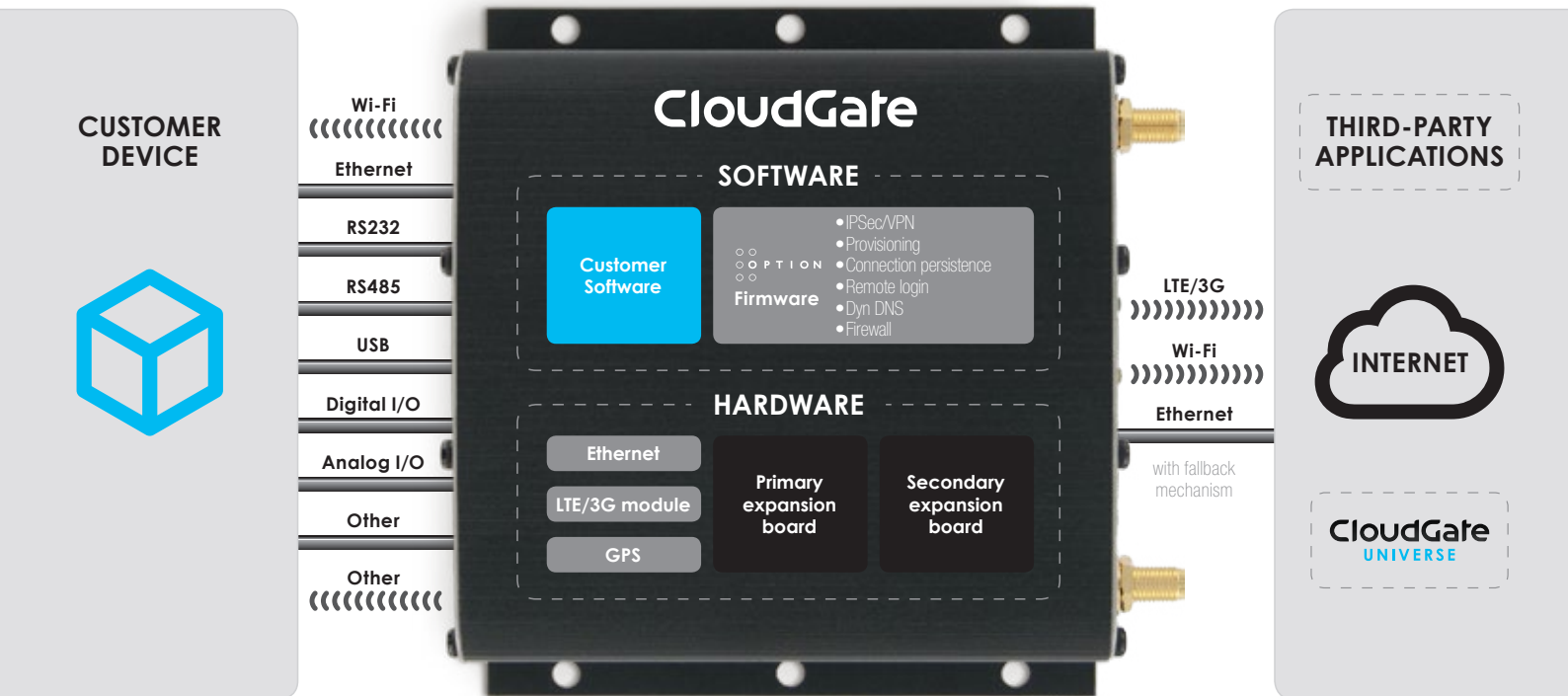
Breadboard card for hardware developer



- Ideal for prototyping your own expansion card
- Fits in the front expansion slot of the CloudGate
- Supports 3 types of connections:
 - All signals on the back connector can be tapped off on breadboard area near this connector
 - 2.54mm pitch components can be soldered on main breadboard area
 - 3.5mm pitch connectors can be soldered on front two rows to provide a more reliable and longterm connection
- Adapter boards are available online to integrate fine-pitch components (see www.breadboard-adapters.com)

SDK + HDK

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. 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.



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Option nv - Gaston Geenslaan 14 - 3001 Leuven Belgium - T +32 16 317 411 - F +32 16 207 164 - www.option.com



DatSheet_v1.3

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

