



M2M 4G INDUSTRIAL CELLULAR GATEWAY

DDCG SERIES



SYNOPSIS

- M2M GATEWAY IS AN INTELLIGENT CELLULAR GATEWAY DESIGNED FOR INDUSTRIAL APPLICATIONS REQUIRING FAULTLESS CONNECTIVITY.
- IT PROVIDES A SECURE, RELIABLE, REAL TIME, REMOTE CONNECTIVITY FOR SCADA, DISTRIBUTION MANAGEMENT SYSTEMS, METERING ETC. SOFTWARE-DEFINED, MULTI-CARRIER NETWORKING, DUAL SIM MODELS, 802.11N AND GLOBAL 3G/HSPA+/4G LTE OPTIONS MAKE IT EASY TO GET CONNECTED.
- WITH DIN-RAIL MOUNTING, WIDE OPERATING TEMPERATURE RANGE, AND IP30 METAL HOUSING, THE M2M GATEWAY IS A CONVENIENT YET RELIABLE SOLUTION FOR ANY INDUSTRIAL WIRELESS APPLICATIONS

FEATURES

- PROTOCOLS SUPPORTED: IEC101, IEC104, MODBUS RTU, MODBUS TCP DNP3.0 ETC.
- ADVANCED FAILOVER: MAXIMIZES UPTIME BY SEAMLESSLY SWITCHING BETWEEN THE MULTIPLE INTERNET INTERFACES (CELLULAR, WAN, WIFI, DUAL-SIM ACTIVE/STANDBY).
- MULTIPLE TUNNELING SCHEMES: SECURE YOUR DATA USING A VARIETY OF VPN TUNNELING SCHEMES, INCLUDING IPSEC, L2TP, PPTP, OPENVPN AND GRE.
- ETHERNET, SERIAL AND I/O FOR CONNECTING DIVERSE FIELD ASSETS.
- WIFI AS WAN OR ACCESS POINT, WIFI SECURITY (WEP / WPA / WPA2 MIXED MODE) AND MULTIPLE SSID.
- GIGABIT ETHERNET PORTS.
- 1 SERIAL RS232/RS485 PORT
- SUPPORT MODBUS RTU, MODBUS TCP, DNP3, MQTT.PROTOCOLS,
- SUPPORT MODBUS TO MQTT, MODBUS TO DNP3 ALONG SD CARD FOR LOCAL DATA STORAGE INCASE OF INTERNET LINK BREAKUP.

TECHNICAL SPECIFICATIONS

HARDWARE

CPU	Industrial-grade 32-bit communication processor
FLASH	16MB, Extensible to 32MB
DDR3	128MB

CELLULAR WAN

FDD LTE	Band 1/2/3/4/5/7/8/13/17/20/21
TDD LTE	Band 38/39/40/41 & Band 61/62 (Private Network)
WCDMA	850/900/1900/2100MHz
EV-DO/CDMA	800/1900MHz
GSM/GPRS/EDGE	850/900/1800/1900
Automatic SIM based network operator switching	

Bandwidth	FDD LTE (Downlink 100Mbps, Uplink 50Mbps) TDD LTE (Downlink 61Mbps, Uplink 18Mbps)
Power & Sensitivity	Power: < 23dBm Sensitivity: <-93.3dBm

HOST INTERFACES

5 of 10/100/1000 Base-T Ethernet port. RJ45 Connectors. 1.5KV Magnetic Isolation
1 of RS232/RS485 Serial Console port. 1.5KV ESD Protection
3 SMA antenna connectors (Wi-Fi and Double-Cellular)
Active GPS antenna support (option)
Micro SD Memory Card Slot

INPUT/OUTPUT

(2) DI, (1) DO, (1) Relay.
Input ON Voltage: 5 to 30 VDC
Input OFF Voltage: 0 to 3 VDC
Output < 50mA @ 30VDC.
Relay:1A 250VAC/30VDC
6-pin 3.5mm wiring terminal

LAN PROTOCOL

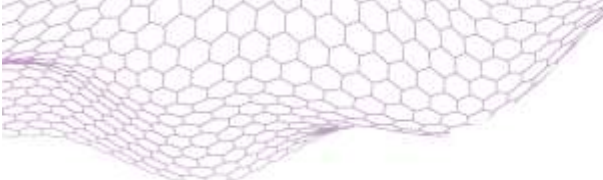
TCP/IP, UDP, ICMP, Telnet, ARP, Telnet
DNS, DNS Proxy, DHCP Server
SNMP, HTTP, HTTPS, SMTP, STMP, IP Pass through (option)
VLAN
Host Interface Watchdog
PPPoE
Modbus RTU, Modbus TCP, DNP3

SERIAL PROTOCOL

TCP/UDP PAD Mode
Modbus (ASCII, DTU, Variable)
PPP

WI-FI

Bandwidth	IEEE802.11b/g : 54Mbps,IEEE802.11n: 150Mbps
Security	Support WEP, WPA, WPA2 and other encryption methods, WPS (Optional)
Power	20dBm (11n), 24dBm (11g), 26dBm (11b)
Sensitivity	<-72dBm @ 54Mbps AP and Client mode.
Access point for up to 25 clients	
Simultaneous access point/client mode	



NETWORK AND ROUTING

Network Address Translation (NAT)

Port Forwarding

Host Port Routing

VRRP

Reliable Static Route

Dynamic DNS

VPN

L2TP, PPTP, IPSec, GRE, and OPENVPN Client

Up to 5 concurrent tunnels

Split Tunnel

Dead Peer Detection (DPD)

Multiple Subnets

VPN Failover

SECURITY

Remote Authentication

DMZ

Inbound and Outbound Port filtering

Inbound and Outbound Trusted IP

MAC Address Filtering.

MANAGEMENT INTERFACES

Web-Based User Interface

Device Configuration Templates

Software and radio module firmware updates

AT Command Line Interface (Telnet/SSH/Serial)

SNMP

SMS Commands (Option)

Support different LAN IP Address (Optional)

GPS (OPTIONAL)

Antenna Interface: SMA Female, 50 ohms impedance

Tracking Sensitivity: better than -144 dBm

Horizontal position accuracy: 2.5 m

Time-To-First-Fix: 29 s

Protocol: NMEA-0183 V2.3

POWER SUPPLY

Standard Power	24VDC supported. Range 5 to 35VDC 12V/1.5A (standard), 8W
Reverse Polarity	Yes
Over Voltage Protection	Yes with 2KV Surge Protection
Connectors	2 Pin, 3.5mm Terminal Block
consumption	300mA @ 12V

PHYSICAL CHARACTERISTICS

Housing	Metal with IP30
Dimensions (L x W x H)	135 x 115.7 x 45 mm
Weight	520g
Installation	34.6 mm Din-Rail or wall mounting or desktop

ENVIRONMENT

Operating Temperature	-35 to +75°C
Storage Temperature	-40 to +85°C
Operating Humidity	95% non-condensing

ORDERING INFORMATION

DDCG M2M 200R XXX YY F

DDCG M2M 200R	Base Model for M2M Gateway with 10/100/1000 M Ports
XXX	232: RS232 485: RS485
YY	AA: Active-Active Mode. AP: Active-Passive Mode.
F	Fixed