VC-2M3G

V-COM2000: Veesta Communication 2000 Product Series

Cellular Gateway / Ethernet / Serial Router Device

VEESTA•WORLD

• Cellular Interface

Standards	GSM/GPRS/EDGE/UMTS/HSPA
Band Options (by order)	• Four-band UMTS/HSPA 850/900/1900/2100 MHz • Dual-band GPRS/UMTS/HSPA 900/2100 MHz
HSPA Data Rate	14.4 Mbps DL, 5.76 Mbps UL (Category 6, 7)
EDGE Multi-slot Class	Class 12
EDGE Data Rate	237 kbps DL, 237 kbps UL
EDGE Terminal Device Class	Class B
GPRS Multi-slot Class	Class 12
GPRS Data Rate	85.6 kbps DL, 85.6 kbps UL
GPRS Terminal Device Class	Class B
GPRS Coding Schemes	CS1 to CS4
Tx Power	UMTS/HSPA: 0.25 W EDGE900: 0.5 W EDGE1800: 0.4 W GSM1800: 0.7 W GSM900: 1.6 W

• Wireless Interface

Standards	IEEE 802.11n for Wireless LAN
Spread Spectrum and Modulation (typical)	• DSSS with DBPSK, DQPSK, CCK • OFDM with BPSK, QPSK, 16QAM, 64QAM • 802.11b: CCK @ 11/5.5 Mbps, DQPSK @ 2 Mbps, DBPSK @ 1 Mbps • 802.11a/g: 64QAM @ 54/48 Mbps, 16QAM @ 36/24 Mbps, QPSK @ 18/12 Mbps, BPSK @ 9/6 Mb
Operating Channels (central frequency)	2.412 to 2.462 GHz (11 channels)

Security	• SSID broadcast enable/disable • 64-bit and 128-bit WEP encryption, WPA /WPA2-Personal and Enterprise (IEEE 802.1X/RADIUS, TKIP and AES)
Transmission Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: 6.5 to 300 Mbps (multiple rates supported)
Tx Power	2.4 GHz 802.11b: Typical 16.14~16.52 dBm 802.11g: Typical 14.10~14.38 dBm
RX Sensitivity	2.4 GHz 802.11b: Typical -69.83 ~ -42.07 dBm 802.11g: Typical -70.76 ~ -42.03 dBm

- **WAN Interface**

Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseTX IEEE 802.3ab for 1000BaseT
Number of Ports	1
Speed	10/100/1000 Mbps auto negotiation speed, F/H duplex mode and auto MDI/MDI-X connection (RJ45-type)

- **LAN Interface**

Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseTX IEEE 802.3ab for 1000BaseT
Number of Ports	2
Speed	10/100/1000 Mbps auto negotiation speed, F/H duplex mode and auto MDI/MDI-X connection (RJ45-type)

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• Interface

Cellular Antenna Connectors	1 SMA (female) for 3G or 4G (by option Order)
Wireless Antenna Connectors	2 RP-SMA (female)
GNSS (Option by Order)	1 SMA (female), GPS (1575.42 MHz), GLONASS (1602 MHz)
Serial Port	1, RS-232 Terminal Block (RS485 by Order option)
LED Indicators	PWR1, STATUS, ERR, CELLULAR SIGNAL, WIFI SIGNAL, WLAN
Ground Screw	M5
Reset Button	Warm Reset/Factory Default Reset

• Software

Network Protocols	ICMP, DDNS, TCP/IP, UDP, DHCP, Telnet, DNS, SNMP, HTTP, HTTPS, SMTP, SNTP, ARP
Routing/Firewall	Static Routes, NAT, port forwarding, IP/MAC/Port filtering
VPN	• Max. Tunnel Number: 5 (Responder/Initiator) • IPSec (DES, 3DES, AES, MD5, SHA-1, DH2, DH5), PSK/X.509/RSA
Cellular Connectivity	Network Provider Check/Cellular Connection Check/Packet-level Connection Check
VLAN Switch	Providing VLAN Tagging on LAN ports, Configuration VLAN IDs.
Real-time Graphs	Load and Traffic Graphs, Wireless Graphs, Connections Graphs
LED Configurations	Provide Configurations of LEDs of device to any trigger based events on nets and services
Backup / Update	Backup Setting and Configuraions on file, system updates
Startup Configuration	Provide utility to Initialize of device, enable/disbale or start/restart/stop of system services,
Diagnostics	Network diagnostic tools, ping/traceroute/nslookup, Bandwidth Tester

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• Communication Applications Options

Modbus Gateway	This application provide the gateway between Modbus RTU protocol over RS232 or RS485 on the device and any Modbus TCP protocol connected to the router
Serial to Ethernet Converter	This application provide the Serial to Ethernet Converter feature to any device over the router
SCADA Data Concentrator	This application provide the SCADA Data Concentrator function to concentrate all of data by any protocols in SCADA like IEC60870-5-101, IEC60870-5-104, DNP3.0, Modbus RTU, Modbus TCP The application also can be used to any protocol conversion over the router and device

• Redundancy Option

SIM Card	Redundancy between SIM cards, faile-over by retry times between SIM slots, possible to enable/disable
WAN Connections	Redundancy between WAN connections, WAN Ethernet Port, Cellular Network, any user-defined WAN
Device Redundancy	Providing as virtual router redundancy protocol

• Utilities Options

Ping Check	Ping check service to provide and maintain the communication live via specified interface and scenario
Socket Relay	Provide enhanced socket relay option as socket gender changer that usefull for any none-APN service
Socket Multiplexer	Providing enhanced socket multiplexing service
Time Synchronization	Providing the Time Synchroknization service based on NTP as NTP Client and TP Server
Firewall	Providng enahanced firewall system with usefull table options
Automatic Updater	Providing service for remote automatic firmware/database updates within full configurations and localization update server and mirror sites

• SIM Interface

Number of SIMs	2 SIM port for redundancy operation
SIM Control	3 V

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Cellular Gateway / Ethernet / Serial Router Device

• Management Software

Configuration and Management Options	Web Console

• Physical Characteristics

Housing	Colored Iron, providing IP30 protection
Weight	350 g
Dimensions	104 X 102 X 44 mm

• Environmental Limits

Operating Temperature	Standard Models: 0 to 55°C (0 to 131°F) Wide Temp. Models:-30 to 70°C (-22 to 158°F) (By Order)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

• Power Requirements

Power Inputs	1 terminal block
Input Voltage	9 to 52 VDC
Input Current	0.7 A @ 12 VDC; 0.2 A @ 48 VDC
Reverse Polarity Protection	Present

• Standards and Certifications

Safety	EN 60950-1, UL 60950-1
EMC	EN 61000-6-2/6-4, IEC 61000-4-2/4/5/6/8 for ESD, EFT, Surge
EMI	CISPR 22, FCC Part 15B Class A
Radio	EN 55032/55024/61000-3-2/61000-3-3/ EN 301 908-1908-2/908-13/300 328, EN 62311/60950

V-COM2000 Product Series - VC-2M3G

Model & Ordering Codes

Cellular Gateway / Ethernet / Serial Router Device *VC-2M3G* - [ ] - [ ] - [ ] - [ ]

Default Model : VC-2M3G-L-2-N-N

Sample Model : VC-2M3G-L-2-N-DEFJ

Including all of specifications specified in the Technical Datasheet of Modem, like Cellular 3G modem with backward compatibility of GPRS and limited to function and items listed in ordering codes in bellow:

Power Supply Option

DC 9-48V	*L*
AC 220V	*A*

Communication Serial Port Option

RS-232, TXD,RXD,SG wires	*2*
RS-485, 2x wires	*4*

Antenna Option

None (No Antenna Order)	*N*
3dB 3G GSM Antenna, 806-960 MHz / 1710-1990 MHz, Magnet Mount, 1m cable	*3*
5dB 3G GSM Antenna, 806-960 MHz / 1710-1990 MHz, Magnet Mount, 2.5m cable	*5*

Feature Options

None	*N*
Socket Relay Option	*A*
Socket Multiplexer Option	*B*
Device Redundancy Option	*C*
Modbus RTU/TCP Gateway Support	*D*
SCADA DCU/PCU Option, Modbus RTU/TCP Protocol	*E*
SCADA DCU/PCU Option, IEC60870-5-104 Protocol	*F*
SCADA DCU/PCU Option, IEC60870-5-101 Protocol	*G*
SCADA DCU/PCU Option, DNP3.0 Protocol	*H*
SCADA DCU/PCU 8x Supported Connections (Master or Slave) (Default if any of option E,F,G,H selected)	
SCADA DCU/PCU 16x Supported Connections (Master or Slave)	*I*
SCADA DCU/PCU 32x Supported Connections (Master or Slave)	*J*
SCADA DCU/PCU 64x Supported Connections (Master or Slave)	*K*