

FMGUARD PRODUCT SPECIFICATION

Physical	
Operating Voltage	8 to 36 VDC
Battery	On-board 2Ah (nominal) Li-Ion Battery
Processor	Cortex A5 32 bit ARM processo
Cellular Modem	GSM: 850/900/1800/1900 MHz UMTS: 800/850/900/1900/2100 MHz
Operating Temperature & Humidity	0-45 °C, 5-90% non condensing
Physical Size	W 160.2 x H 89 (top) x D 53.5 mm without terminal blocks and connectors.
Weight	Approximately 465 g. without accessories
Mounting	Industrial standard ABS housing with 9M DIN rail mounting, pluggable
Connectors	2-way pluggable terminal blocks
Security Feature	2 Level security, administrator and guest
Date and Time	Support NTP server time zone synchronization Real time clock w/ battery back up
LED Indicators	TX=Reserve for Modbus transmit RX=Reserve for Modbus receive S1 and S2 = for signaling status and possible errors
Communication Port	2x RJ45, Ethernet (10/100 Mbit) & RS232 Mini USB-B, Service port SMA female connector for UMTS USB host port (USB-A receptable) RS485 Modbus Serial Port
Interface	HTML interface, via web browser Dot Matrix LCD with 240x160 pixels, touch screen with virtual buttons
Network	
Network Support	Static and Dynamic IP
Network Protocol	a. TCP (Transmission Control Protocol) b. IP (Internet Protocol) c. HTTP (Hyper Text Transfer Protocol)
Digital Input	
Digital Input Description	8x Digital Input Logic high: 8 to 40VDC Logic Low: -5 to 3 VDC Impedance: 3.3kΩ

Configuration	Independent configuration of input description, open/close status description
Digital Output	
Digital Output Description	8 x digital solid-state digital output Max. 36 volt / 1.5 A per. channel Short-circuit, ESD, Inductive kick-back protected up to 20 mH User supplied power
Configuration	User defined output description
Output Control	Through SMS or locally On / Off relay outputs through web browser and through Logic Expression
Analog Input	
Analog Input Description	4 x analog inputs Range is 0-5, 0-10VDC or 0-20, 4-20 mA Resolution: 12 bit Accuracy: Typ. $\pm 0.3\%$ FSR @ 25°C Impedance: 40 k Ω (V)/504 ohm (C)
Configuration	Configurable input description, scaling, trigger delay, crit high/high/low/crit low alarm points
Analog Output	
Analog Output Description	4 x analog outputs. Range is 0-5, 0-10VDC or 0-20, 4-20 mA Resolution: 12 bit Accuracy: Typ. $\pm 0.3\%$ FSR @ 25°C
Configuration	--
Output Control	--
Modbus Protocol	
Maximum No. of IO pts.	256
Maximum No. of Expansion Modules	64
Acceptable Adresses	1-247
Maximum Cable Length	1,000 m @ <100kbit; this limit is highly influenced by the quality of the cable, signaling rate, noise etc.
Baudrate	9600, 14400, 19200, 38400, 56000, 57600, 115200
Data Bits	7, 8
Parity	None, Odd, Even
Stop Bit	1, 2
Remote Management	

Remote Command	<ul style="list-style-type: none"> a. Add / edit / delete mobile phone groups, repeat time b. Query Operational / Authorizer / Forwarder mobile phone numbers c. Query digital input / digital output / analog input / analog output status d. Query health check e. On / Off output equipment / devices f. Acknowledgment
SMS/Email Alert	
Phone Groups	<ul style="list-style-type: none"> a. 40 Operation Numbers/Email b. 8 Authorized Numbers/Email c. 4 Escalation Numbers/Email d. Accepts International Phone Number format and supports Auto Roaming
Configurable SMS Message	Digital Inputs, Digital Outputs: Alarm and Normal Analog Inputs, Analog Outputs: Crit low, Low, Normal, High and Crit High
Auto Health Check	Programmable Daily or once a week health check
Time Stamp	SMS and Email sent and received with time stamps