



SmartGen
ideas for power

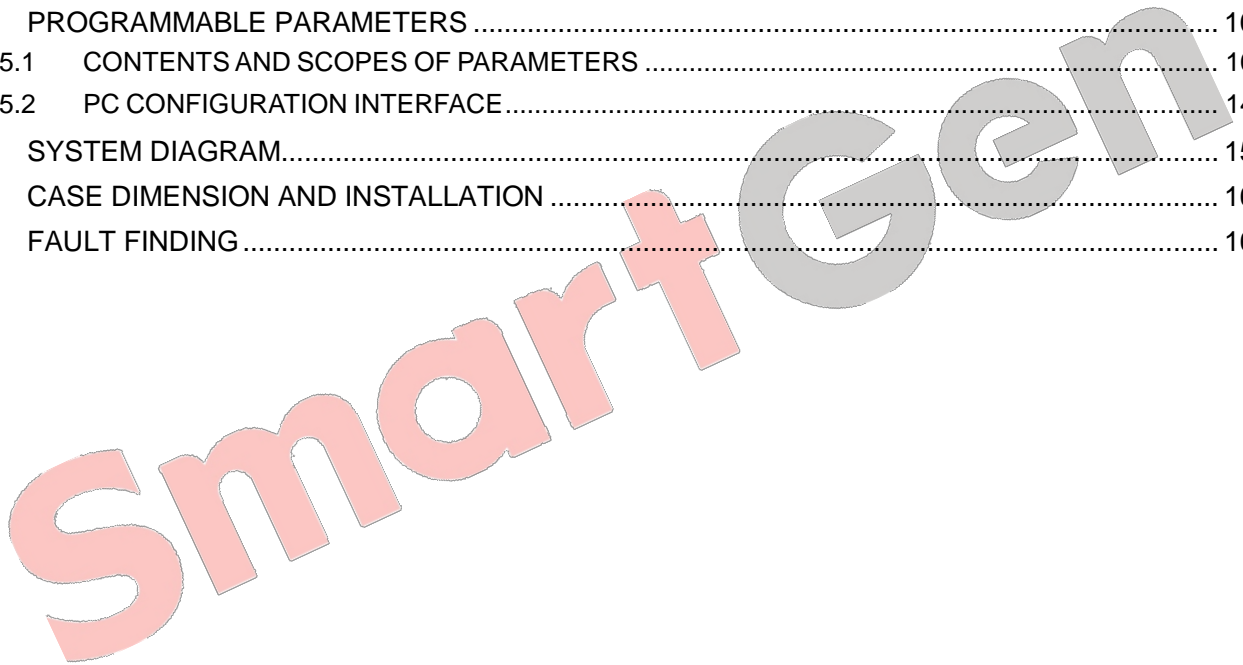
CMM366-WIFI
CLOUD MONITORING COMMUNICATION MODULE
USER MANUAL



SMARTGEN (ZHENGZHOU) TECHNOLOGY CO., LTD.

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Chinese trademark

SmartGen English trademark

SmartGen — make your generator *smart*

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Software Version

Date	Version	Note
2016-08-15	1.0	Original release.

1 OVERVIEW

CMM366-WIFI Cloud Monitoring Communication Module is WIFI wireless network communication protocol switch module which can achieve genset (with SCI) connect to Internet. The module obtains genset data via RS485 port, USB port, LINK port or RS232 port of genset controller modules of international first-class brands including SmartGen, DeepSea, ComAp, etc. Then the module transmits the data to corresponding cloud server via WIFI wireless network for achieving user's real-time monitoring to running status and searching of running records via APP (IOS or Android) and PC terminal devices.

CMM366-WIFI module has already integrated protocols of mainstream genset control module. It not only can monitor genset but also can receive some digital alarm input/output signals to achieve monitoring of generator room entrance guard, guard against theft and fire facilities.

2 PERFORMANCE AND CHARACTERISTICS

- 1) Connect to cloud server via wireless WIFI, one to one monitoring;
- 2) Multiple ports for communication with genset control module: RS485, RS232, LINK and USB (Host); can monitor great majority genset control modules of international first-class brands;
- 3) Widely power supply: DC (8~35)V, can direct use genset build-in battery;
- 4) With ARM-based 32-bit SCM, high integration of hardware and strong programming ability;
- 5) Include with location information to realize genset location;
- 6) Take JSON network data communication protocol, upload real-time data variation and take compression algorithm to vastly reduce network flow at the same time;
- 7) Users can set up history data upload rest to upload monitoring data to server (history data can be analyzed);
- 8) When alarm occurs it can upload data to server immediately;
- 9) 2 auxiliary digital input ports which can receive external alarm signal;
- 10) 1 auxiliary relay output port which can output various of alarm signal;
- 11) Perpetual calendar and clock function;
- 12) Power and multiple communication status indicators on front panel that working status is clear at a glance;
- 13) Lamp test function;
- 14) Parameter adjust function: users can adjust parameters via USB port;
- 15) Take standard π -type 35mm guide-rail installation or screw-fixed installation to install controller into the genset control box;
- 16) Modular design, self extinguishing ABS plastic shell, light weight, compact structure with easy installation.

3 SPECIFICATION

Items	Contents
Operating Voltage	DC 8.0V~35.0V, continuous power supply.
Power Consumption	Standby: ≤2W Working: ≤5W
Digital Input Ports	Volts free digital input
Digital Output Ports	1A DC30V Volts free output
USB Host	A-type USB female port
RS485	Seclusion type
RS232	General type
LINK	SmartGen exclusive port
USB Device	B-type USB female port
WIFI	IPX antenna Support 802.11b/g/n standard
Case Dimensions	73mmx105mmx35mm
Working Conditions	Temperature: (-25~+70)°C Humidity: (20~93)%RH
Storage Condition	Temperature: (-25~+80)°C
Weight	0.15kg

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4 PANEL AND TERMINAL DESCRIPTION

4.1 PANEL INDICATOR AND BUTTONS



Icon	Note
POWER/ALARM	Green LED Light: Power supply normal and connect to cloud server successfully. Red LED Light: Common alarm indicator
RS485(Red)	Normally Off State: RS485 disabled Normally Light: Communication fail Blink: Communication normal
USB(Red)	Normally Off State: USB(Host) disabled Normally Light: Communication fail Blink: Communication normal
WIFI(Red)	Off State: CMM366-WIFI login with server unsuccessfully Light: Login with server successfully Blink: Real-time communication normal
LINK(Red)	Normally Off State: Disabled Normally Light: Communication fail Blink: Communication normal
RS232(Red)	Normally Off State: RS232 disabled Normally Light: Communication fail Blink: Communication normal

Lamp test/Rest:

Press this button for 1s, all the LEDs are illuminated; press for 10s, reset the module to default and all the LEDs blink for 3 times.

▲Note: After reset the module, set up the parameters via PC software is recommended. Please operate cautiously.

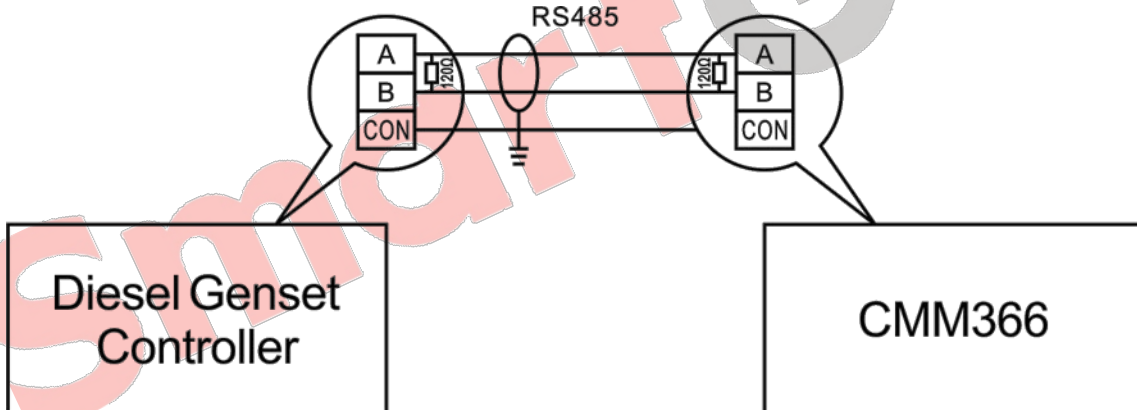
4.2 WIFI ANTENNA INTERFACE

Connect WIFI antenna to the antenna interface of cloud monitoring communication module shown as follow:



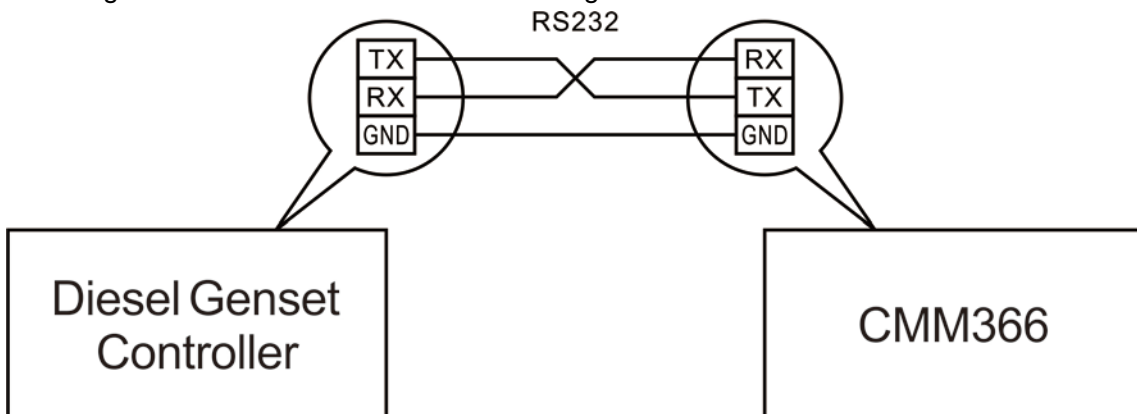
4.3 RS485

Connect with genset controller via RS485 to receive genset data information. If communication is abnormal, 120Ω terminal resistance is recommended. One end of shield wire hangs in the air and the other one connects with SCR.



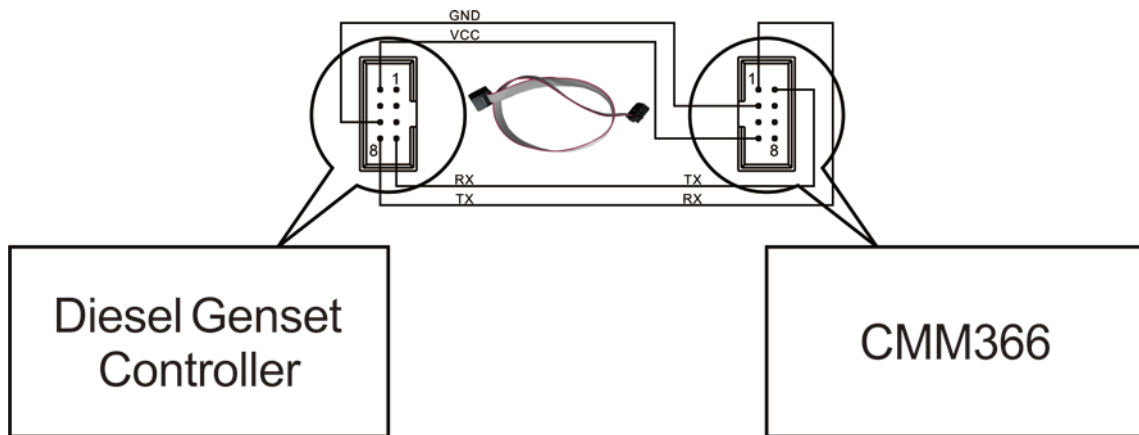
4.4 RS232

Connect with genset controller via RS232 to receive genset data information.



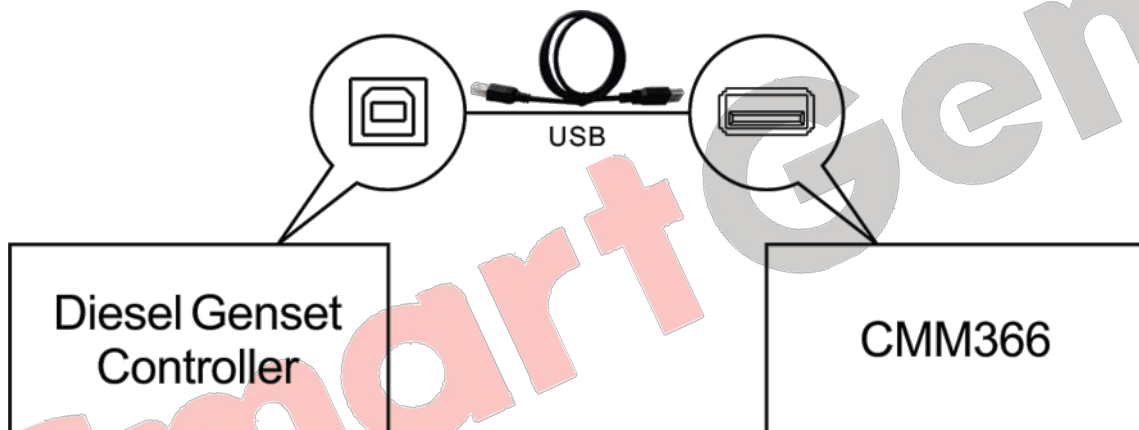
4.5 LINK

Connect with genset controller via LINK to receive genset data information.



4.6 USB HOST

Connect with genset controller via CMM366 A-type USB mother port and USB data cable to receive genset data information.



4.7 USB DEVICE

Connect with PC via USB port to set up all the parameters and view CMM366-WIFI ID&Login password.



4.8 TERMINAL

No.	Function	Cable Size	Note
1	B-	1.0mm ²	Connected with negative of starter battery.
2	B+	1.0mm ²	Connected with positive of starter battery. 3A fuse is recommended.
3	Aux. Input 1	1.0mm ²	Active when connect to B-.
4	Aux. Input 2	1.0mm ²	Active when connect to B-.
5	Aux. Output	Normally Open	Normally open outputs, rated 1A DC30V
6		Common	
7		Normally Close	
8	RS232 RX	0.5mm ²	RS232
9	RS232 TX	0.5mm ²	
10	RS232 GND	0.5mm ²	
11	RS485 B(-)	0.5mm ²	Impedance-120Ω shielding wire is recommended, its single-end earthed.
12	RS485 A(+)	0.5mm ²	
13	SCR	0.5mm ²	

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5 PROGRAMMABLE PARAMETERS

5.1 CONTENTS AND SCOPES OF PARAMETERS

Parameter contents and scope :

Form1

No.	Items	Parameters	Defaults	Description
WIFI				
1	DHCP Enabled	(0-1)	1	0: Disabled 1: Enabled, auto acquire IP
2	IP Address	(0-255)	192.168.0.101	The changes of all Ethernet settings (such as: IP address, Subnet mask, etc.) will be active after power on again.
3	Subnet Mask	(0-255)	255.255.255.0	
4	Gateway IP	(0-255)	192.168.0.2	
5	DNS Address	(0-255)	211.138.24.66	
6	MAC Address	(0-255)	00.08.DC.01.02.03	
7	SSID	(0-65535)	32 bits	
8	Network Password	(0-65535)	64 bits	
Gateway				
1	Website	(0-65535)		20 Chinese characters, letters or numbers
2	URL	(0-65535)	monitor.smartgen.com.cn	40 characters
3	Server Port	(0-65535)	50158	
4	Password	(0-65535)	123456	16 characters
GPS				
1	Location Info	(0-1)	0	0: Disabled 1: Manual Input
2	Longitude	(-180-180)°	0.000000	GPS location, altitude
3	Latitude	(-90-90)°	0.000000	
4	Altitude	(-9999.9-9999.9)	100.0	
Cloud Server				
1	Auto Gain Comm. Port	(0-1)	1	0: Disabled 1:Enabled
2	ID	(1-254)	1	Module ID
3	Communication Port	(0-4)	2	0:Disabled; 1:LINK; 2:RS485; 3:RS232; 4:USB
4	Baud Rate	(0-2)	0	0:9600bit/s; 1:19200bit/s 2:115200
5	Location Info	(0-1)	0	0:Disabled 1:Manual input
6	Longitude	(-180-180)°	0.000000	GPS location, altitude
7	Latitude	(-90-90)°	0.000000	
8	Altitude	(-9999.9-9999.9)	100.0	
9	Type	HGM6110 See: Form4		
10	Name	(0-65535)	Module Names(20 Chinese characters, letters or	



			numbers)	
11	Debug Staff Name	20 Chinese characters, letters or numbers		
12	Telephone	20 Chinese characters, letters or numbers		
13	Installation Time	20 Chinese characters, letters or numbers		
14	History Data Rest	(0-3600)s	0	History data upload rest. Note: No upload when it is 0s
15	Time Zone	(-12-12)	8	Time Zone
16	Data Upload Interval	(1-20)s	5	Real time data upload interval
Module Configuration Info				
1	Type	(0-5)	1	0:AMF module 1:Single-unit self-starting module 2: Single-single parallel module 3:Mains-genset parallel module 4:Mains-bus parallel module 5:Bus-bus parallel module Note: The parameter will auto change according to genset type.
2	Rated Speed	(0-6000)r/min	1500	Rated Speed
3	AC Supply	(0-3)	0	0:3P4W;1:3P3W;2:2P3W;3:1P2W。
4	Rated Volt	(30-30000)V	230	Rated Volt
5	Rated Freq	(10-600)Hz	50	Rated Freq
6	Rated Current	(5-6000)A	500	Rated Current
7	Rated Power	(0-6000)kW	276	Rated Power
8	Custom Description 1	(0-65535)	Custom Description (20 Chinese characters, letters or numbers)	
9	Custom Description 2	(0-65535)	Custom Description (20 Chinese characters, letters or numbers)	
10	Custom Description 3	(0-65535)	Custom Description (20 Chinese characters, letters or numbers)	
11	Custom Description 4	(0-65535)	Custom Description (20 Chinese characters, letters or numbers)	
12	Custom Description 5	(0-65535)	Custom Description (20 Chinese characters, letters or numbers)	
Digital Input				
Digital Input 1				
1	Setting	(0-9)	0	Default: Not used
2	Type	(0-1)	0	0:Active when close 1:Active when open See: Form2
3	Delay	(0-20.0)	0.0	Action delay
Digital Input 2				
3	Setting	(0-9)	1	Default: Lamp test
4	Type	(0-1)	0	0:Active when close 1:Active when open See: Form2
5	Delay	(0-20.0)	0.0	Action delay
Digital Output				

1	Setting	(0-14)	0	Default: Not used See: Form3
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Content of auxiliary input ports:

Form2

No.	Item	Description
0	Not Used	Not used.
1	Lamp Test	All the indicators are illuminated when input is active.
2	Remote Control Inhibited	Cloud start/stop control is prohibited when input is active.
3	Access Alarm Input	Access alarm is uploaded to server when input is active.
4	Fire Alarm Input	Fire alarm is uploaded to server when input is active.
5	Alarm Input	External alarm is uploaded to server when input is active.
6	Reserved	
7	Reserved	
8	Reserved	
9	Factory Test Mode	It is only used for factory hardware port test when active.

Content of auxiliary output ports:

Form3

No.	Item	Description
0	Not used	Output port won't output when this item is selected.
1	Digital Input 1 Active	Output when auxiliary input 1 is active.
2	Digital Input 2 Active	Output when auxiliary input 2 is active.
3	RS485 Comm. Fail	RS485 communication fails.
4	Network Comm. Fail	Network communication fails.
5	LINK Comm. Fail	LINK communication fails.
6	RS232 Comm. Fail	RS232 communication fails.
7	Common Alarm	Output when there is an alarm.
8	Remote Control	Send remote control command via cloud server, output fixed delay: 20s
9	Reserved	
10	Reserved	
11	Reserved	
12	Reserved	
13	Reserved	
14	Reserved	

module types:

Form4

Manufacturers	Type	Note
SmartGen	HGM6110	Single-unit self-starting module
	HGM6120	AMF module
	HGM7x10	Single-unit self-starting module
	HGM7x20	AMF module
	HGM410	Single-unit self-starting module
	HGM420	AMF module
	HGM9120	AMF module
	HGM9210	Single-unit self-starting module
	HGM9220	AMF module



	HGM9310	Single-unit self-starting module
	HGM9320	AMF module
	HGM9410	Single-unit self-starting module
	HGM9420	AMF module
	HGM9510	Single-single parallel module
	HGM9520	Mains-genset parallel module
	HGM9530	Single-single parallel module
	HGM9540	Mains-genset parallel module
	HGM9560	Mains-bus parallel module
	HGM9580	Bus-bus parallel module
	HGM9610	Single-unit self-starting module
	HGM9620	AMF module
	ZX9320	AMF module
	HSC940	Single-unit self-starting module
	DeepSea	DSE7110MKII
DSE7120MKII		AMF module
DSE7210		Single-unit self-starting module
DSE7220		AMF module
DSE7310		Single-unit self-starting module
DSE7320		AMF module
DSE7410		Single-unit self-starting module
DSE7420		AMF module
DSE7450		Single-unit self-starting module
DSE8610		Single-single parallel module
DSE8620		Mains-genset parallel module
ComAp		MRS10 II
	MRS16 II	Single-unit self-starting module
	AMF25 II	AMF module
	IGNT	Single-single parallel module
Harsen	GU620A	Single-unit self-starting module
	GU621A	AMF module
	GU630A	Single-unit self-starting module
	GU631A	AMF module
	GU620A-00	Single-unit self-starting module
	GU621A-00	AMF module
	GU630A-00	Single-unit self-starting module
	GU631A-00	AMF module
	GU320A	Single-unit self-starting module
	GU320B	Single-unit self-starting module

5.2 PC CONFIGURATION INTERFACE

The USB port of CMM366-WIFI communication module connects PC port to configure the parameters.

IP

Obtain an IP address automatically

Use the following IP address

IP Address: 192.168.0.101


Subnet Mask: [REDACTED]

Default Gateway: [REDACTED]

DNS Address: [REDACTED]

MAC Address: [REDACTED]

Wifi



Wifi: zsywifi

Password: [REDACTED]

zsywifi	[REDACTED]
CMCC	[REDACTED]
STARBUCK_18121401	[REDACTED]
smartgen	[REDACTED]
smartgen	[REDACTED]
zácwf	[REDACTED]
smartgen	[REDACTED]

WIFI Configuration

Gateway

Site Name: [REDACTED]

Server Url: monitor.smartgen.com.cn

Server Port: 50158 (0-65535)

Security Code: 123456

Gateway Configuration

Cloud Servers

Debugger Name: [REDACTED]

Phone Number: [REDACTED]

Installation Date: [REDACTED]

Ethernet Set: Cloud

LINK Set: Modbus

Time Zone: (GMT+08:00) Beijing, Chongqing, Hong Kong, U

Historic upload interval: 0s (0-3600s)

Live Data upload interval: 5s (1-20s)

Module Name	Config	<input checked="" type="checkbox"/> Obtain Port automatically			Module	<input type="checkbox"/> Location Info		
		Port	Baud	ID		Longitude	Latitude	Altitude
[REDACTED]	Config	RS485	9600	1	HCM6110	0.000000	0.000000	100.0

Cloud Server Configuration

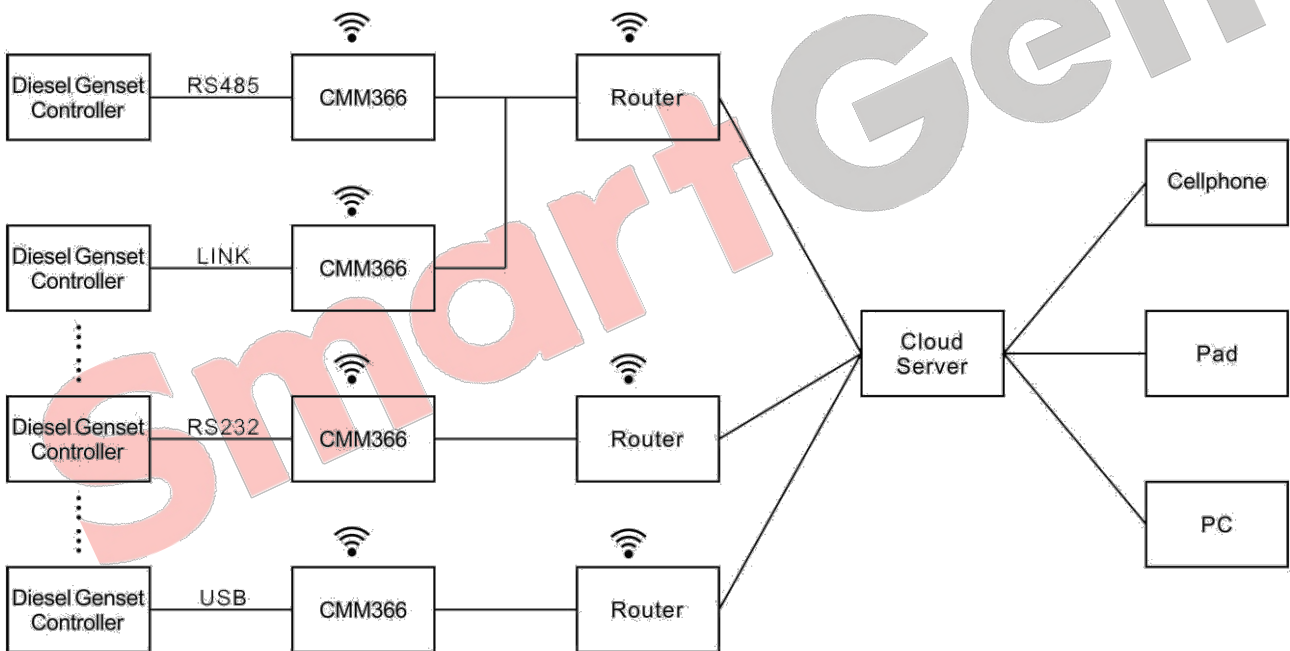
Monitoring

Satellite Num.	0	Altitude	0
Longitude	0.000000	Hardware Ver.	V 1.2
Latitude	0.000000	Software Ver.	V 1.0
Input 1		Issue Date	2016-05-26
Input 2		Module Time	2016-08-15(1) 16:30:16
Output 1			
Module ID	<input type="text" value="383033313334510900560037"/>	<input type="button" value="Print"/>	<input type="button" value="Print Setup"/>
	<input type="text"/>		

Module Monitoring Interface

6 SYSTEM DIAGRAM

1 CMM366-WIFI module connects with 1 genset monitor module. It can be connected via RS485 port, LINK port, RS232 port or USB port.



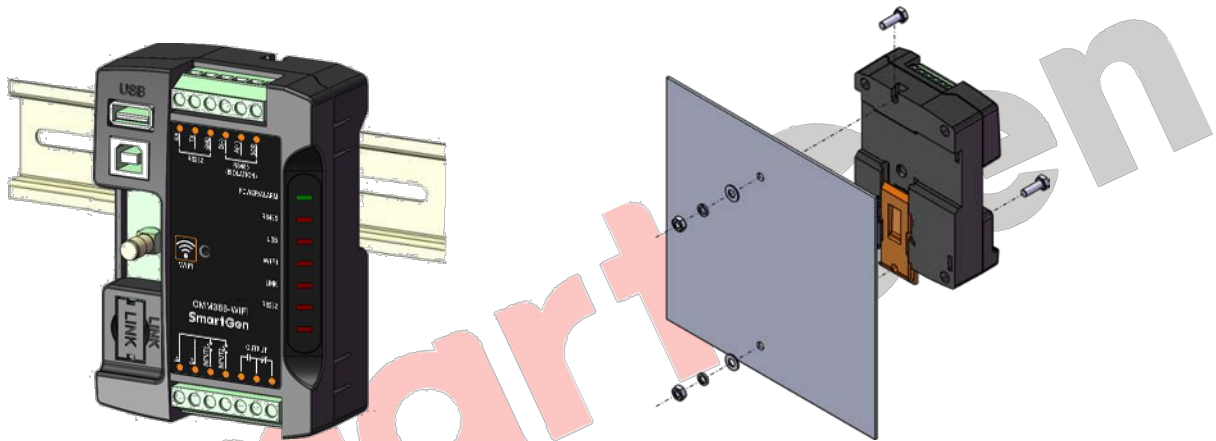
CMM366-WIFI System Diagram

7 CASE DIMENSION AND INSTALLATION

2 ways for installation: 35mm guide rail in box or screw (M4) installation as below:



CMM366-WIFI Case Dimension



CMM366-WIFI Guide Rail Installation

CMM366-WIFI Screw Installation

8 FAULT FINDING

Symptoms		Possible Solutions
Controller	no response with power.	Check power voltage; Check controller connection wirings.
Network Indicator	Not Light	Check Ethernet parameters setting is correct or not; Check network plug indicator is blinking or not; Check cable is normal or not.
RS485	Communication Abnormal	Check connections; Check RS485 port is enabled or not; Check settings of genset ID and baud rate are correct or not. Check RS485's connections of A and B is reverse connect or not.
RS232	Communication Abnormal	Check connections; Check RS232 port is enabled or not; Check settings of genset ID and baud rate are correct or not.
LINK	Communication Abnormal	Check connections; Check LINK port is enabled or not; Check settings of genset ID and baud rate are correct or not.