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Connecting. Converting. Leading !

Document Name: USER MANUAL for GW IoT EM V1.0

INTRODUCTION

GW IoT EM is used for remote monitoring of modbus devices via Ethernet or Wi-Fi network. It acts as a modbus master to multiple modbus slave field devices at a single location and provides reliable data connection to a web based application server.

OPERATION

GW IoT EM can be used in Wi-Fi AP mode and STA mode simultaneously. For configuration of the gateway, laptop is connected GW IoT EM's Wi-Fi access point. After connecting, it is first configured with SSID of Wi-Fi network to be connected and ethernet IP settings to connect to LAN. Then upload CSV file and configured with desired protocol MQTT or HTTP for server communication. CSV file contains configuration parameters like upload interval in seconds, and configuration of Modbus queries.
At power on, GW IoT EM connects to internet using Wi-Fi or ethernet network. It starts to poll modbus devices using configured modbus queries in the CSV. The unit starts uploading modbus parameters at configured periodic interval.

CONFIGURATION DETAILS

Procedure to connect and configure GW IoT EM

1) Power on GW IoT EM.
2) Wait for 2 minutes. Connect to SSID GWIoTEM_MACID4digit using password 87654321.

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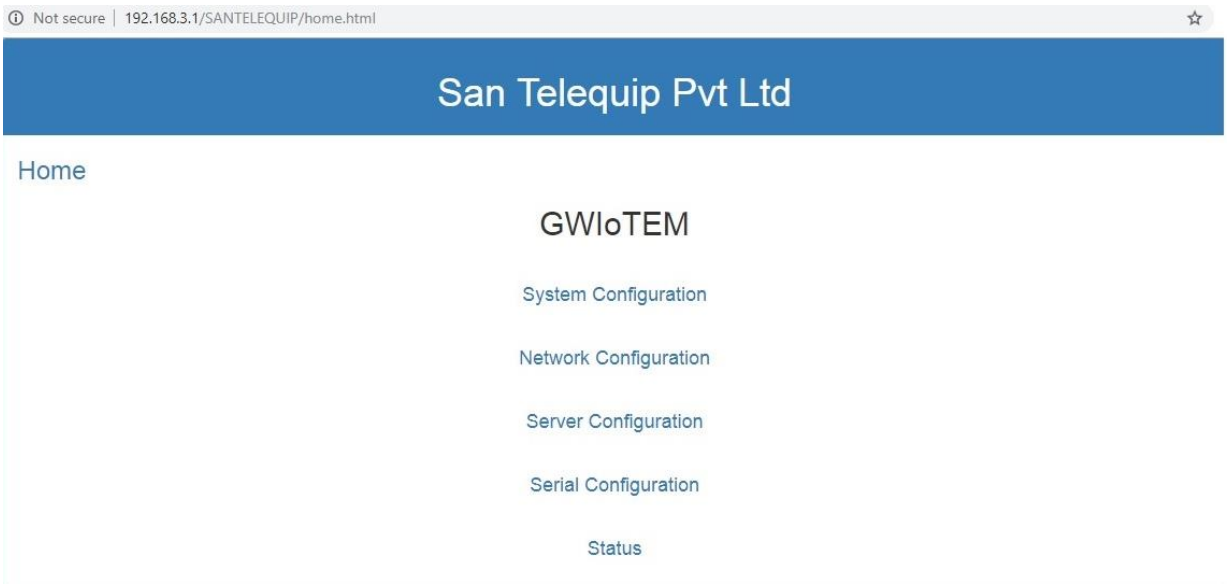
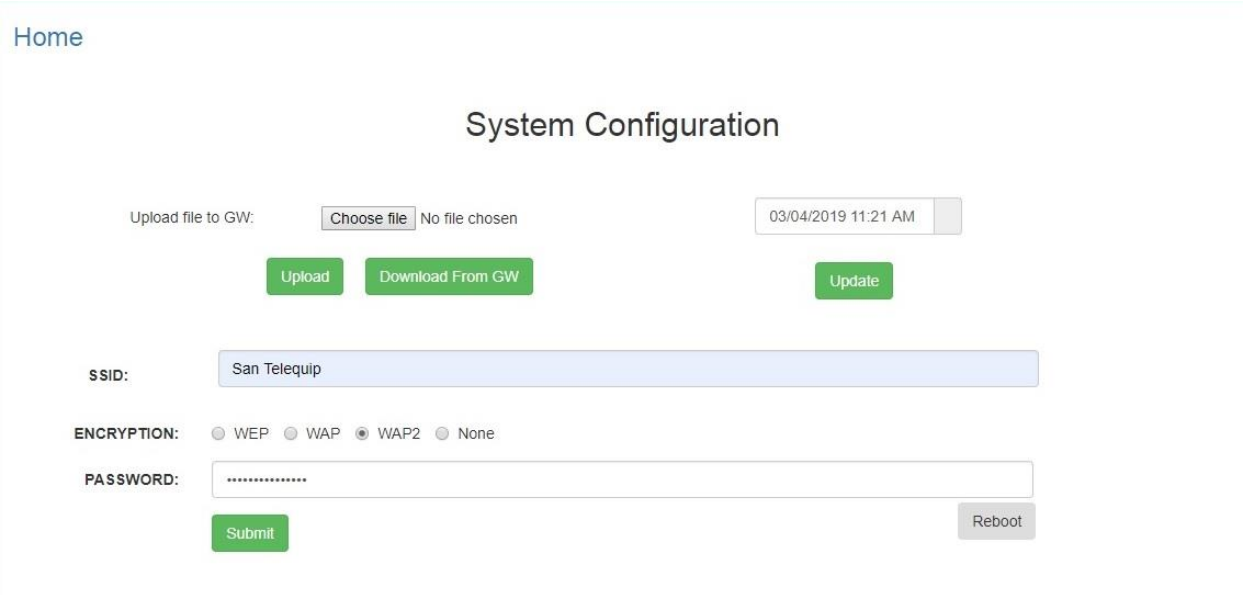
3) Once laptop is connected to GW IoT EM. Enter 192.168.3.1 IP address in any browser to access settings of the device.
   There will 5 menus for configuration and status
   a) System configuration
   b) Network configuration
   c) Server configuration
   d) Serial configuration
   e) Status

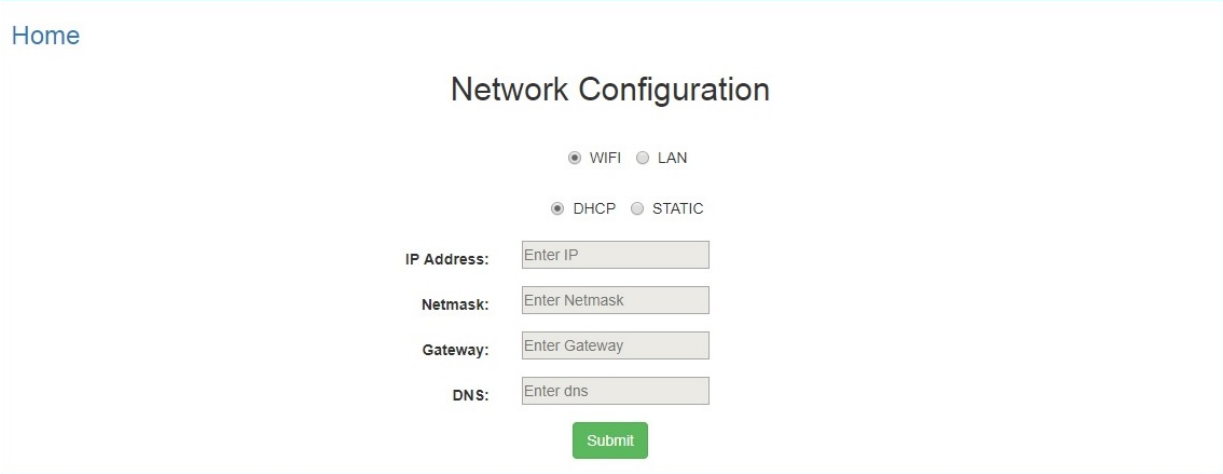


4) System configuration
   Enter SSID and password of the Wi-Fi network and submit. After submitting, Wi-Fi will restart and unit will connect to internet using configured SSID. Unit will be accessible using192.168.3.1after restart.

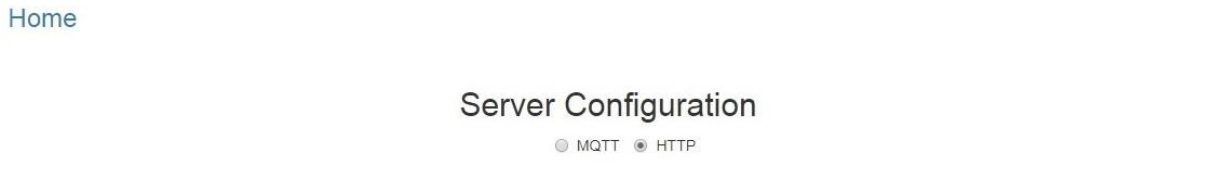


Upload and download CSV file using option menu provided on the system menu. Upload CSV in the device using Upload button. Please note that CSV file name should be always GWIoTEM.csv

5) Network configuration.
This menu is used to set Wi-Fi and LAN interfaces DHCP or static IP mode. Currently Wi-Fi supports DHCP mode only. It is recommended to use DHCP modes for both interfaces. If required enter LAN IP settings in static and click submit.



6) Server configuration
Select required protocol MQTT or HTTP and put the required settings.

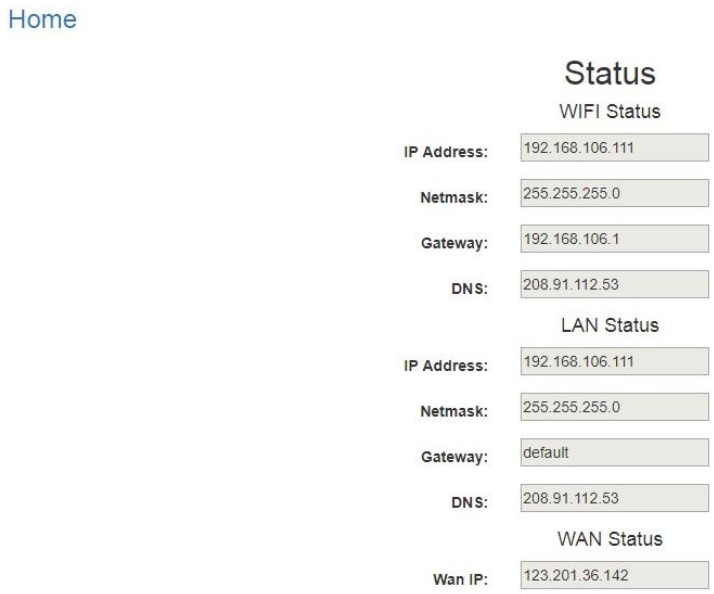


Click HTTP to put webserver URL. If required change port number.

7) Serial configuration
Select Baud rate, Data bits, Parity, Stop bits and click submit.

After all settings, reboot the system through system configuration menu.

8) Check status menu for current IP settings



Connector details:

1) **RTU interface(RS485):**
   RTU has RS485 interface using 2 Pin Terminal Block.

PIN no.	PIN details
1	D+ (RS485)
2	D- (RS485)

2) **RTU interface (RS232):**
   RTU has RS232 interface using 3 Pin Terminal Block.

PIN no.	PIN details
1	TX
2	RX
3	GND

3) **Power connector:**
   GW IoT EM works on +24V DC supply using 3 Pin Terminal Block.

PIN no.	PIN details
1	+Terminal of 24V DC IN
2	-Terminal of 24V DC IN
3	GND

LED INDICATIONS

LED Name	Details	
Power	ON	Unit is powered on
Status	OFF	Status
TX	Blinking	When RS485 data is transmitting
RX	Blinking	When RS485 data is receving

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CSV example format:

Date	01-01-2019			
Time	14:30			
Upload_Interval	60	Seconds		
Slave_Response_Timeou	800	miliseconds		
User_Name	sanuser1			
Password	sanuser1			
Baud_rate	Data_bits	Parity	Stop_bits	
9600	8	None	1	
Webserver_URL				
http://103.241.146.153:8080/contineonx-web-admin/santel-remo-api/postdata?				
Device_ID	Data_Type	Address	Length	Queryno
1	FC03	1	5	Q1
1	FC03	6	5	Q2
QEND				
Plant_ID	Tag_Type	Scaling_Factor		
1	I	1		
1	I	1		
TAGSEND				
Inputs_DeviceID	12			
Inputs_Variable_ID	0			
Maxtags	1500			
Offline_Message	N			
Retries	2			
AI_Inputs	0			
DI_Inputs	0			
DO_Outputs	0			