AT-WEB/LOGGER GATEWAY

Overview:

AT-Web/Logger gateway is a Raspberry Pi based gateway that supports:

- Monitoring and control Modbus RTU Rs485 protocol based devices on website. The gateway is a web server.
- Data log devices memory values onto AT-Cloud server for trending, alarming and reporting.

Feat	ures:
1.	Login
2.	View ATSC202
3.	Control SOLUTIONS OF MANAGEMENT SYSTEMS
4.	Trend
5.	Settings
6.	Report
7.	Exit
8.	Wiring Diagram

1. LOGIN

* Website Address

Access the website on the gateway via

http://[Ip_address]:9000

- [Ip_address] : Ip address of Gateway in local area network (LAN), default IP is printed on the cover of gateway. You can search on http://atscada.com website for "how to change the default IP of raspberry Pi" if you want to change this value.
- 9000 : Port (Default)

Example:	http://192.168.1.28:9000
* Login Pag	
Login Page i	is default webpage when you access the website.

LOGIN User Password -LOGIN ATSCADA LAB

Login Page interface :

User name (default): admin	User	admin
Password (option): admin	Password	•••••

You can change login password in settings feature.

Click button \bigcirc LOGIN to Login.



2. VIEW

After logging in, appear "View Page" (default)

View Page interface

		DISADIC	Disable	
5 Location 5	6 Location 6	7 Location 7	Image: Control of the second	
Disable	Disable	Disable		
	Cu	rent Alarm		
No Date Time	Location Status	Value Low Level	High Level	ACK
	L	MPTT		

There are three areas : Feature Buttons, Monitoring Feature, Alarm Table

* Feature Buttons

🔮 View 💽 Control	🖾 Trend	🔀 Settings	Report	🖒 Exit
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Used to direct to other feature pages. Include 6 buttons:



* Monitoring Feature

Displays maximum 16 locations.

)	Location 1	2	Location 2	3	Location 3		Location 4
	Disable		Disable		Disable		Disable
5	Location 5	6	Location 6	7	Location 7	(3)	Location 8
	Disable		Dischle		D	i i	Disable
	Distort		Disable		Disable		DISAUK
1	Location 9	2	Location 10	3	Disable Location 11	4	Location 12
8	Location 9 Disable	2	Location 10 Disable	3	Disable Location 11 Disable	4	Location 12 Disable
1	Location 9 Disable Location 13	2	Location 10 Disable Location 14	3	Location 11 Disable Location 15	4	Location 12 Disable Location 16

Each location includes name and value. The name and Modbus RTU memory address of the location can be set at settings feature.



In settings feature, you can enable the location to work or disable it. Details is below.

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Allow the location to work (Settings – ENABLE), if connection status is GOOD, the value is in realtime
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Else if the connection is **BAD**



If you do not allow the location to work: (Settings – DISABLE).



* Alarm Table

View the last 10 alarm events. Alarm events are invoked when memory real-time value is lower than Low-Level or higher than High-Level set in Settings feature.

Alarm event details : Date Time, Location (Name), Status, Value, Low Level, High Level, ACK

			C	urrent Alarm —			
No	Date Time	Location	Status	Value	Low Level	High Level	ACK
				EMPTY			
4							* •

- Date Time : Date and time of alarm. (ex : 08/09/2018 08:08:08).
- Location: Name of alarm location
- Status: Type of alarm (High Alarm, Normal, Low Alarm)
 - **High Alarm**: When value of location is **higher** than High Level. The background color is **RED COLOR**.
 - **Normal**: When value of location returns to normal. The color background color is in **BLUE**.

• Low Alarm: When value of location is lower than Low Level. The color background color is in **RED**.

No	Date Time	Location	Status	Value	Low Level	High Level	ACK
1	07/09/2018 17:09:05	Location 1	High Alarm	30.5	0	30	ACK
2	07/09/2018 17:08:59	Location 5	High Alarm	30.1	0	30	ACK

No	Date Time	Location	Status	Value	Low Level	High Level	ACK
1	07/09/2018 17:09:34	Location 1	Normal	30	0	30	ACK
2	07/09/2018 17:09:33	Location 5	Normal	30	0	30	ACK
3	07/09/2018 17:09:05	Location 1	High Alarm	30.5	0	30	
4	07/09/2018 17:08:59	Location 5	High Alarm	30.1	0	30	

- Value: The real-time value of location
- Low Level: The value low level
- High Level: The value high level
- ACK: click this button to do acknowledge for the alarm event.

No	Date Time	Location	Status	Value	Low Level	High Level	ACK
1	07/09/2018 17:09:34	Location 1	Normal	30	0	30	
2	07/09/2018 17:09:33	Location 5	Normal	30	0	30	
3	07/09/2018 17:09:05	Location 1	High Alarm	30.5	0	30	
4	07/09/2018 17:08:59	Location 5	High Alarm	30.1	0	30	



3. CONTROL

Control Page Interface:

Scada MANAGEMENT SYSTEMS		CONTROL		
View	Control 🖉	Trend 🔀 Settings	🛄 Report	🖒 Exit
Holding Coil				
Device Id Memory Address		Value	Write	
		Data		
Date Time	Device Id	Memory Address	Old Value	New Value
		No Data		
4				

Allow operators to write values to memory devices. Memory address is Modbus RTU register address. There are two types of memories that you can write: **Coils Registers** and **Holding Registers**.



* Holding Registers

Support writing new value to memory address: 40001 – 49999 of each device ID

-	: Textbox, input value of devide id
(from 1 to 247).	
- address (from 40001 to 40000)	: Textbox, input value of memory
address (110111 40001 to 49999).	
-	: Textbox, input value to write.

Click button Write to write.

If success writing, display history of control events on gridview table.

mory Address 40003		value	Write			
			Data			
Date Time		Device Id	Memory Address	Old Value	New Value	
2018-09-07 16:48:43		1	40003	1	100	

If fail, show notification. Checking the enter information.

192.168.1.3:9000 says	
Failed !	
	ОК

* Coil Registers

Writing values to memory registers with address: 1 - 9999

Device Id		: Textbox, input value of devide id
(from 1 to 247).		
- address (from 1 to 9999).		: Textbox, input value of memory
-		: Data list, select value to write.
Click button Write	to write.	

If success, display "history of control events on gridview table.

Data Data Date Time Device Id Memory Address Old Value New Value 09-07 16:50:12 1 1 0 1
Date Time Device Id Memory Address Old Value New Value 09-07 16:50:12 1 1 0 1
09-07 16:50:12 1 1 0 1

If fail, show notification. Checking the enter information.

Failed !	ок
192.168.1.3:9000 says	

4. TREND

Displays value of each location by chart on the current day (from 0h to the current time)

Trend Page Interface



Move mouse point on trend to view value at each time stamp.



If the location has both low level and high level in settings when enabling

Location	Name	Device Id	Memory Address	Low Level	High Level	Enable	
1	Location 1	1	40001	0	30	Enable	2



The trend of the location includes three lines: value, Low Level and High Level

If the location has only low level (does not have high level) in settings when enabling

Location	Name	Device Id	Memory Address	Low Level	High Level	Enable	
1	Location 1	1	40001	0		Enable	1



The trend includes 2 lines: value and Low Level

If the location has only high level (does not have low level) in settings when enabling

Location	Name	Device Id	Memory Address	Low Level	High Level	Enable	
1	Location 1	1	40001		30	Enable	2

The trend includes 2 lines: value, High Level



If the location has not low level and high level in settings when enabling

Location	Name	Device Id	Memory Address	Low Level	High Level	Enable	
1	Location 1	1	40001			Enable	1

The location trend is only one value line





5. SETTINGS

		da IT SYSTEMS				SE	ΓTIN	GS					
	<u>e</u>	View	C	ontrol	~	Trend	×	Settings		Report	Ċ	Exit	
	Server	Alarm	Account	Location									
	Ip Serv	rer	103	.48.195.37									
	Times	Rate(s)	30 :	seconds									
						A	ISCADA LA	В					
There are	e fou	r tabs	: Serv	er, A	larn	n, Acc	ount	t, Locat	ion	2			
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									1			I	
* Server													
Ip Ser	ver		10	3.48.	195.	37			: IP	address	s of (Cloud Se	rve
Times	Rate	e(s)	30	seco	nds				: Pe	eriod (s)	log	lata in C	loı
Server											U		
* Alarm													
Setting a	larm	notifi	cation	via S	SMS	or En	nail.						
setting u		notin	cution				IuIII						
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Email				: Email add	dress receive a
message					
Server	Alarm	Account	Location		
SMS Nu	mber				Enable
Email					Enable
			Apply	Cancel	

Tick checkbok and input SMS Number or Email.

Server	Alarm	Account	Location			
SMS Nu	mber	01	23456789			✓ Enable
Email		ats	scada.lab@atp	ro.com		✓ Enable
			Apply		Cancel]
Click App	ly to a	pply.				
* Account						
Changing pass	sword to l	ogin				
Old Passwo	ord			: Input Ol	d password	to Login.
New Passwe	ord			: Input Ne	ew password	l you want
change.						
Confirm				: Input aga	ain new pass	sword.
Click App	ly to a	pply.				
* Location						

Settings details for each location.

erver	Alarm Account	Locatio	n						
Location	Name	Device Id	Memory Address	Low Level	High Level	Gain	Offset	Deadband	Enable
1	Location 1	1	40001	0	30	0.1	0	0	
2	Location 2	6	40001	0	30	0.1	0	0	2
3	Location 3	1	40001	0	30	0.1	0	0	2
4	Location 4	6	40001	0	30	0.1	0	0	
5	Location 5	1	40001	0	30	0.1	0	0	
6	Location 6	6	40001	0	30	0.1	0	0	>
7	Location 7	1	40001	0	30	0.1	0	0	
8	Location 8	6	40001	0	30	0.1	0	0	2
•	T4 0		40004	•	20	0.1	0	•	

- Location ID
- Name : Name of location
- **Device Id :** ModbusRTU Slave ID
- Memory Address : Memory address read value.
- Low Level : low level value.
- **High Level :** high level value.
- Gain, Offset : Used to calib value.

[Value] = [MemoryValue] * Gain + Offset

Note :

[MemoryValue] : Value read from memory.

[Value] : Value after calib.

- Deadband :
- **Enable** : Enable/Disable to view.

Click button to edit.

Location	Name	Device Id	Memory Address	Low Level	High Level	Gain	Offset	Deadband	Enable
1	Location 1	1	40001	0	30	0.1	0	0	🗆 Enable 🛃 🔇

You can change details of tags : Name, Device Id, Memory Address, Low Level, High Level, Gain, Offset, Deadband, Enable (checkbok).



Message after successfully updated.

192.168.1.3:9000 says Successfully Updated!...





6. REPORT

View report data grid and export to excel.

Report Page Interface.

Cada ANAGEMENT SYSTEMS		REPORT	
View	Control 🍝 Ti	rend 🔀 Settings	🗒 Report 🖒 Exit
Alarm Data			
Data			
Location	All	Alarm Type	All
From	09/08/2018	То	09/08/2018
		History Alarm Report	Jouren Download
4			
		ATSCADA LAB	

OLUTIONS OF MANAGEMENT SYSTEMS

There are two tabs : Alarm to query historical alarm events, Data to query logged data values.



ocation All rom 09/07/2018		Alarm T To	уре	All 09/07/2018			
			History Alarm Repo	ort	Search	Download	1
Date T	ime	Name Location	Alarm Type	Value	Low Level	High Level	ACK
07/09/2018	17:08:59	Location 5	High Alarm	30.1	0	30	Done
07/09/2018	17:09:05	Location 1	High Alarm	30.5	0	30	Done
07/09/2018	17:09:33	Location 5	Normal	30	0	30	ACK
07/09/2018	17:09:34	Location 1	Normal	30	0	30	ACK

Click button **Download** to export file and download. File excel : Report_Alarm.xls

x∎			Report_Alarm.xls	- Excel	1	? 🕥	- 🗆	×
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	A	В	С	D	E	F	G	
1	Date Time	Name Location	n Alarm Type	Value Lo	w Level High	Level	ACK	
2	07/09/2018 17:08	Location 5	High Alarm	30.1	0	30	Done	
3	07/09/2018 17:09	Location 1	High Alarm	30.5	0	30	Done	
4	07/09/2018 17:09	Location 5	Normal	30	0	30	Done	
5	07/09/2018 17:09	Location 1	Normal	30	0	30	Done	
6								
7								_
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* Data

Location

: Select location from name list.

: Start date time

All

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То		09/08/2	018		: End I	Date time	e.		
Click butto	n	arch to	view rep	ort table					
Alarm Data									
Location From		All • 09/08/2018	1	1	Го		09/08/2018		
							Search	Download	
				History Dat	a Report				
Date	Time	Location 1	Location 2	Location 3	Location 4	Location 5	Location 6	Location 7	Loca
08/09/2018	8 08:05:27	27.8	27.9	27.8	27.9	27.8			
08/09/2018	8 08:05:57	27.7	27.8	27.7	27.8	27.7			
08/09/2018	8 08:06:27	27.7	27.8	27.7	27.7	27.7			
08/09/2018	8 08:06:57	27.6	27.7	27.6	27.7	27.6	4		
08/09/2018	8 08:07:27	27.5	27.7	27.0	27.7	27.0			
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2 08/09/	2010 0:	05 27.0	27.9	27	.0	27.9	27.0		
3 08/09/	2018 8:	05 27.7	27.8	27	.7	27.8	27.7		
4 08/09/	2018 8:	06 27.7	27.8	27	.7	27.7	27.7		
5 08/09/	2018 8:	06 27.6	27.7	27	.6	27.7	27.6		
6 08/09/	2018 8:	07 27.6	27.7	27	.6	27.7	27.6		
7 08/00/	2018 8-	07 27 5	27.6	27	5	27.6	27.5		
0 00/00/	2010 0.	00 27 4	27.0	27	4	27.5	27.4		
8 08/09/	2018 8:	08 27.4	27.5	27	.4	27.5	27.4		
9 08/09/	2018 8:	08 27.3	27.5	27	.3	27.5	27.3		-
< >	Rep	port_Data	\oplus			: •			Þ
READY					Ħ	8 🗉		+	100 %

7. EXIT

Click button	Ċ	Exit	to exit.
Cher button	No.		

Return Login Page.

LOGIN						
	User Password	admin •••••				
	ATSCADA LAB					

8. WIRING DIAGRAM

Wiring diagram from device to gateway AT-Web/Logger

