

SurfGate User Manual (NTD83X/Gateway)

NTD83X-UserQ



SyncWave Inc.

Table of Contents

Table of Contents
1. Safety Instructions
2. Device Introductions
3. Device Specifications
4. Pre-Boot Preparation
5. Initial Setup (WebUI Login)
6. LTE (Cellular Network)
7. Ethernet Management
1. When using Ethernet as LAN
2. When using Ethernet as WAN
8. Wireless LAN
1. Wifi STA (Wireless Client Mode)
2. WLAN Basic Settings (Access Point Mode)
3. Wireless MAC Filter
9. VPN
1. SSTP22
2. IPSec
10. RS485/232
1. Modbus RTU connection
2. Connectivity Device Settings (Pre-installed Devices)
2-1. Pre-installed devices setting27
2-2. List of Pre-installed devices27
2-3. Checking data of pre-installed devices
2-4. CSV output of pre-installed devices27
3. Connected device settings (Non Pre-installed Devices)
11. EnOcean
1. EnOcean Device Manager screen description

2. Register from the Regsterd Device List	
3. Register from Manually Register Device	
4. Register through Teach-in	
5. EnOcean Equipment Screen Description	
6. Register the sensor	
7. Removing the sensor	
8. List of supported EEPs	
9. List of Supported GPs	
12. Modbus TCP	
1. Modbus TCP connection	
2. Modus Address Map (EnOcean)	
3. Modus Address Map (Modbus RTU)	
13. FTP/SFTP	
1. FTP Upload	
2. FTP Gather	
3. Un_upload List	
14. MQTT	
15. Cloud Service	
1. Connect to AWS	
2. Connect to Azure	
16. Software Updates	51
17. Network Interface	
18. Revision History	53
19. Information	55

1. Safety Instructions

This chapter describes safety precautions.

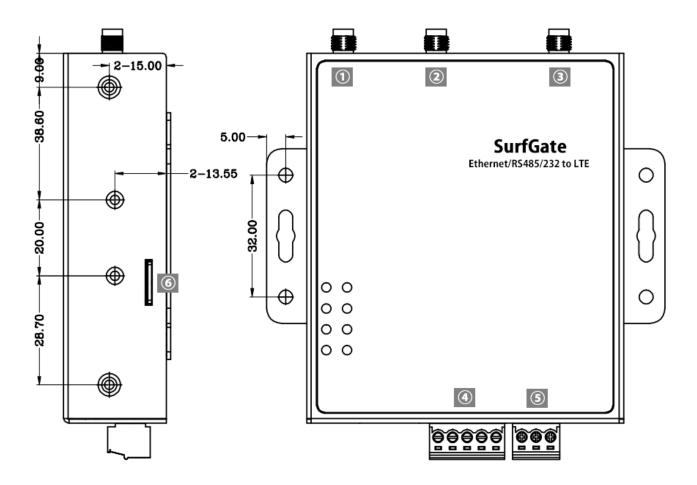
To use this product safely, please follow instructions below:

- Please adhere to the guidelines provided in this user manual when using the product.
- Do not store, install, or use the product in the following environments:
 - > Areas highly affected by vibration and shock.
 - Unstable locations.
 - > Places exposed to outdoor elements such as direct sunlight, wind, rain, and water.
 - > Environments with temperatures and humidity levels outside the specified range.
 - Locations where humidity fluctuates drastically, leading to condensation or freezing risks.
 - > Areas influenced by electric and magnetic fields.
 - Sites prone to strong high-frequency noise, surges, corrosive gases, and dissolved liquids.
- Ensure that the area around the product is not blocked to allow for proper heat dissipation.
- Avoid installing the product near heat-generating equipment.
- Never throw the product into a fire or expose it to excessive heat.
- Do not attempt to disassemble, modify, or repair the product.
- When mounting the product on a DIN rail, ensure that all screws are securely tightened.
- Cease using the product immediately if you notice any abnormal noise, odor, smoke, or excessive heat generation.
- Use caution when installing or removing SIM cards or SD cards; apply only the necessary force.
- Dispose of the device appropriately following local government regulations.

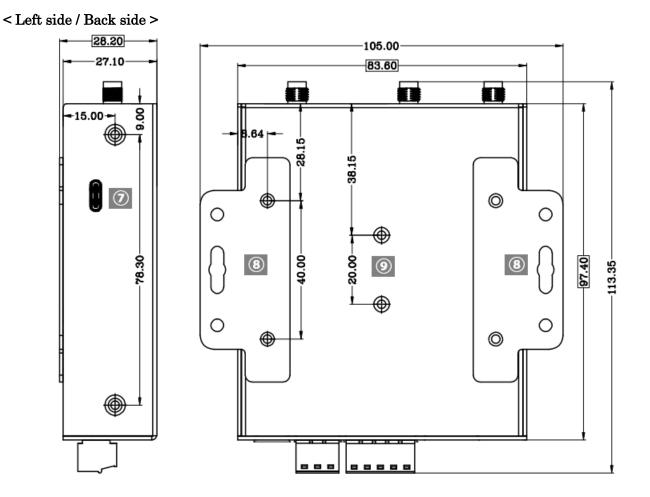
2. Device Instructions

This chapter describes the names and roles of each part.

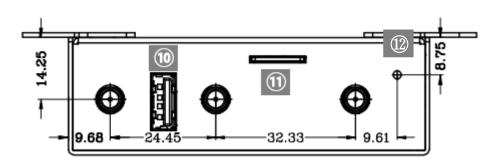
< Right side / Front >



① LTE antenna port	Connection terminals for LTE antennas
② WIFI Antenna Port	Connection terminals for wireless LAN antennas
③ Shared Antenna Ports	Connection terminals for LTE (sub) and EnOcean antennas, etc.
④ RS232/RS485 port	Connection terminals for RS232 and RS485
5 DC power port	Connection terminals for DC power cables
6 SD Card slot	Slot to insert Micro SD Card

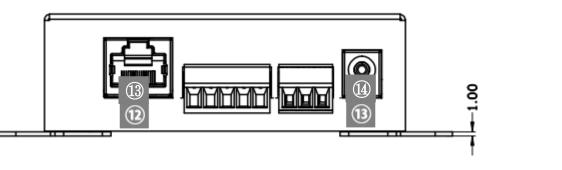


⑦ USB-C port	Terminal for connecting USB-Type-C
⑧ Mounting bracket	Metal fittings for attaching to a wall, etc. (removable)
9 DIN rail bracket	Metal fittings for mounting on the DIN rail (removable)



10 USB-A port	Terminal for connecting a USB device (for Debug)
1 SIM Slot	Slot to insert Micro SIM (3FF)
12 Reset button	Reset factory default button (press 10 seconds)

< Bottom >



13 Ethernet port	Terminals for connecting 100BASE-TX Ethernet cables
(1) DC power port	Terminal for connecting the included AC adapter (12V standard)

< Attached Antenna >



15 General-purpose antenna	Antennas for LTE, WIFI
16 Sub-GHz Antenna	Sub-GHz band (920 MHz) antennas such as EnOcean receiver

3. Device Specifications

This chapter describes the product specifications.

Basic Hardware		
item	criterion	
CPU	Dual Core; ARM Cortex-A7 up to 1.2GHz; ARM Cortex-R5	
RAM	128MB DDR2	
Flash	256MB Nandflash	
Cellular Interface		
item	criterion	
4G	LTE Category 4	
Number of antennas	2	
Connector	SMA	
SIM	Micro SIM ×1	
LTE Frequencies	1,3,8,18,19,41	
Serial Interface		
item	criterion	
Туре	RS485×1 or RS232 ×1	
Connector	5-pin Data+ (A), Data- (B), TXD, RXD, GND; 3.5mm terminal block	
	3-pin VCC GND PE	
ESD protection	Class 4	
Baud rate	2400 bps to 115200 bps	
Ethernet Interface		
item	criterion	
Number of ports	10/100/the 1000 Mbps ×1, LAN or WAN	
Magnet isolation	1.5KV	
protection		
Wireless Interface		
item	criterion	
Number of antennas	1	
Connector	SMA	
Standards	802.11 b/g/n, 1 x 1 MIMO, supports AP and Client modes	
Frequency bands	$2.412 - 2.484 \; \mathrm{GHz}$	

EnOcean Interface (Optional)

item	criterion
Number of antennas	1
Standards	928MHz (Japan); 868Mhz (Europe)
Connector	SMA
Sensitivity	-95 dBm
Modulation	FSK
Data rate	125Kbps
MAX Registrable Sensors	100
MAX Monitorable Sensors	24

Others

item	criterion
SD	Micro SD (Max 128GB)
Reset button	1
USB	USB 2.0 (host) × 1, Type A, 5V 500mA
LED indicators	left: power, Ethernet, WIFI, Link-K (socket connected)
	right: signal strength
Watchdog	built-in hardware watchdog

Software

item	criterion
OS	Linux OpenWRT
Network Protocols	PPP, PPPoE, TCP, UDP, MQTT(s), DHCP, ICMP, NAT, HTTP(s), DNS,
	NTP, SMTP, ARP, NTP, SMTP, Telnet, DDNS, etc.
Industrial Protocols	Modbus RTU, Modbus TCP, BACnet IP%
VPN	OpenVPN, SSTP, IPsec
Firewall	DMZ, anti-DoS, Filtering (IP/Domain name/MAC address), Port
	Mapping, Access Control
Remote management	SurfView remote management system, WebUI, SSH

Cloud Connection

item	criterion
Cloud	AWS; Azure; Cumulocity

Power Supply and Consumption

item	criterion
12V Adaptor Supply	DC-Jack; 3-pin terminator
Wired Power Supply	3-pin terminator (+, $-$, GND)
Input Voltage Range	9 ~ 36V DC

Power consumption	Idle: 1W
	Data link: 5W (peak)

Physical Characteristics

item	criterion
Dimensions	97×83×27mm
Weight	298g
Housing	Metal
Installations	Desktop, wall mounting and 35mm DIN rail mounting
Operating temperature	$-20 \sim +70 \ ^{\circ}\text{C}$
Storage temperature	$-20 \sim +80 \ ^{\circ}\text{C}$

Certification

item	criterion
Europe	CE
Japan	Telec/Jate
Environment	RoHs

Regulatory

item	criterion		
EMI	EN55032 CE, Class B		
EMS	IEC61000-4-2 ESD, Level 4		
	IEC61000-4-4 EFT, Class B		
	IEC61000-4-5 SURGE, Level 4		
	IEC61000-4-6 CS, Class A		
	IEC61000-4-11 DIP, Class C298g		
Vibration	IEC60068-2-6		
Shock	IEC60068-2-27		

4. Pre-Boot Preparation

This chapter describes the preparations before startup.

• Install the Antenna

When using the wireless function, attach an antenna to each port corresponding to the intended function. Ensure that the antenna is firmly attached to prevent any rotation, as this can affect antenna sensitivity.

• Insert SIM card

Insert the SIM card following the orientation indicated on the product label. Pay close attention to the direction in which the SIM is inserted. Inserting it forcibly may result in difficulty removing it. Ensure the device is powered off before inserting the SIM; otherwise, it will not be recognized. If you do not intend to use the cellular network, there's no need to insert the SIM card. Insert the SIM card in the orientation indicated on the product label.

• Insert SD card

Insert the SD card following the orientation indicated on the product label. Take care to align the insertion direction properly. Forcing the SD card may make it difficult to remove. Ensure the device is powered off before inserting the SD card to prevent recognition issues. If you do not plan to use an SD card, there's no need to insert it.

• Plug the AC adapter

Plug the included AC adapter to the power terminal of this product and plug it into an electrical outlet.

- When plugged into an outlet, the power is turned on automatically.
- Remember to unplug the adapter from the outlet when finished to turn off the power.
- Please note that as a countermeasure against power outages, the product may continue to run for a short while after the power is turned off.

5. Initial Setup (WebUI Login)

This chapter describes the procedure for logging in to the WebUI.

- 1. Insert SIM Card.
 - \ast Pay attention to the direction when inserting the SIM card.
 - * Ensure the power is off before inserting the SIM card, as it will not be recognized if inserted while the power is on.
 - * If you do not intend to use the cellular network, there's no need to insert the SIM card.
- 2. Plug the AC adapter that came with this product into an electrical outlet.
- 3. Start your computer.
- 4. Connect the USB-C port of this product to the USB port of the computer with a USB cable.
- 5. Launch a web browser on your computer.
- Enter the following URL in the address bar. 192.168.1.1
- 7. When the login screen is displayed, enter the following login information.

Username	
Password	
Sign In	

>Username: admin

>Password: admin

*It may take some time to display immediately after starting this product, so if you cannot connect, wait for a while and then connect again.

8. The login is completed and the dashboard is displayed.

6. LTE (Cellular Network)

This chapter describes the LTE connection procedure.

- 1. Select [Internet] from the main menu.
- 2. Select [APN Management] from the side menu.

	юТ	Dashboard	Internet	Wireless	System
	Internet Connection	APN Manager	ment		
	APN Management	APN Profiles List			New APN Profile
1	LTE WAN	APN Profile Na		ІР Туре	Operation
ſ	Ethernet WAN	default	mmtcom.jp	IPV4	Check
l	Engineering Information	APN	default	~	
	Manual Network				Save

3. Click [New APN Profile] to set the APN information of the inserted SIM.

ALI	Settings		X
AP	N Profile Name		
AP	'N Name		
Us	er Name		
Pa	ssword		
IP.	Туре	IPV4/V6	~
	thtype thentication Type	PAP	~

- 4. Select [OK].
- 5. Select the APN Profile you created from the APN drop-down menu .

Engineering Information					
Manual Network	APN	test	~	Г	Save
PIN Management					Jave

6. Click [Save].

7. Ethernet Management

This chapter describes the Ethernet Management procedure.

1. When using Ethernet as LAN

- 1. Select [Internet] from the main menu.
- 2. Select [Ethernet Management] from the side menu.
- 3. Click [Edit] from the Ethernet Management.

юТ	Dashboard	Internet		Wireless		System
Internet Connection	Ethernet Mana	agement				
APN Management	Ethernet Port	LAN/WAN Mode	Ethernet Mo		Subnet Mask	Operation
LTE WAN	1	LAN	DHCP_SERV	ER 192.168.1.1	255.255.255.0	Edit
Ethernet Management						
DHCP Settings						

4. Enter the following from the Ethernet Management.

Ethernet Management

Ethernet Port	LAN/WAN Mode	Ethernet Mode	IP Adress	Subnet Mask	Operation		
1	LAN	DHCP_SERVER	192.168.1.1	255.255.255.0	<u>Edit</u>		
Ethernet Port		1					
LAN/WAN Mod	de	● LAN ○ WAN	I				
Ethernet Mode		DHCP_SERVER O Static					
		If needed, click <u>he</u>	e to configure [OHCP settings			
Gateway IP		192.168.1.1					
Subnet Mask		255.255.255.0					
					ок		

-LAN/WAN Mode: In the case of LAN

-Ethernet Mode: DHCP_SERVER

The connected device is automatically assigned an IP address by DHCP. -Gateway IP : DHCP Default Gateway in Setting IP (cannot be changed) -Subnet Mask: Subnet Mask of DHCP Setting (cannot be changed)

-Ethernet Mode: Static case

Any IP address and subnet mask can be assigned to the Ethernet port. It is not possible to assign the same settings as the segments assigned by DHCP Settings.

-LAN IP: Any IP address - Subnet Mask: Arbitrary Subnet Mask

5. Click the OK button.

*For more information about interfaces, see chapter 17 Network Interface.

2. When using Ethernet as WAN

- 1. Select [Internet] from the main menu.
- 2.Select [Ethernet Management] from the side menu.
- 3. Click [Edit] from the Ethernet Management.

loT	D	ashboard	Internet		Wireless		System
Internet Connection		Ethernet Mana	agement				
APN Management		Ethernet Port	LAN/WAN Mode	Ethernet Mo	de IP Adress S	ubnet Mask	Operation
		1	LAN	DHCP_SERV	ER 192.168.1.1 2	55.255.255.0	<u>Edit</u>
LTE WAN							
Ethernet Management							
DHCP Settings							

4. Enter the following from the Ethernet Management.

thernet Man	agement				
Ethernet Port	LAN/WAN Mode	Ethernet Mode	IP Adress	Subnet Mask	Operation
1	LAN	DHCP_SERVER	192.168.1.1	255.255.255.0	<u>Edit</u>
Ethernet Port		1			
LAN/WAN Mod	de	◯ LAN			
Ethernet Mode	e	OHCP_CLIENT	⊖ Static		
IP Address					
Subnet Mask					
					ОК

-LAN/WAN Mode: In the case of WAN

-Ethernet Mode : DHCP_CLIENT

An IP address can be automatically assigned by DHCP from the opposing device. -IP Address: Auto-assigned/cannot be changed

-Subnet Mask: Auto-assigned/cannot be changed

-Ethernet Mode : Static

Assign an arbitrary IP address and Subnet Mask to the Ethernet port. -WAN IP: Any IP address -Subnet Mask: Any Subnet Mask -Gateway IP: Gateway IP address of the network to be connected -DNS1 (optional): Any DNS server address (primary) -DNS2 (optional): Any DNS server address (secondary)

5. Click the OK button.

*For more information about interfaces, see chapter 17 Network Interface.

8. Wireless LAN

This chapter describes the procedure for setting up a wireless LAN.

1. Wifi STA (Wireless Client Mode)

- 1. Log in to the WebUI and select [Wireless] from the main menu.
- 2. Select [Wifi STA] from the side menu.
- 3. Enter the following from the Wifi STA.

loT	Dashboard	Internet	Wireless	System
Wifi STA	Wifi STA Wifi STA Status	⊖ Enabled	Disabled	
WLAN Basic Settings			Disabled	
WLAN Advanced Setting	SSID			
Wireless MAC Filter	Security Type Wi-Fi Password	WPA2-PSK	~	
		□ Show Passv	vord	
				ОК

-Wifi STA Status: Enabled / Disabled

-SSID: SSID of the connection destination

- Security Type: Security Type of the connection destination - Wi-Fi Password: Wi-Fi Password of the connected Access Point

4. Select [OK].

2. WLAN Basic Settings (Access Point Mode)

- 1. Log in to the WebUI and select [Wireless] from the main menu.
- 2. Select WLAN Basic Settings from the side menu.
- 3. Enter the following from the WLAN Basic Settings.

	юТ		Dashboard	Inte	ernet	Wireles	s	System
	Wifi STA		• If the security ty	-	P wireless netw	ork adapters that o	nlv operate i	n 802.11n mode may not be
WL	AN Basic Settings		able to access th				ny oporato n	
WLAN	Advanced Settin	gs	WiFi Status Working Band		Enabled2.4GHz	Disabled		
Wi	reless MAC Filter		SSID		DTU_MD83X_	A42F		
			Security Type		WPA2-PSK	~		
			Wi-Fi Password		•••••			
			SSID Broadcast		Note: If the SSI	◯ Disabled D broadcast is turn		ustomer must enter the re information, please refer
			AP Isolate Switch		Disabled	~		
								OK Cancel

-Wi-Fi Status: Enabled / Disabled

-SSID: Any Name

-Security Type: Any Security Type

-Wi-Fi Password: Any Wi-Fi

Password-SSID Broadcast: Enabled (If you want to publish the SSID) / Disabled (if you do not want to expose the SSID)

- AP Isolate Switch: Disabled (do not block communication between wireless clients) / Enabled (block communication between wireless clients)

4. Select [OK].

3. Wireless MAC Filter

- 1. Log in to the WebUI and select [Wireless] from the main menu.
- 2. Select [Wireless MAC Filter] from the side menu.
- 3. Select the following mode from MAC Filtering Mode, and then select [Save].

-Disable: To disable

-Allow: Specify the MAC address of the device to be allowed

- -Deny: Specify the MAC address of the device that is not allowed
- 4. Select the [Add] button.
- 5. On the Add MAC Filter Address screen, enter the MAC address of the device and select [Save].

Add MAG	C Filter	Addre	ess		Х
•	•	•	•		
V. .					Save

9. VPN

This chapter describes the procedure for setting up a VPN.

1. SSTP

- 1. Log in to the WebUI and select [System] from the main menu.
- 2. Select SSTP from the Protocol pull-down menu.

ΙοΤ	Dashboard	Internet	Wireless	System
_	VDN			
Firmware Upgrade	VPN Protocol	NONE	~	
System Settings				Save
VPN				

- 3. Select SSTP from the Protocol pull-down menu.
- 4. Set the following:

юТ	Dashboard	Internet	Wireless	System
	_			
Firmware Upgrade	VPN			
System Settings	Protocol	SSTP	~	
Cystem Cettings	VPN Connection	Status Disconnected		
VPN	Server			
IPSec Tunnel	Root Cert		Load	
OpenVPN	Туре	Password	\sim	
Advance Settings	PAP/CHAP Usern	ame		
WAN Port PIN	PAP/CHAP Passw	vord		
				Save

-Server: VPN server address to connect to

-Root Cert: Set the certificate of the VPN you want to connect to, and press [Load]. -Type:

- Password: Password method
- Certificates(TLS): Certificate method
- -Enter the PAP/CHAP Username: (password method) username

-Enter the PAP/CHAP Password: (password method) password

- -User certificate :(certificate method) Set the certificate and press [Load].
- -User private key: (Certificate method) Select Private Key and press [Load].
- 5. Click the [Save] button.
- 6. When the VPN Connection Status becomes Connected, the connection is complete.
- 7. Select [Dashboard] from the menu of WebUI.
- 8. The VPN information is displayed in the VPN section.

юТ	Dashboard	Internet	Home Network	Wireless	Router	
Connection 1.38M 1.12M	ЛВ	Wi-Fi S Network N	Settings ame (SSID) 4D83X_2c26	Network Settings Signal Strength -94 dBm USSD >		
VPN Protocoi: SSTP VPN Connection Status: Connected Server: 112.124.110.213:5555 PAP/CHAP Username: 111 PAP/CHAP Password: 111		Status Information IMEI IP Address WAN IP Address MAC Address IMSI Connected Time		3520990017614823 192.168.1.1 10.200.10.22 00:ad:b8:64:2c:26 311420000000022 00:47:43	Detail Information	

2. IPSec

- 1. Log in to the WebUI and select [System] from the main menu.
- 2. Select the IPSec Tunnel menu.
- 3. Set the following:

loT	Dashboard	Internet	Wireless	System
Firmware Upgrade	IPSec Tunnel			
System Settings	IPSec Switch Enabled	~		
VPN	IPSec Connection			
IPSec Tunnel	IPSec Mode			
	Tunnel			~
OpenVPN	Remote Address		DPD Delay(sec)	
Advance Settings	0.0.0.0		30	
· · · · · · · · · · · · · · · · · · ·	Key Exchange Mo	de		
WAN Port PING	ikev2			~
	Local Subnets		Remote Subnets	
	0.0.0/0		0.0.0/0	
	Phase #1		Phase #2	
	Lifetime		Lifetime	
	3600		3600	
	IKE Encryption		ESP Encryption	
	aes128	~	aes128	~
	IKE Hash		ESP Hash	
	sha1	~	sha1	~
	DH Group		PFS Group	
	modp1024	~	none	~
	Authentication Me	ethod		
	psk			~
	Pre-Shared Key			
	••••			
	Show Password			

-IPSec Switch: Enabled/Disabled VPN server address

-IPSec Connection Status - Displays the status of the connection with the IPSec server

-IPSec Mode: Select from Tunnel/Transport

-Remote Address: Enter the address of the IPSec server.

-DPD Delay (sec): DPD (Dead Peer Detection), IPsec tunnel communication interruption in

real time

Set the time period to be detected (same effect as Heartbeat)

Save

-Key Exchange Mode: Select from ikev1 / ikev2

-Local Subnets: Enter the addresses of local subnets protected by IPsec

-Remote Subnets: Enter the addresses of remote subnets protected by IPsec

Phase #1 (Security Association Phase1)

-Lifetime: Enter the survivable time of Phase 1

- IKE Encryption: Select encryption algorithm from aes128 / aes192 / aes256 / 3des

- IKE Hash: Select authentication algorithm from sha1 / sha256 / sha384 / sha512 / md5

-DH Group: Select DH Group.

Phase #2 (Security Association Phase2)

-Lifetime: Enter the survivable time of Phase 2

- ESP Encryption: Select encryption algorithm from aes128 / aes192 / aes256 / 3des

- ESP Hash: Select authentication algorithm from sha1 / sha256 / sha384 / sha512 / md5
- -PFS Group: Select PFS Group.

-Authentication Method: Authentication method, fixed by psk (Pre-shared Key) -Enter the Pre-Shared Key: psk password

4. Click the [Save] button.

5. When the IPSec Connection Status becomes Connected, the connection is complete.

10. RS485/232

This chapter describes the procedures related to RS485/232.

1. Modbus RTU connection

1.Connect the target device to this product via RS485 and RS232.

2. Log in to the WebUI and select [IoT] from the main menu.

3. Select [RS485/232] from the menu. 4. Use Modbus Setting to set the communication according to the target device.

IoT > RS485/232		
Modbus Setting Modbus List	Profile List	
CSV Convert:	Start Stop	
Modbus Setting		
* Switch:	Enabled	~
* CRC:	Enabled	~
* Mode:	Master	~
* Parity:	NONE	~
* Serial type:	RS485	~
* Baud rate:	9600	~
* Data Bits:	8	~
* Stop Bits:	1	~
* Acquisition Cycle:	1min	~
* Timeout	50	ms

-CSV Convert Select: Stop/Start (leave it as Stop in the procedure)

-Switch: Enabled/Select Disabled (Select Enabled when using RTU)

-CRC: Enabled/Select Disabled (If you want to use CRC, select Enabled.)

-Mode: Master fixed (cannot be changed / Slave will be supported in the future)

-Parity: Select according to the settings of the target device

-Serial Type: RS485/Select RS232

-Baud rate: Select according to the settings of the target device

Save

-Stop Bits: Select according to the settings of the target device

- -Acquisition Cycle: Select the data acquisition interval
- -Timeout: maximum acquisition time
- 5. Press the [Seve] button.

2. Connectivity Device Settings (Pre-installed Devices)

- 2-1. Pre-installed device settings
- 1.Select [Modbus List] from the menu.
- 2. Click [Add].
- 3. Register the target device.

loT >	RS485/232											
Mod		Modbus List	Profile L	ist								
List	of Slaves	;			List	of Var	iable					
				Add	Slave	ld: 1						Add
No.	Name	Slave Id	Profile	Operation	No.	Name	Start Address	Register/Bits	Read/Write	Value	Response	Operation
1	N1	1	KM-N1-FLK	Edit Del								

-Name: Enter the name

-Salve Id: Enter the slave ID of the target device.

-Profile: Specify the profile of the target device (Default if there is none)

4.[Click OK.

2-2. List of Pre-installed Devices

By selecting a pre-installed device, you do not need to set up details.

brand	name	Model No.
OMRON	Power Usage Logger	Model KM-N1-FLK

2-3. Check data of pre-installed devices

For pre-installed devices, you can check the values on the WebUI.

- 1. Select [Profile List] from the menu.
- 2. Select the target device from Select Profile.
- 3. It is possible to check the acquired data.

2-4.CSV output for pre-installed devices

For pre-installed devices, CSV output of acquired data is possible.

- 1. After the settings of the pre-installed device are completed
- 2. Select [Modbus Setting] from the menu.
- 3. Select Start from CSV Convert
- 4. Click [OK].
- 5. CSV output is completed.

IoT > RS485/232		
Modbus Setting Modbus List	Profile List	
CSV Convert:	Start Stop	
Modbus Setting		
* Switch:	Enabled]
* CRC:	Enabled]
* Mode:	Master 🗸]
* Parity:	NONE]
* Serial type:	RS485 ~]
* Baud rate:	9600 ~]
* Data Bits:	8 ~]
* Stop Bits:	1 ~]
* Acquisition Cycle:	1min 🗸]
* Timeout	50]ms

Save

3.Connectivity Device Settings (Non Pre-installed Devices)

For devices that not in pre-installed devices list, please do settings manually.

1. Clie	ck on the	Slave Id I	link									
loT >	RS485/232											
Modi		Modbus List	Profile L	ist								
List o	of Slaves				List	of Var	iable					
				Add	Slave	ld: 1					(Add
No.	Name	Slave Id	Profile	Operation	No.	Name	Start Address	Register/Bits	Read/Write	Value	Response	Operation
1	N1	1	KM-N1-FLK	Edit Del								

2. Click the [Add] button from the List of Variable screen on the right.

3.Configure the settings from Add Variable window.

	Add Variable		x	1
ər ət	Add Variable Name of Variable Unit Function Code Start Address(Hexadecimal) Number of Bits Read/Write	Ox01(read) ✓ Ox01(read) ✓ Only read ○ Only write OK Cancel	x	ď
		OK Cancel		

- -Name of Variable: Enter the name
- -Unit: Enter the unit
- -Function Code: Select function code
- -Start Address (Hexadecimal): Enter the start address
- -Number of Bits: Number of bits
- -Read/Write: Select only Read or only Write

4.Click [OK].

loT >	Modbus-RTU											
Мо		Modbus List	Profile	List								
List	of Slaves	5			Lis	t of Varia	able					
				Add	Slave	ə ld: 1						Add
No.	Name	Slave Id	Profile	Operation	No.	Name	Start Address	Register/Bits	Read/Write	Value	Response	Operation
4	test	1	default	Edit Del	1	<u>test</u>	0001	1	Only read	0.01	-	Edit Del
1												

The acquired data is displayed in the Value field.

11. EnOcean

This chapter describes the procedures related to EnOcean.

1. EnOcean Device Manager screen description

- 1. Log in to the WebUI and select [IoT] from the main menu.
- 2. Select [EnOcean] from the menu.

I	оТ	Dasht	oard	Ir	ternet	Wirele	ess		System
loT > EnOc	ean								
EnOcean	Device Manager	EnOcean E	iquipment						
EnOceai	n Device Ma	anager							
Source o	f Data	Intern	al o Ext	ternal					
Registere	d Devices	List of reg	gistered	devices				Manually F	Register Device
Device Nan	ne Device ID	EEP	EEP function	on	ЕЕР Туре	Di	ata	RSSI	Operation
<u>test</u>	05005B76	A5-02-30	Temperatur	re 10 Bit Te	mperature Sensor	Range 93 FA	55 0A	-58	UnRegister
			Sensors	-	40°C to +62.3°C				
Unregiste	ered Devices	List of u	nregiste	red devic	es receiving	now Only Teach I	Packets	Clear Unreg	stered Devices
Device ID	Packet Type	Telegram Type	EEP	EEP function	EEP Type	Data	RSSI	Teach Data	Operation
0502DB21	Packet Type 10	4BS	Unknown	Unknown	Unknown	82 45 87 0E	-60	-	Register
04144135	Packet Type 10	VLD	Unknown	Unknown	Unknown	A8 22 C0 00 0	-68	-	Register

- 3. Select Source of Data
 - -Internal: When receiving a sensor with EnOcean built-in this product (normal use)
 - -External: When using USB400J receiver
- 4. Check the screen display

Registered Devices: Registered sensors are displayed

Unregistered Device: Automatically searched sensors are displayed.

2. Register from the Unregistered Device list

* Register sensors from the auto searched sensor list

1. Click [Register] for the sensor you want to register with this product from the Unregistered Devices list.

Unregiste	ered Devices	i			🗌 Sho	w Only Teach Pa	ckets	Clear Unreg	istered Device
Device ID	Packet Type	Telegram Type	EEP	EEP function	EEP Type	Data	RSSI	Teach Data	Operation
0502DB21	Packet Type 10	4BS	Unknown	Unknown	Unknown	7C 45 86 0E	-52	-	Register
04144135	Packet Type 10	VLD	Unknown	Unknown	Unknown	A7 21 80 00 03	-68	-	Register
						DB 1A A6 E0			

2. Enter the information into New EnOcean Devices window.

lew EnOcean Devices		×
EnOcean Device Name		
EnOcean Device id		
04144135		
EnOcean RORG		
USR DEFINE	~	
EnOcean Function		
USR DEFINE	~	
EnOcean Type		
USR DEFINE	~	

- EnOcean Device Name: Enter a name of your choice (up to 16 characters, alphanumeric)
- EnOcean Device id: Corresponding sensor ID (no need to change)
- EnOcean RORG: Select EEP-RORG of the corresponding sensor
- EnOcean Function: Select the EEP-Function of the corresponding sensor
- , EnOcean Type: Select the EEP-Type of the corresponding sensor.
- 3. Click the [OK] button.
- 4. Sensor registered into Registered Devices list.

3. Register from Manually Register Device

- * Register sensors those are not auto searched
- 1. Click the [Manually Register Device] button.

EnOcean I	Device Mar	nager					
Registered	Devices					Manually Rec	jister Device
Device Name	Device ID	EEP	EEP function	ЕЕР Туре	Data	RSSI	Operation

2. Enter the information into New EnOcean Devices window.

New EnOcean Devices		x
EnOcean Device Name		
EnOcean Device id		
04 <mark>1</mark> 44135		
EnOcean RORG		
USR DEFINE	~	
EnOcean Function		
USR DEFINE	~	
EnOcean Type		
USR DEFINE	~	

-EnOcean Device Name: Enter a name of your choice (up to 16 characters, alphanumeric)

- -EnOcean Device id: Enter the corresponding sensor ID
- -EnOcean RORG: Select the EEP-RORG of the corresponding sensor
- -EnOcean Function: Select the EEP-Function of the corresponding sensor
- -EnOcean Type: Select the EEP-Type of the corresponding sensor
- 3. Click the [OK] button.
- 4. Sensor registered into Registered Devices list.

4. Register through Teach-in

*Get your Teach-in information and register

- 1. Press the LEARN button of the corresponding sensor.
- 2. When you receive the Teach Data, click [Register].

						Teach Packet		lear Unregistere	u Devices
Device ID	Packet Type	Telegram Type	EEP	EEP function	ЕЕР Туре	Data	RSSI	Teach Data	Operation
04144135	Packet Type 10	VLD	D2-14-41	Multi Function Sensors	Indoor - Temperature, Humidity XYZ Acceleration, Illumination Sensor	9B D3 C0 00 2B EA FA D7 40 B0	-61	40 FF 0B 00 41 14 D2 C4	Register

3. Enter the information into New EnOcean Devices window.

EnOcean Device Name		T		
EnOcean Device id				
04144135				
EnOcean RORG				
D2 - VLD Telegram	~	~		
EnOcean Function				
14 - Multi Function Sensor	s 🗸	~		
EnOcean Type				
41 - Indoor -Temperature, I	Hu	~		

-EnOcean Device Name: Enter a name of your choice (up to 16 characters, alphanumeric)

-EnOcean Device id: Corresponding sensor ID (no need to change)

-EnOcean RORG: EEP-RORG of the corresponding sensor (no change required)

-EnOcean Function: EEP-Function of the corresponding sensor (no change required)

-EnOcean Type: EEP-Type of the corresponding sensor (no change required)

4. Click the OK button.

5. Sensor registered into Registered Devices list.

5. EnOcean Equipment Screen Description

The sensor registered here will be the data sent to Cloud or Modbus TCP.

- 1. Log in to the WebUI and select [IoT] from the main menu.
- 2. Select [EnOcean] from the menu.
- 3. Click [EnOcean Equipment] from the menu.

IoT > EnOce	ean		
EnOcean E	Device Manager EnOcean Equipment		
EnOcean	n Equipment		
01 Name	test	Ū	۹_
	temperature: 24.0°C		
	humidity: 33.0%		
	illumination: 15lx		
	accelerationStatus: threshold1		
	accelerationX: -0.005g		
	accelerationY: 0.025g		
	accelerationZ: 1.005g		
	contact: open		
02 Name		0	+
03 Name		0	+
04 Name		0	+

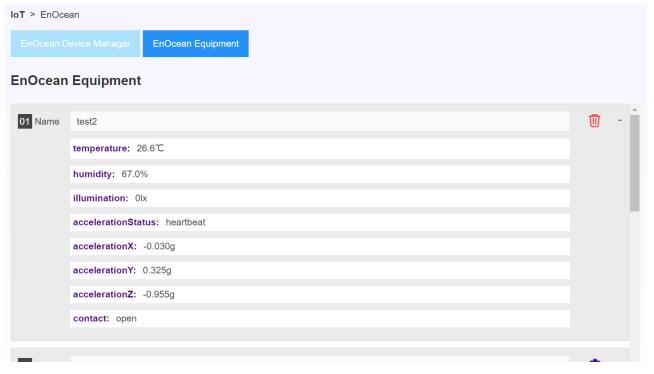
6. Add registered sensor into EnOcean Equipment List

- 1. Press the [gear icon] on the right side of the number 01.
- 2. Select the sensor you want to add into EnOcean Equipment List from registered sensors.

Input Device test	~
toot	

3. Click [OK].

4.01 If you press [+] on the right side, you can check the details of the value received from the sensor.



7. Delete registered sensor

1. Click the [Trash can icon] on the right side of EnOcean Equipment page.

EnOcean Equipment	
01 Name test	U +
02 Name	O +
Name	ά.

2. Click [UnRegister] on the right side of the EnOcean Device Manager page.

EnOcean De	vice Manager	EnOcean Ec	luipment				
	Device Ma	nager					
egistered	Devices				N N	Janually Re	gister Device
						200	
Device Name	Device ID	EEP	EEP function	ЕЕР Туре	Data	RSSI	Operation

3. The registered sensor is deleted.

8. List of supported EEPs

*List of EEPs that can be decoded

ROR G	ROR G	FUN C	FUNC NAME	TYP E	TYPE NAME	EEP Number
F6	RPS	02	Rocker Switch, 2 Rocker	04	Light and blind control ERP2	F60204
D5	1BS	00	Contacts and Switches	01	Single Input Contact	D50001
A5	4BS	02	Temperature Sensors	05	Temperature Sensor Range 0°C to +40°C	A50205
A5	4BS	02	Temperature Sensors	14	Temperature Sensor Range −20°C to +60°C	A50214
A5	4BS	02	Temperature Sensors	17	Temperature Sensor Range +10°C to +90°C	A50217
A5	4BS	02	Temperature Sensors	30	10 Bit Temperature Sensor Range -40°C to +62.3°C	A50230
A5	4BS	04	Temperature and Humidity Sensor	01	Range 0°C to +40°C and 0% to 100%	A50401
A5	4BS	04	Temperature and Humidity Sensor	02	Range –20° C to +60° C and 0% to 100%	A50402
A5	4BS	04	Temperature and Humidity Sensor	03	Range -20° C to $+60^{\circ}$ C 10bit-measurement and 0% to 100%	A50403
A5	4BS	06	Light Sensor	01	Range 300lx to 60.000lx	A50601
A5	4BS	06	Light Sensor	02	Range 0lx to 1.020lx	A50602
A5	4BS	06	Light Sensor	03	10-bit measurement (1-Lux resolution) with range Olx to 1000lx	A50603
A5	4BS	07	Occupancy Sensor	01	Occupancy with Supply voltage monitor	A50701
A5	4BS	07	Occupancy Sensor	02	Occupancy with Supply voltage monitor	A50702
A5	4BS	07	Occupancy Sensor	03	Occupancy with Supply voltage monitor and 10-bit illumination measurement	A50703
A5	4BS	08	Light, Temperature and Occupancy Sensor	01	Range 0lx to 510lx, 0° C to $+51^{\circ}$ C and Occupancy Button	A50801
A5	4BS	08	Light, Temperature and Occupancy Sensor	02	Range 0lx to 1020lx, 0 $^{\circ}$ C to +51 $^{\circ}$ C and Occupancy Button	A50802

A5	4BS	08	Light, Temperature and Occupancy Sensor	03	Range 0lx to 1530lx, -30°C to +50°C and Occupancy Button	A50803
A5	4BS	09	Gas Sensor	04	CO2 Sensor	A50904
A5	4BS	10	Room Operating Panel	01	Temperature Sensor, Set Point, Fan Speed and Occupancy Control	A51001
A5	4BS	10	Room Operating Panel	03	Temperature Sensor, Set Point Control	A51003
A5	4BS	10	Room Operating Panel	04	Temperature Sensor, Set Point and Fan Speed Control	A51004
A5	4BS	10	Room Operating Panel	05	Temperature Sensor, Set Point and Occupancy Control	A51005
A5	4BS	10	Room Operating Panel	07	Temperature Sensor, Fan Speed Control	A51007
A5	4BS	10	Room Operating Panel	08	Temperature Sensor, Fan Speed and Occupancy Control	A51008
A5	4BS	10	Room Operating Panel	0C	Temperature Sensor and Occupancy Control	A5100C
A5	4BS	10	Room Operating Panel	10	Temperature and Humidity Sensor, Set Point and Occupancy Control	A51010
A5	4BS	10	Room Operating Panel	12	Temperature and Humidity Sensor and Set Point	A51012
A5	4BS	10	Room Operating Panel	13	Temperature and Humidity Sensor, Occupancy Control	A51013
A5	4BS	10	Room Operating Panel	19	Humidity, Temperature Set Point, Temperature Sensor, Fan Speed and Occupancy Control	A51019
A5	4BS	14	Multi-Func Sensor	05	Vibration/Tilt, Supply voltage monitor	A51405
A5	4BS	30	Digital Input	02	Single Input Contact	A53002
A5	4BS	30	Digital Input	05	Single Input Contact, Retransmission, Battery Monitor	A53005
D2	VLD	14	Multi Function Sensors	40	Indoor -Temperature, Humidity XYZ Acceleration, Illumination Sensor	D21440
D2	VLD	14	Multi Function Sensors	41	Indoor -Temperature, Humidity XYZ Acceleration, Illumination Sensor	D21441

9. List of Supported GPs

*List of GPs that can be decoded

Maker	Sensor Type	GP Number
Watty Inc.	2Wireless temperature sensor	НҮНQ
	4 Wireless Temperature Sensors	HYHQ-FF
	Electronic Wet Bulb Black Bulb Temperature Wireless Sensor	WBGT_7500_E

12. Modbus TCP

This chapter describes the procedures related to Modbus TCP.

1. Modbus TCP connection

- 1. Log in to the WebUI and select [IoT] from the main menu.
- 2. Select [Modbus TCP] from the menu.

3. Enter the following from [Modbus TCP Setting].

IoT > Modbus TCP			
Modbus TCP Setting	Address Mapping List		
Modbus TCP Sett	ing		
Data Source:	EnOcean	~	
			Save
Modbus TCP Switch:	Enabled	~	
Host Mode:	LAN (Gateway)	~	
Host Address:	192.168.1.1		
* Port:	1502		
			Save

-Data Source:

EnOcean / Modbus RTU

-Modbus TCP Switch: Enabled (to enable) / Disabled (to disable)

-Host Mode / Host Address

LAN(Gateway) / default gateway address

LAN(Static) / Ethernet static address

WAN(LTE) / cellular address

WAN (Wi-fi STA) / Wi-fi allocated address

WAN(DHCP/Static) / wired WAN address

-Port: $1502 \sim 1562$

4. Select Save.

2. Modus Address Map (EnOcean)

*When EnOcean is selected as data source

- 1. Log in to the WebUI and select [IoT] from the main menu.
- 2. Select [Modbus TCP] from the menu.
- 3.Select Address Mapping List.

Data Source	Address	Data	Equipment No	Channel	R/W
EnOcean	30001~30959	32bit float	1~24	1~20	R

4. Check the address map on the WebUI and make a request to the address specified by this product from the Modbus tool or server

. Example) Humidity data can be obtained by requesting TCP Address 30003.

IoT > Modbus TCP								
Modbus TCP Setting	Address Mapping List							
Address Mapping	List							
Toggle Sequence Nnumber: 1 : test2								
Channel Tag Address Data Type Data								
Channel	Тад	Address	Data Type	Data				
Channel 0	Tag TMP10	Address 30001	Data Type 32b_float	Data 25.500				
0	TMP10	30001	32b_float	25.500				
0	TMP10 NA	30001 30002	32b_float NA	25.500 0.000				

3. Modus Address Map (Modbus RTU)

*If Modbus RTU is selected in the data source

1. Log in to the WebUI and select [IoT] from the main menu.

2. Select [Modbus TCP] from the menu.

3.Select Address Mapping List.

Data Source	Address	Data	R/W
Modbus RTU	30001~31000	16bit float	R

4.Click the [Add] button.

Add Mapping		x
Modbus RTU Slave ID	1 : N1	~
Modbus TCP Address	30001~31000	
Modbus RTU Address	0200	~
Data Type	16B_Float	~
	Save Ca	ancel

*Modbus RTU equipment must be set up in advance.

- 4. Select the following
 - -Modbus RTU Slave ID: Modbus RTU Select the device set in
 - -Modbus TCP Address: Modbus TCP Select from address 30001~31000
 - -Modbus RTU Address: Select the address map of the device connected to Modbus RTU.
 - -Data Type: Select the data type
- 5. Click the [Save] button.

6. Check the address map on the WebUI and make a request to the address specified by the product from the Modbus tool or server.

Example) If you request TCP Address30001, you can get RTU Address0200 data.



13. FTP/SFTP

This chapter describes FTP/SFTP-related procedures.

1. FTP Upload

- * Upload CSV file converted from RS485/232.
- * Compatible devices: OMRON's KM-N1-FLK
- 1. Log in to the WebUI and select [IoT] from the main menu.
- 2. Select [FTP/SFTP] from the menu.
- 3. Select [FTP Upload].
- 4. Configure the following settings.

IOT > FTP/SFTP		
FTP Upload FTP Gather	Un_upload List	
FTP Upload		
Enable This Connection:		
Туре:	FTP v	
* Server:		
* Port:	21	
Mode:	PORT Mode 🗸	
* User Name		
* Password:	Ø	
* Interval Time:	S	
File Prefix:		

Enable This Connection: Check if you want to use it.

- -Type: Select FTP/SFTP
- -Server: Enter the IP address of the upload destination.
- -Port: Fixed value by selecting Type (no change required)
- -User Name: Enter the user name of the upload destination
- -Password: Enter the password of the upload destination
- -Interval Time: Set the upload interval

οк

-File Prefix: Name of the output folder (initial)

5. Click OK.

2. FTP Gather

* Ability to retrieve files from subordinate devices.

*Compatible devices: OMRON's KM-D1-ETN

- 1. Log in to the WebUI and select [IoT] from the main menu.
- 2. Select [FTP/SFTP] from the menu.
- 3. Select [FTP Gather].

4.Configure the following settings.

IoT > FTP/SFTP		
FTP Upload FTP Gath	her	
FTP Gather		
Enable Gather Func:		
Server:	192.168.1.222	
Port:	21	
User Name	ftp	
Password:		
Dev-Type:	KM-D1-ETN ~	
Method:	Manual ~	
Date-range:	2023-06-06 to 2023-06-07 💌	
	DownLc	oad Ok

-Enable This Connection: Check if you want to use it.

- -Server: Enter the IP address of the subordinate, device.
- -Port: Specify the port
- -User Name: User name of the subordinate device

-Password: Password name of the subordinate device

- · Dev-Type: KM-D1-ETN (cannot be changed / other devices will be supported)
- Method: Manual/Auto
- -Data-range: Target period of the CSV you want to obtain
- 5. Click [Download]
- 6. CSV for the target period is saved in the product.

3. Un_upload List

- * Function to check the list of CSV files saved in this product.
- 1. Log in to the WebUI and select [IoT] from the main menu.
- 2. Select [FTP/SFTP] from the menu.
- 3. Select [Un_upload List].

IOT > FTP/SF	TP	
FTP Upload	FTP Gather	Un_upload List
N1 Un_up	load List	
20240124		
4. Select a f	older for th	e date.
IOT > FTP/SFTF	0	
FTP Upload	FTP Gather	Un_upload List
N1 Un_uplo	ad List	
🦘 Back / 20240		
6144_2024_0	01_24_14_11_00.c	SV
6144_2024_0	01_24_14_12_00.c	SV
6144_2024_0	01_24_14_16_00.c	CSV
6144_2024_0	01_24_14_17_00.c	SV

- * CSV files are saved by creating folders for each date.
- * Files that have been successfully uploaded will be deleted.
- \ast CSV files are stored for up to 7 days and deleted in folders at 23:59 on the 7th day.

14. MQTT

This chapter describes the procedures related to MQTT.

- 1. Log in to the WebUI and select [IoT] from the main menu.
- 2. Select [MQTT] from the menu.

юТ		Dashboard	Inte	rnet	Wireless		System
IoT > MQTT							
MQTT List							
Index	Enable	Name	Client id	Host	Port	Connection status	Start/Stop
1	Disabled	-	-	-	-	-	-
2	Disabled	-	-	-	-	-	-
3	Disabled	-	-	-	-	-	-
4	Disabled	-	-	-	-	-	-

- 3. Select any number in the index.
 - $*4~\mathrm{MQTTs}$ can be used at the same time
- 4. Select any number in the index.

MQTT List

Index	Enable	Name	Client id	Host	Port	Connection status	Start/Stop
1	Disabled	-	-	-	-	-	-
2	Disabled	-	-	-	-	-	-
<u>3</u>	Disabled	-	-	-	-	-	-
<u>4</u>	Disabled	-	-	-	-	-	-
General Settin	gs						
Index		1	~				
Enable		Disabled	~				

Save

- -Enabled: Enabled (if enabled)/Disable (If you want to disable it)
- 5. Click the [OK] button.
- 6. Enter the following:

General Settings	
Index	1 ~
Enable	Enabled
* Name	zf1
* Client id	1
* Host	broker.hivemq.com
* Port	8883
User name	
Password	S.

-Name: Arbitrary name

-Client id: Any ID

-Host: Destination host address

-Port: PORT number (MQTT:1883/MQTTS:8883)

7. If you are using MQTTS, set TLS to Enabled and select a certificate.

TLS	Enabled	~	
* CA File:	ssl_cafile.pem	Lo	ad Upload successful
Cert File:	ssl_certfile.pem	Lo	ad Upload successful
Key File:	ssl_keyfile.pem	Lo	ad Upload successful
* Timeout	10	s	
* Keep alive	60	s	
Version	V5.0	~	
LWT Topic			
LWT Qos	1	~	
LWT Retain	Disabled	~	
LWT Payload			
			Save

8. Click the [Save] button.

9. Verified that the Connection status is "Connected".

IoT > MQTT	ΙοΤ	>	MQTT
------------	-----	---	------

MQTT List

Index	Enable	Name	Client id	Host	Port	Connection status	Start/Stop
1	Enabled	test	test	54.165.198.210	1883	Connected	Stop
2	Disabled	-	-	-	-	-	-
<u>3</u>	Disabled	-	-	-	-	-	-
<u>4</u>	Disabled	-	-	-	-	-	-

10. Configure the data source and publishing.

Data Collection:	Enabled ~
Pub Data:	⊖ Data Payload ⊖ Serial ● EnOcean
Data Format:	● JSON
Pub Topic	test/test
Pub Qos	1 ~
Pub Retain	Disabled ~
Pub Type:	● Processed Data ◯ Raw Data
Pub Mode:	Periodic reporting ~
Pub Interval	10 s

-Data Collection : Enabled/Disable

-Pub Data : Data Payload (for verification) / Serial / EnOcean:

-Data Format : JSON

-Pub Topic: Enter the topic name

-Pub QoS: Select the message assurance level.

-Pub Retain: Enabled for the Retain function/Select Disable.

-Pub Type :

-Processed Data: Telegram parsed data

-Row Data: Unparsed Telegram data

-Pub Mode :

-Periodic reporting: Time interval report

-Real-time reporting: Real time reporting latest data from sensors

-Pub Interval: Enter the transmission interval (Input is available only when Periodic

reporting is selected.)

11. Click the [Save] button.

Save

15. Cloud Service

This chapter describes Cloud-related procedures.

1. Connect to AWS

- 1. Log in to the WebUI and select [IoT] from the main menu.
- 2. Click [AWS] from the menu.
- 3. Enter the following:

IOT > AWS

AWS

Connection status:	Connected Stop	
Enable:	Enabled	•
* Source of data:	⊖ Serial	
* Data Format:	Json	
* Host:	a2iugp19eqekwb-ats.iot.us-east-1.amazonaws.com]
* Port Number:	8883	
User Name:		
Password:	Ø	
* CA File:	AmazonRootCA1.crt	Load
* Cert File:	certificate.pem.crt	Load
* Key File:	private.pem.key	Load
Reporting method:	Real-time reporting	•
* Topic:	test/mine	
* EnOcean Data mode:	○ Processed Data	
Additional Json Message:		
		e e

ОК

- -Source of data: Select the data sent from EnOcean / Serial.
- -Data Format: JSON
- -Enable This Connection: Check to start a connection to AWS.
- -Host: Enter the AWS endpoint.
- -Port Number:8883

-CA File: Select the certificate and press [Load]

-Cert File: Select the certificate file and press [Load]

- Key File: Select the private key file and press [Load]

-Reporting method: Select the communication timing from the following.

-Periodic reporting: Time interval report

-Real-time reporting: Real time reporting latest data from sensors

-Interval Time: Enter the transmission interval (can only be entered if Periodic reporting is selected)

-Topic: Enter the topic name of the MQTT

-EnOcean Data Mode:

-Processed Data: Telegram parsed data

-Row Data: Unparsed Telegram data

-Additional Json Message : Enter if there is a sentence you want to add to the JSON.

*Example)"reciever_type" : "500J",

*Please enter according to JSON format.

4. Click [OK].

2. Connect to Azure

- 1. Log in to the WebUI and select [IoT] from the main menu.
- 2. Click [AWS] from the menu.
- 3. Enter the following:

ΙοΤ	>	Azure

Azure

Connection status:	Disconnected	
Enable:	Enabled	~
* Source of data:	🔿 Serial 💿 EnOcean	
* Data Format:	Json	
* Host Name		
* Device ID		
* Shared Access Key		
Reporting method:	Periodic reporting	~
* Interval Time:		S
* EnOcean Data mode:	Processed Data	
Additional Json Message:		
	L	12

49

OK

-Enable This Connection: Check to start a connection to Azure.

-Host Name:

Enter your Azure host name - Enter your Device ID: Device ID

-Shared Access Key: Set the access key

-Reporting method: Select the communication timing from the following.

-Periodic reporting: Time interval report

-Real-time reporting: Real time reporting latest data from sensors

-Interval Time: Enter the transmission interval (can only be entered if Periodic reporting is selected)

-Topic: Enter the topic name of the MQTT

-EnOcean Data Mode:

-Processed Data: Telegram parsed data

-Row Data: Unparsed Telegram data

-Additional Json Message : Enter if there is a sentence you want to add to the JSON.

*Example)"receiver_type" : "500J",

*Please enter according to JSON format.

4. Click [OK].

16. Software Updates

This chapter describes the procedure for updating the software.

- 1. Log in to the WebUI and select [System] from the main menu.
- 2. Se lect [Firmware Upgrade] from the side menu.
- 3. Select [Browse] and select the update file (~.bin) to be provided separately.
- 4. Select [Upgrade].

loT	Dashboard	Internet	Wireless	System
Firmware Upgrade		closing your web browser or di	0	
System Settings VPN		at during the update, there may rt of the process. Your device w rsion:		
IPSec SurfView	Current Firmware Da	te: rmware upgrade file and then p	20240110_20_46	a' buttop
Advance Settings WAN Port PING		I_INTERNAL_001_T69_AB_01	, ,	-

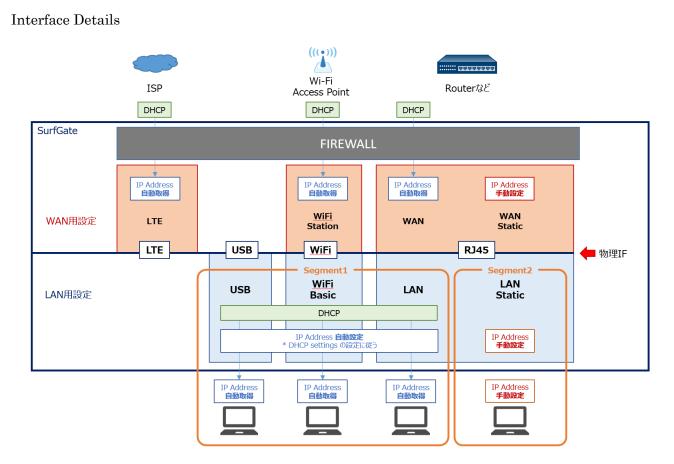
5. A progress bar pop-up is displayed, and the application restarts when the progress reaches 100%.

6. The update is complete.

 \ast Do not unplug the power during the update.

17. Network Interface

This chapter describes the Network Interface.



Each physical interface operates in one of the roles.

• In the WAN, the FW policy is applied to inbound communication.

LAN (DHCP), wireless LAN, and USB are accepted on the same logical interface.

The WAN interface is registered as the default gateway.

18. Revision History

This chapter provides a history of revisions.

The manual revision symbol is appended to the end of the version number on the front cover.

Version Number: NTD83X -User \Box

Revision	Date of	Revised page
symbol	revision	
А	December	first edition
	2022	
В	January 2023	Correction of USB description and added about power OFF
С	March 2023	Added IoT chapter
D	March 2023	Added Wireless chapter
Е	March 2023	Corrected the AWS chapter
F	March 2023	Modify the address in the Modbus Address List
G	April 2023	Addition of device configuration, product specifications, and TBD
		items
Н	June 2023	Add Modbus RTU, FTP/SFTP items
Ι	July 2023	Adding a Wi-Fi STA item
J	September	Reflect the change in model number
	2023	Image replacement and procedure change due to WebUI
		improvement
		Added Regulatory and Certification items to the Product
		Specifications chapter
		Added EEP to EnOcean chapter
		Modification of $RS485/232$ chapter, deletion and modification of
		Modbus Address List
		Add Azure to the Cloud Service chapter
		Adding an MQTT ChapterAdding a VPN Chapter
K	October 2023	Added System Log chapter
		Modified product specification chapter EnOcean
L	October 2023	Added corresponding EEP to EnOcean chapter
Μ	October 2023	Added MQTTS to the MQTT chapter

↑ Revision symbol

Ν	October 2023	Added IPSec to the VPN chapter
0	November	Added Ethernet Management and Network Interface chapters.
	2023	
Р	January 2024	Removed the System Log chapter, added
		FTP/SFTP chapter, changed
		the cover, and changed the information chapter
Q	April 2024	Updated the list of supported EEPs and GPs in the EnOcean
		chapter.

19. Information

We do not guarantee our products when they are used under conditions or environments not described in this magazine, or when they are used for applications that require particular safety, such as when they are expected to have a significant impact on human life or property, unless there is a special agreement intended by the Company.

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Version number: NTD83X -UserQ as of April, 2024