# Network Card SC21 Manual (Setup Guide)



## Introduction

Thank you for purchasing the OMRON "Network card SC21" (this product hereafter). This document contains the information you need for using safely this product. Please read carefully before installation and use.

#### About Disclaimers

We may not respond to the compensation for any damages even if they are caused by the use of our products, including the abnormalities and failures of the equipment, connection devices, and software.

Request for using

- Please read the safety precautions described in the beginning carefully before use.
- To transfer or sell this product to a third party, attach all the documents and other accessories contained in the product package to this product. It is supposed that this product is to be used in accordance with the conditions specified in the attached documents.
- When disposing of this product, please handle correctly according to the disposal method of each local government.
- Store this document near this product so it can be referenced whenever required.
- The document may not be reproduced in whole or in part without the express written permission.
- The contents of the document may change in the future, without notice.
- Windows is the registered trademarks of United States Microsoft Corporation in the United States and other countries.
- Other company names and product names are the trademarks, or registered trademarks belong to their respective owners.
- This English version of this "User's Manual" is prepared for reference purpose only. In the event of any conflict or inconsistency between the Japanese version and this English version, the Japanese version shall prevail.

## **Safety Precautions**

The following describes important for safe use in combination with our uninterruptible power supply (UPS).

Safety Precautions

Please read carefully before installing or using the unit. Also, please read the instruction manual of the uninterruptible

power supply (UPS) before installing or starting to use it.

• The symbols and respective meanings regarding the safety of this Instruction Manual are as follows.

Caution	This symbol indicates that incorrect use may cause injury or property damage.
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※ Property damage represents extended damage to houses, household effects, livestock, and pets.

$\bigcirc$	This indicates prohibition (what you must not do). For example, ${\mathfrak S}$ indicates that disassembling is prohibited.
0	This indicates obligation (what you must do). For example,

Note that even a point described with the Caution symbol could result in a serious event depending on the situation.

Make sure of paying attention to these symbols containing critical indications.

Observe the contents of this manual and the UPS such as the use conditions and environments.

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This product does not have a network security function such as a firewall.

When connecting this product to a network, be sure to connect it to a network environment where external security measures are taken by firewalls and access right restrictions.

When accessing this product from the outside via a network for maintenance, etc., ensure security by means such as VPN connection before accessing.

When attaching or removing the product, place the UPS on a stable and in the direction which does not to tip over. Do not drop this product.

- Dropping or toppling the unit may cause injury.
- If you drop this product, stop using it and have it inspected and repaired.

#### Provide secure grounding for the UPS.

- For a 3P wall outlet, directly connect the AC input plug of the UPS to it.
- When a power outlet is 2P, after attaching a 3P-2P conversion plug for AC input plug, perform grounding. Or perform grounding from connection terminal of the UPS.
- In case of a terminal block connection, perform grounding from connection terminal.
- Without an earth connection, the unit can fail or cause an electric shock due to the electric leakage.

When attaching and removing this product, always turn OFF the power switch of the UPS and connected device and disconnect the AC input plug from the wall.

• Not doing so may cause a failure of the unit and connected device.

# When attaching, unpacking and removing this product, do not touch the parts on the basal plate.

- Doing so may cause injury.
- This product uses the parts sensitive to static electricity. Do not touch especially the connector and other parts.
- If parts become high temperature, it is possible to get burned.

# Do not leave the place to become the high temperature and a strong place of the direct lays of the sun.

• Battery gets very hot, and there is a danger of explosion or fire.

#### Do not make it wet or put water on it.

- Electric shock or fire can occur.
- When you soak in water, please stop use of this product immediately, and request check and repair.

# Do not throw the unit into a fire, do not disassemble or heat up the unit.

• The unit may explode or cause a fire.

#### Do not disassemble, modify or repair this product.

Doing so may cause injury or a fire.

#### Do not connect a LAN cable to the EMD Port of this product.

• If it is connected by mistake, the network equipment may fail.

# For the USB Port of this product, do not connect other than a specified USB equipment.

• Not doing so may cause a failure of the unit and connected device.

# Do not connect the Port (type A) mounted this product and the mini USB Port (Mini-B) with a USB Port.

• Not doing so may malfunction to the unit or connected equipment.











• If you notice such a condition, stop using the unit and contact the shop of purchase or our company for inspection and repairs.

A liquid (Electrolyte) cannot be touched even if a liquid (Electrolyte) is on an internal board.

 If it adheres to eyes or the skin, please wash away with a lot of clean water immediately and receive a medical examination of a doctor.

### About disposal of this product

- Dispose of this product correctly by putting it in a plastic bag according to the separating rules prescribed by municipalities.
- For corporations, dispose of this product as industrial wastes.

• There is a risk that the infant swallow.

hand reaches.

- + and of a battery are not short-circuited with wire etc.
- There is a risk of starting generation of heat and a fire.

If you notice abnormal sound, smell or smoke, immediately turn off the power switch of the connected UPS and disconnect the AC input plug from a wall outlet.

The removed battery should not be put on the place which infants'







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## About this product

## **Enclosed items**

Please check whether there is any damage in the appearance of this product, or all the accessories are included. When a packing article has faults and shortage, please ask the store where you purchased it.



## Names and functions of parts



① Setup Port	Use the port for setting (Mini-B) / USB cable that comes with this product.
② Restart button	This product is restarted.
③ Status lamp	*This product does not use it.
④ Power lamp	Green / It turns on when it is possible to communicate.
⑤ Act lamp	Yellow / It turns on during transferring of data.
⑥ 100/10 lamp	Green / Lighting: 100M, Lighting-out: 10M
⑦ USB Port	USB Wi-Fi adapter, USB memories are connected.
⑧ EMD Port	*This product does not use it.
9 Network Port	LAN Cable is connected.

### Supported models, software

#### For compatible Uninterruptible Power Supply (UPS)

Please check our product page.

#### Recommended web browser

Microsoft Edge / Internet Explorer 11 Google Chrome Safari Firefox

#### Supported wireless LAN adapter

EW-7811Un made by EDIMAX

#### **Operation confirmed USB memories**

RUF3-AL032G made by BUFFALO GH-UF3TA32G made by GREEN HOUSE

## Attaching to a UPS

Attach this product to the card slot behind a UPS.

Since the position of the card slot differs for each model, refer to the UPS instruction manual for details.

CAUTION

When you perform insertion and removal of this product, be sure to turn off a UPS pull out "AC input" plug from a commercial power supply receptacle.

1 Remove two screws and cover (or existing card).



② Insert this product and push it to fix certainly the terminal behind the card to the UPS's connector.

CAUTION Confirm the inserting direction, and do not push it in forcefully.



3 Fix this product with two screws that are removed.

%BN150XR is fixed with one screw.



%Store the cover that is removed not to be lost.

## **Network Setting**

In this product, the IP address is fixed. Change the setting according to the environment.

Network Se	etting (Initial Value)	
IPv4	IP Address	192.168.2.150
	Sub-net Mask	255.255.0.0
	Gateway	192.168.2.1
IPv6	Disabled	

There are the following two methods for changing.

(1) Changing with terminal soft (See on page 5.)

(2) Changing with Telnet (See on page 8.)

### Changing with terminal soft

Connect the computer by an accessory USB cable and change the setting with terminal soft.



This document explains using with a computer (OS: Windows 10) and

terminal soft "Tera Term."

① Connect this product USB Port (Mini-B) to a computer (OS: Windows 10) by an accessory USB cable.



Cable (USB)

- 0 A USB serial conversion driver is installed automatically.
- ③ Start TeraTerm.
- ④ Select "Serial" on "New connection" window and select the port "COM\*:ELMO GMAS(COM\*)" or "COM\*:USB Serial Device (COM\*)" of this product.

(A nu	mber	is	entered	to	*.)
-------	------	----	---------	----	-----

Service: ○ leinet	SSH version: SSH2 ~
 Other	Protogol: UNSPEC ~

Hint

When the port of this product is not shown, see "Confirming the USB serial port" on page 14.

⑤ After the terminal window is opened, push <Enter> key and enter a username and password following the window.

(	Initia	Va	lue)
۰.	mana	• •	,

Please Enter UserName : OMRON	Username	OMRON
Please Enter Password : *****	Password	admin

6 Select "SNMP/WEB Card Settings" of "1" and press the <Enter> key.

Configuration Utility [OWRON Network Card SC21 v1.20]
<ol> <li>SNMP/WEB Card Settings</li> <li>Reset Accounts/Passwords to Default</li> <li>Reset Configuration to Default</li> <li>Restart SNMP/WEB Card</li> <li>Entry Passthru Mode</li> <li>Exit</li> </ol>
Please Enter Your Choice =>1

⑦ Select "IP, Time and System Group" of "1" and press the <Enter> key.



8 Select "IPv4 Group" of "1" and press the <Enter> key.

+=====================================	Configuration Utility [IP, Time and System Group]
SNMP/WEB Card Version Ethernet Address 1. IPv4 Group 2. IPv6 Group 3. Date and Time Group	: SC21 : 00:E0:D8:FF:C1:C8
<ol> <li>System Contact</li> <li>System Name</li> <li>System Location</li> <li>Return to previous mer</li> <li>Please Enter Your Choice =&gt;</li> </ol>	: Technical Support Team : UPS Agent : nu >1

- ③ Select "IP Address" of "1" and press the <Enter> key, and enter the IP address for this product and press the <Enter> key.
  - Change a gateway (2.Gateway Address) and subnet mask (3.Network Subnet) too by the same procedure as IP address.

① After finishing each change, select "0" to return to the initial screen (Main Menu) and exit from the console screen of this product by "Exit" of "0.

Configuration Utility [OMRON Network Card SC21 v1.20]
<ol> <li>SNMP/WEB Card Settings</li> <li>Reset Accounts/Passwords to Default</li> <li>Reset Configuration to Default</li> <li>Restart SNMP/WEB Card</li> <li>Entry Passthru Mode</li> <li>Exit</li> </ol>
Please Enter Your Choice =>0

(1) Finish "Tera Term" and remove the USB cable.

## **Changing with Telnet**

Connect a computer and this product with a LAN cable and change the settings with Telnet. After setting the network setting of the computer to this product, change the network setting of this product.



When Telnet is not enabled in your Windows, see "Enabling Telnet" on page 13 to make it enabled.

#### Changing network settings of a computer (In case of Windows10)

When the network configuration of the environmental condition is same as this product (192.168.2.n), it is unnecessary to change.

① Select [Start] -> [Settings].



- 2 Select [Network and Internet] -> [Change Network setting]
  - -> [Change adapter options]

## Hint

Right-click the network icon in the task tray [Open Network & Internet settings]. The same screen is opened with -> [Change adapter options] also.

	Troub	leshoot p	roblems					
Open Network & Internet settings								
Ŕ	~ ^	🙁 🖫	<b>⊅</b> )) EN(	9:11 AM 3 4/13/2018	3			

③ Right-click the Ethernet to select [Properties].



When there are several Ethernet icons, right-click the network icon which connected this product.



④ Select "Internet Protocol Version 4 (TCP/IPv4)" and click [Properties].

🕴 Ethernet0 Properties	(
Networking	
Connect using:	
🚽 Intel(R) 82574L Gigabit Network Connection	
Configure This connection uses the following items:	
Client for Microsoft Networks     File and Printer Sharing for Microsoft Networks     File and Printer Sharing for Microsoft Networks     Internet Protocol Version 4 (TCP/IPv4)     Microsoft Network Adapter Multiplexor Protocol     M    Microsoft LLDP Protocol Driver     Internet Protocol Version 6 (TCP/IPv6)	
Install Uninstall Properties	
Description Allows your computer to access resources on a Microsoft network.	
0K Cancel	]

⑤ Set the settings to this product, click the [OK] to close the window.

ternet Protocol Version 4 (TCF	P/IPv4) Properties	×	
Seneral			
You can get IP settings assigne this capability. Otherwise, you for the appropriate IP settings.	d automatically if your network support need to ask your network administrator	5	
Obtain an IP address auto	matically		(Setting example)
• Use the following IP addre	ss:		IP address: 192.168.2.5
IP address:	192.168.2.5		11 add10001 10211001210
Subnet mask:	255.255.0.0		Subnet mask: 255.255.0.0
Default gateway:	192.168.2.1		D f
Obtain DNS server addres	s automatically	_	Default gateway: 192.168.2.1
Use the following DNS served	ver addresses:	_	
Preferred DNS server:			
Alternate DNS server:			
Validate settings upon ex	Advanced		
	OK Cani	cel	



Select the host address part (the part of n in "192.168.2.n") from 2 to 254 except 150.

#### Changing network settings of this product with Telnet.

- ① Select [Start] -> [Windows system] -> [Command Prompt].
- ② Enter the following command and press <Enter> key. Telnet 192.168.2.150



③ After screen shows "Please Enter User Name:", Login with the following username and password.

	(Initial Value)
Username	OMRON
Password	admin

- %For the operation after login, see the procedure 6-10 in "Changing with terminal soft" on page 5.
- ④ Please close [Command Prompt].



After finishing setting this product, restore the network setting of the computer to original settings.

## Web monitor

After installing this product to the network, open the monitor window of this product with a Web browser.

In the web monitor, it is possible to confirm the condition of a UPS and set various setting.

Startup the Web browser and enter the IP address of this product in the address bar. The factory default value of this product is "192.168.2.150".

% If you changed the "IP address" in "Network settings", enter the changed "IP address".



② Click the [Login] button in the Web monitor window.



③ Enter the username and password in the login window and click "Log in."

OMRON		
Username		(Initial Value)
Usemame	Username	OMRON
Password	Password	admin
Password •		1
Log in		

The username and password can be changed in [Card management] -> [Authentication Configuration]->[Administrator Setting] on the Web monitor window. 4 The Web monitor window opens.

OMRON UPS Monitor ×									
OMRON									OMRON Dato and Time 13/04/2018 10:05:5
	UPS-BN100T	SC21 ( IP:	192.168.2.1	120) Syn	stem Nam	ic (To	kyo_S	C21 No.4)	Location (Shinagawa_No.3)
System Status	System Statu	s > UPS Mo	miter						
UPS Monitor	UPS Mo	nitor	UPS Sta	tus	Product 1	Inform	nation		
UPS Management									
Card Management		er Flow Di	agram						Voltage Real-time Chart     Ors Real Time Chart
Network		_							130.0 V (1005) (24.5°C)
Event Notification	-							-	
External Links	•							-9	100.0 V Battery UPS Voltage Capacity Temperature
			m /			- /		-	Load Real-Time Chart
			1	_		/~			50.0 V
			-						40 %
	- Oper	ating Status		2					85.
	Contract Test	Mode							10.09.28 10.09.45 10.09.56 10.04.13 0 %
	Sche	dule Calen	ıdar						Active Alarm List
	<	> 2	018, A	pril		Got	o curres	at month	
	Sun	Mon	Tue	Wed	Thu	F	ri	Sat	Occurred Time Alarm Description
	1	1 2	3	- 4	5	0	6	7	
	1	8 9	10	11	12	0	13	14	
	61	5 16	17	18	19	0	20	21	
	2	2 23	24	25	26	0	27	28	
	25	30				0	4		
	-								

\*Some screen notation may be different depending on the firmware version.

#### How to logout

Click the [Logout] button.

Then, the setup of this product is completed. For the details, see "SC21 User's Manual."

## **Enabling Telnet**

By default, Telnet has not enabled in Windows10. Take the following procedure to make it enabled.

- ① Select [Start] -> [Windows System] -> [Control Panel].
- 2 Change [View by] to [Small icons] and select [Programs and Features].



③ Select [Turn Windows features on or off] on the left side on the window.



④ Check [Telnet Client] and click [OK] to close the window.

After that [Telnet Client] will install automatically.

After finishing the installation please close the [Programs and Features].



## Confirm the USB serial port.

#### ■ In case of Windows10.

① Select [Start] -> [Settings].

0		Windows PowerShell	~
		Windows System	^
ŝ		Command Prompt	
Ф		Control Panel	
	Q	(D) 🤶 🖡	. 숙

② Enter "device manager" at "search" field to search, and click the device manager displayed.

Settings				-	×
	Windows Settings				
	devicemanager	×			
	त्रि Device Manager				
			_		
System	Devices		Phone		

③ If "ELMO GMAS(COM\*)" or "USB Serial Device (COM\*)" is displayed in "port (COM and LPT), it means being recognized normally.



Hint Right-click [Start] to open [Device manager] from the menu.

#### ■ When a UPS serial port is not recognized normally,

USB device not recognized The last USB device you connected to this computer malfunctioned, and Windows does not recognize it. Windows Explorer

After connecting a USB cable to a computer, if the above message appears and it is not recognized, try the following procedure.

Press the restart button of this product with a tip of a clip and wait 30 seconds.
 %Restart time of this product is about 30 seconds.



2 Select [Start] -> [Settings].



③ Enter "device manager" at "search" field to search, and click the device manager(M) displayed.

Settings				-	×
		Windows Settings	5		
	devi	cemanager	×		
	2	Device Manager			
	口		[		
	System	Devices	l Pi	hone	

④ Confirm whether "ELMO GMAS(COM\*)" or "USB Serial Device (COM\*)" is displayed in "Port (COM and LPT)

# Specifications

Network	10Base-T/100Base-TX				
USB	Type A (Wireless adapter / for USB memory)				
	[Note] Do not use this port for charging purposes.				
	Also, do not connect USB devices that				
	require a current exceeding 100mA.				
	Mini-B (for console setting)				
Protocol	SNMP, HTTP, HTTPS, SSH, Telnet, ICMP, SMTP etc.				
MIB	SWC2 (original: for SC21)				
	UPS MIB (RFC1628)				
Usage environment	-10 to 55 degrees Celsius / 10 to 90% RH				
temperature/humidity	(with no condensation)				
Storage environment	-20 to 55 degrees Celsius / 10 to 90% RH				
temperature/humidity	(with no condensation)				
Maximum electric power	3W				
consumption	6W (When using a USB)				
Dimensions (WxDxH)	60x130x19 mm				
Weight of unit	About 70g				
Noise regulation	VCCI Class B (Compliant)				

Memo

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