



CUnet (MKY43) USB Unit

**CU-43USB**

Product Manual

## Introduction

Thank you for purchasing StepTechnica product.

### ● Please check the bundled items.

This product consists of the following contents. Please be sure to check before you use.


If you discover damaged or missing items, contact your retailer.


- |                           |   |
|---------------------------|---|
| • USB terminal (CU-43USB) | 1 |
| • CU-43USB Annex Guide    | 1 |
| • MicroUSB cable          | 1 |


### ● Safety precautions

For safe use of this product, please be sure to observe the content that is described in this document.

This document provides safety information using the following symbols to prevent accidents resulting in injury or death and the destruction of equipment and resources. These are serious matters related to safety. Understand the meanings to operate the equipment safely.

 <b>DANGER</b>	DANGER indicates an imminently hazardous situation which, if not avoided, may result in death or serious injury.
Do not use the product where it is exposed to flammable or corrosive gas. Doing so may result in an explosion, fire, electric shock, or failure.	

 <b>CAUTION</b>	WARNING indicates a potentially hazardous situation which, if not avoided, may result in death or serious injury.
Installation and connection of this product must be done by engineer with electrical knowledge. Before installation and replacement, always turn off the power of this product. If not, it can cause fires and electric shock. Please use this product in a range of specifications and conditions stipulated in this document. If not, it can cause fires and electric shock. Please do not use this product in an area where water and chemicals may contact. It can cause fires and electric shock. If an error occurs, please immediately turn off the power. After removing the cause, please power on again. If not, it can cause fires and electric shock. This product is not designed for use in critical applications, such as life support (Nuclear and radiation related equipment, railway equipment, aviation equipment, marine equipment, medical equipment etc) systems.	

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Do not strike or bend this product. It can cause malfunction, overheat, failure or breakage. Do not touch the terminal contacts of connectors with your hands. It can cause malfunction, overheat or failure. If the terminal contacts are accidentally touched, clean the contacts with industrial alcohol. Make sure that your PC can supply ample power to this product. Insufficiently energized products could cause malfunction, overheat, or failure. The specifications of this product are subject to change without prior notice for enhancement and quality improvement. Please do not attempt to disassemble, repair and modify this product. We assume no responsibility for the losses, damages or problems resulting from any attempt to do so. Regardless of the foregoing statements, StepTechnica is not liable for any damages whatsoever (including damages for loss of business profits) arising out of the use or inability to use this product including software.	

- Related manuals

For the use of this product, also refer to the following documents in which describe CUnet communication.  
For software development, please refer to the CU-43USB Software Manual.

- CUnet Introduction Guide
- CUnet Technical Guide
- Let's Try CUnet
- MKY43 User's Manual

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## Revision History

Date	Version	Content	Note
AUG 2018	1.0E	Issued the first edition	
APR 2020	1.1E	Added Windows 10 as supported OS	
NOV 2025	1.2E	Added Windows 11 as supported OS Change of Address	

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# Chapter 1 Product outline

CU-43USB is a device which connects a PC and CUnet network.

CU-43USB provides more efficient use of MKY43 with library for Windows supported by StepTechnica.

This product is applied to evaluate CUnet system or develop CUnet slave.

This product is bus-powered USB device.

## Chapter 2 Names and functions of each part

This chapter describes the names and functions of each part.

### 2.1 Names and functions

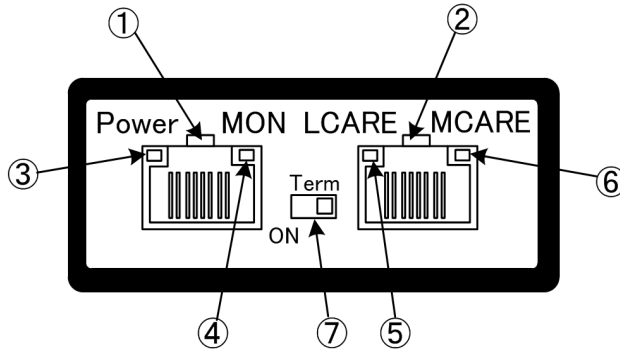


Fig.2-1 External view (front)

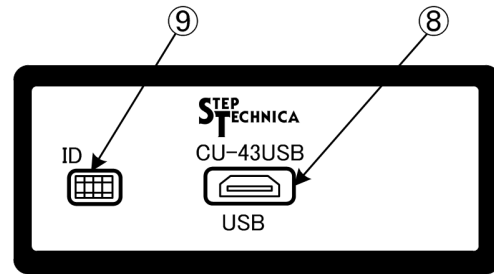


Fig.2-2 External view (back)

Table 2-1 Names and meanings of each part

No.	Name	Type	Content	
1	CU_A	Connector	CUnet communication connector (Refer to "2.2.1 CUnet communication connectors")	
2	CU_B	Connector	CUnet communication connector (Refer to "2.2.1 CUnet communication connectors")	
3	Power (G)	LED	During power supply, a green LED is lit.	
4	MON (G)	LED	While CUnet communication is active, a green LED is lit.	
5	LCARE (O)	LED	When CUnet communication error occurs once, an orange LED is lit.	
6	MCARE (R)	LED	A red LED is lit when CUnet communication errors have occurred three times consecutively at the same slave.	
7	Term	Switch	CUnet interface can be connected to a termination resistor of 100 Ω by turning on this switch. (Factory-setting is OFF state.)	
8	USB	Connector	USB connector for PC	
9	Option	Switch	<div><div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div></div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div></div> 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## 2.2 Connectors

### 2.2.1 CUnet communication connector

Table 2-2 CUnet communication connector pin assignment

Pin number	Signal name
1	NC
2	NC
3	NC
4	TRX-
5	TRX+
6	NC
7	NC
8	Case Shield

Note : CU\_A and CU\_B are the same pinout.

Caution :      If Term switch is ON, this product will be the termination.  
In this case, please do not connect the cable to the CU\_B connector.  
Please connect the cable only to CU\_A connector.  
If this product is not the termination, set the Term switch OFF, connect both CU\_A and CU\_B connectors as well.



## Chapter 3 Software setup

This chapter describes the software setup required to use this product.

Please download "Setup Disk" for CU-43USB from our website's 'Download' page in advance.

URL : <http://www.steptechnica.com/en/download/index.html>

This software requires the following operating systems.

Windows 11

### 3.1 File structure

File structure of "Setup Disk" is the following.

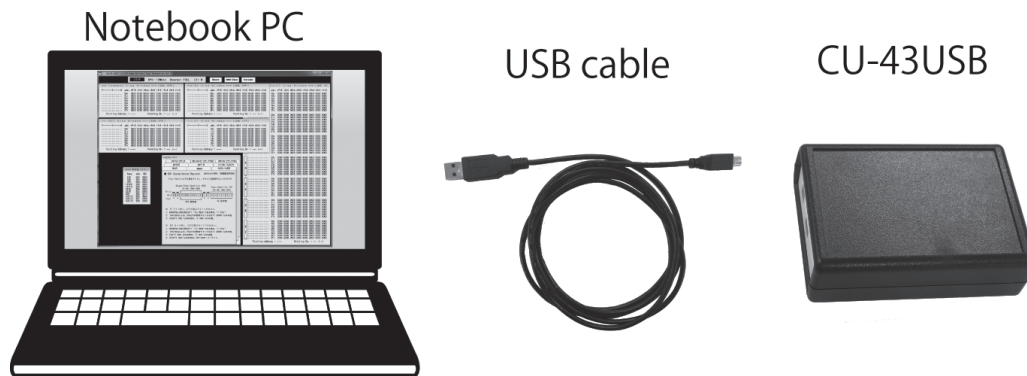
#### CU-43USB\_V100

+-----	STD-CU43USB_V1.0J.pdf
+-----	STD-CU43USB-SW_V1.0J.pdf
+-----	DLL_Ver.1.0.0
	+ ----- x86
	----- cu43usb.dll
	----- cu43usb.lib
	----- cu43usb.h
	+ ----- x64
	----- cu43usb.dll
	----- cu43usb.lib
	----- cu43usb.h
+-----	Driver_Ver.1.0.0
	----- cu43usb.cat
	----- cu43usb.inf
	----- dpinst_x86.exe
	----- dpinst_x64.exe
	----- dpinst.xml
	----- 43usb.bmp
	----- CUNET.ico
+-----	CUeditor43J for CU-43USB_Ver.1.0.0
	-----setup.exe
	----- CUeditor43J.CAB
	----- SETUP.LST

This document
Software specification
DLL folder
Library folder for 32bitOS
Dynamic library for 32bitOS
Static library for 32bitOS
Header files of the library function
Library folder for 64bitOS
Dynamic library for 64bitOS
Static library for 64bitOS
Header files of the library function
Driver folder
Catalog file
System definition file
Driver installation file for 32bitOS
Driver installation file for 64bitOS
Setting file for dpinst
Image file for dpinst
Icon file for dpinst
Editor software folder
Installation file for editor software
Cabinet file for installation
LST file for installation

### 3.2 How to connect to PC

Connect the PC and CU-43USB using MicroUSB cable.



### 3.3 How to install driver software

This section describes the driver installation procedure.

In this document, how to install the driver on Windows 11 is illustrated.

1 Power on the PC, start Windows, please login with an administrator account (such as Administrator.)

2 Select "Driver\_Ver.1.0.0\dpinst\_x64.exe", and run.

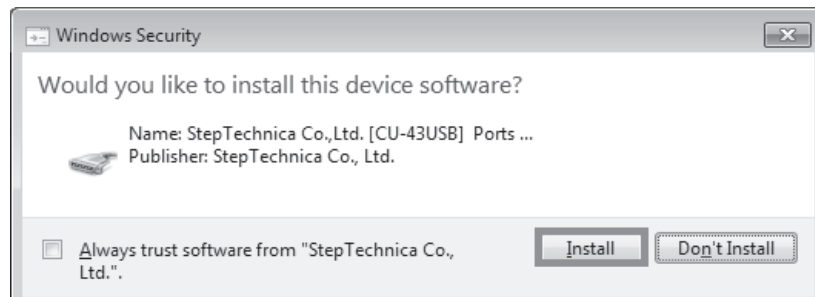
43usb.bmp	Bitmap image	291 KB
cu43usb.cat	Security Catalog	8 KB
cu43usb.inf	Setup Information	2 KB
CUNET.ico	Icon	6 KB
dpinst.xml	XML Document	2 KB
dpinst_x64.exe	Application	1,016 KB
dpinst_x86.exe	Application	894 KB

3 User Account Control dialog box will show up. Select "Yes".

4 Driver installation window is displayed. Select "Next".



5 Windows Security dialog box will show up. Select "Install".



6 Select "Finish".



### 3.4 How to check the connection of CU-43USB

Start the "Device Manager". Make sure that "CU-43USB" is identified.

## Chapter 4 Hardware

### 4.1 General specifications

Table 4-1 General specifications

Power supply method	MicroUSB bus power
Supply voltage fluctuation range	4.75V ~ 5.25V
Consumption current	400mA or less
Operating frequency	48MHz (MKY43)
Number of concurrent use	4 (Up to 4 units can be connected to one PC.)
Operating temperature	0°C ~ 40°C
Storage temperature	0°C ~ 80°C
Operating humidity	0% ~ 90% (Without condensation)
Atmospheric conditions	Without corrosive gas
Size	66.5 (W) × 28 (H) × 92 (D) mm Not including rubber feet
Weight	100g (max)

### 4.2 CUnet communication specifications

Table 4-2 CUnet communication specifications

Communication method	Half-duplex mode
Communication configuration	Multi-drop configuration
Communication cable	Shielded twisted-pair cable (CAT-5 or greater straight-through cables can be used.)
Interfaces	RJ-45 ( 2 pieces) , RS485 level, differential type, pulse transformer isolation system.
Transfer rate	12Mbps/6Mbps/3Mbps (Rates can be selected by software program)
Termination	Enable / Disable can be selected by switching.
Operation indicator	Communication is active : MON LED is lit green Communication is stopped : SCAN LED is lit off

### 4.3 Interfaces and PC system requirements

Table4-3 Interfaces and PC system requirements

USB bus specification	USB2.0 / 1.1
USB Interface	MicroUSB <sup>*1</sup>
Supported OS	Windows11
Accessories	USB cable
Provided software	Windows driver Library for Windows CUeditor43J

※ 1 Operation is not guaranteed when the product is connected to PC via USB hub.

#### 4.4 CUnet interface

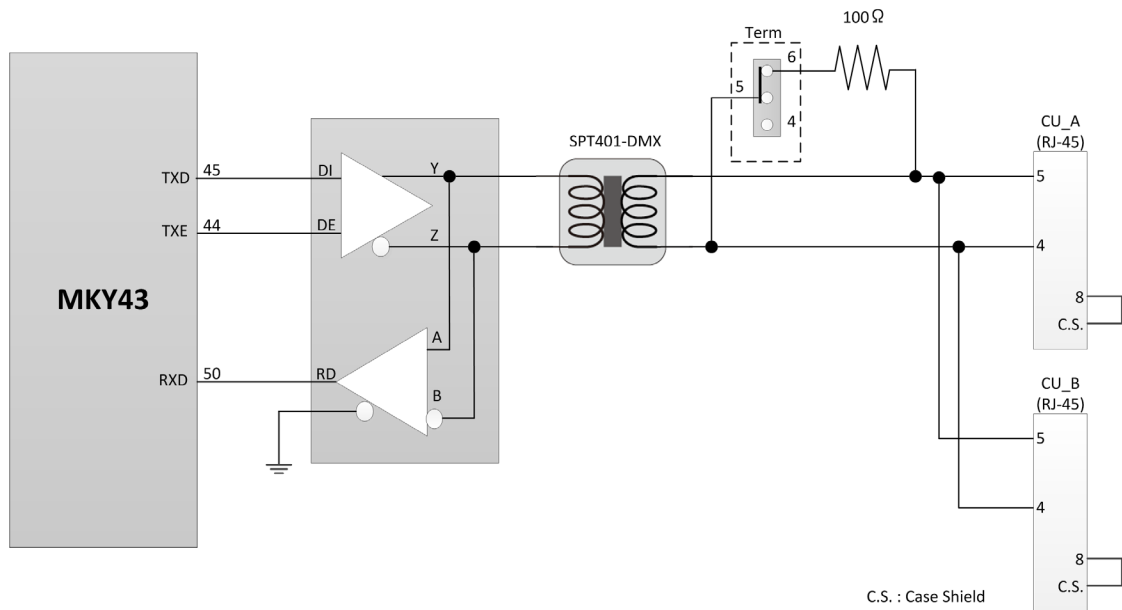


Fig.4-1 CUnet connection diagram

4.5 Dimension drawing

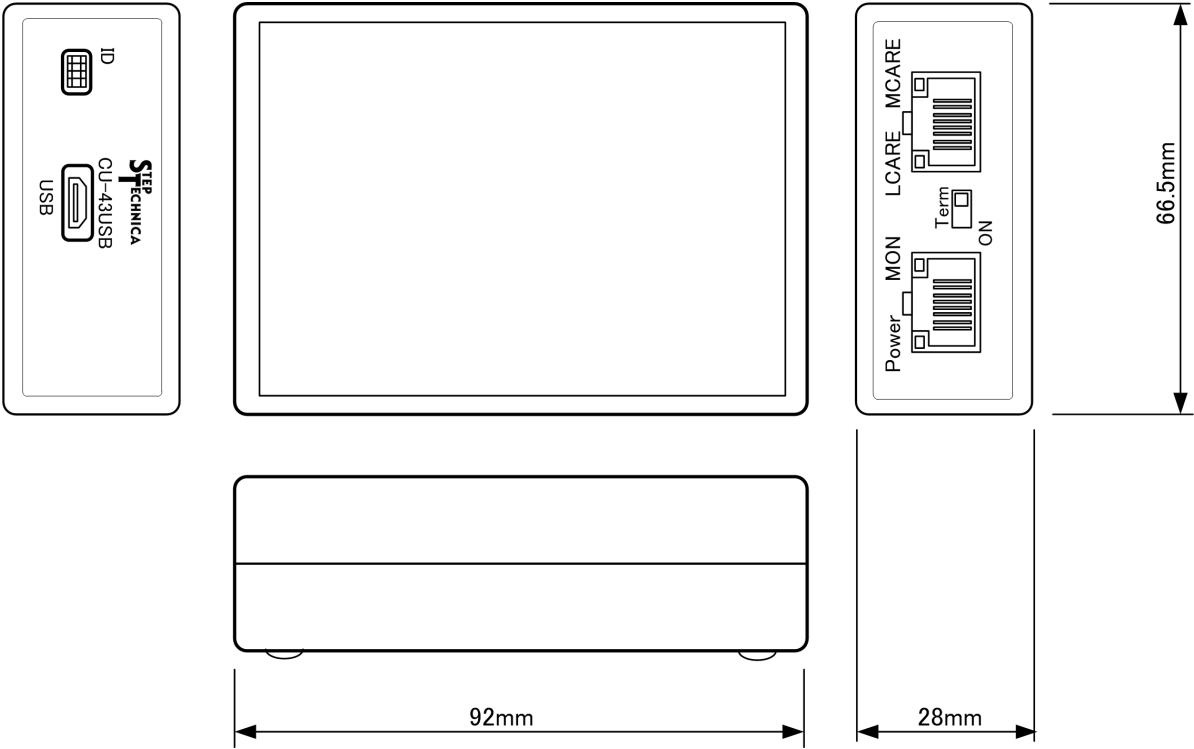


Fig 4-2 Dimension drawing

## Notes

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**CUnet (MKY43) USB Unit**  
**CU-43USB**  
**Product Manual**

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