

CHINO

USB Engineering Cable RZ-EC6

Instruction manual

Thank you for purchasing [RZ-EC6]. Understand RZ-EC6 properly and read this instruction manual beforehand in order to avoid any troubles.

Precautions for CHINO engineering cable users

- RZ-EC6 does not operate on driver of different type CHINO engineering cable (RZ-EC4 or RZ-EC5). Install a driver dedicated for RZ-EC6 by attached CD-ROM.
- If using RZ-EC6 on a personal computers (also mentioned as PC) using CHINO engineering cable (RZ-EC4 or RZ-EC5), do not set identical COM port number for both products. If both products are set to identical COM port number, COM port error or communication error may occur.
- If overlapping COM port number used for another product and RZ-EC6's, error may occur on COM ports of both products.
- If changing COM port number after a driver dedicated for RZ-EC6 is installed, make sure to use unused COM port number.

- For the persons doing instrumentation, installation and sales -
Be sure to handover this instruction manual to the persons using RZ-EC6.

- For the users of RZ-EC6 -
This instruction manual is also used for maintenance. Preserve this instruction manual until you scrap RZ-EC6. Make sure to write down and save the setting details.

CHINO

Introduction

Thank you for purchasing engineering cable 'RZ-EC6'

RZ-EC6 is a USB engineering cable used exclusively for CHINO products. This cable is designed to connect the engineering port of CHINO product to the USB port of Windows 10 or Windows 11 PC. Using RZ-EC6 with the parameter programming software enables an easy parameter setup from the engineering port for a product without communications interface.

*Engineering cable is a cable dedicated for setting parameter of a device. Do not use it for data acquisition of the device or do not connect it to the device regularly.

Understand the cable properly and read this instruction manual beforehand in order to avoid any trouble.

Product warranty scope

RZ-EC6 is warranted for one year from the date of delivery. If it is damaged during the warranty period, when used normally based on the cautions in the instruction manual and markings attached to RZ-EC6, etc., it will be repaired without any charge (only in Japan). In the case, we are sorry to trouble you, but please contact your dealer or nearest CHINO's sales office.

However, in cases of the followings, it will be repaired at your expense even during warranty period.

1. Failure or damage caused by improper use or connection, or invalid repair or modification.
2. Failure or damage caused by fire, earthquake, wind or flood, thunderbolt, or other extraordinary natural phenomena, or pollution, salt, harmful gas, abnormal voltage, or use of unspecified power.
3. Replacement of parts or accessories that have reached the end of their lives or that are expendables.
4. Cause of the failure is made by product manufactured by other than CHINO.

Furthermore, the term 'warranty' in this sense covers only a CHINO's product itself. Therefore, we are not responsible for compensation for whatever the damage that is triggered by failure of our product.

Notice

1. No part of this manual can be reproduced or copied in any form without permission.
2. The contents of this manual may be altered without prior notice.
3. This manual has been documented by making assurance doubly sure. However, if any question arises or if any error, an omission, or other deficiencies are found, please contact your nearest CHINO's sales office.
4. CHINO is not responsible for any operation results of RZ-EC6.

- Microsoft and Windows are trademarks of Microsoft Corporation and the related company.
- Company names and product names appeared in this manual are trademarks and registered products of the respective companies.
- Please note that the marks "TM" and "®" are omitted throughout this manual.

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1 Before use

1-1 For safe use of the product

To use RZ-EC6 safely read following precautions and understand the contents then use.

1-1-1 Preconditions for use

RZ-EC6 is a cable which is intended to connect the engineering port of our product to the USB port of Windows 10 or Windows 11 PCs. Do not use RZ-EC6 under any other conditions.

1-1-2 Symbol mark

The following symbol marks are used in this instruction manual hence understand the meaning of these symbol marks properly.



Warning

Warnings are explained to avoid causes for death or serious injuries of users.



Caution

Cautions are explained to avoid causes for slight injuries of users or damages of the unit or peripheral devices.

1-1-3 Important



Warning

In order to use the product correctly and safely, follow this instruction manual. Please understand beforehand that our company will not at all be responsible for any claims for injury, damage and passive damages due to wrong use of the product.

- If using RZ-EC6 on a PC using CHINO engineering cable (RZ-EC4 or RZ-EC5), do not set identical COM port number for both products. COM port error may occur.
- Do not overlap COM port number with another product and RZ-EC6. COM port error may occur.
- Do not insert or remove RZ-EC6 during communication. Error may occur in PC.
- RZ-EC6 is a cable dedicated for setting parameter of a device. Do not use it for data acquisition of the device or do not connect it to a device regularly. Error may occur on a device.
- Do not connect two of RZ-EC6 to a PC. COM port error may occur.
- To insert and remove RZ-EC6, do not hold the cord. Make sure to hold the connector part and work on.
- Never use RZ-EC6 for the equipment used in medical, nuclear, aerospace or transportation field which involves human lives.
- Never attach or remove RZ-EC6 with wet hands while it is connected. Doing so may cause an electrical shock or personal injury.
- Never allow foreign matter such as liquid and metallic substance to get into RZ-EC6. It may cause an electrical shock, fire or failure of the product.
Use a dry, soft cloth to wipe away any dirt on the product. Do not use the organic solvent such as benzene and alcohol.
- Do not attempt to disassemble or remodel RZ-EC6. It may cause an electrical shock, fire or failure of the product.
- If there is an offensive smell, a strange noise or smoke or if the temperature increases abnormally, it is very risky hence cut off the power supply immediately and contact the dealer or nearest CHINO's sales office.
- CHINO is not responsible for recovering any data or programs lost while using RZ-EC6 in any circumstances. We recommend you to have a data backup regularly.
- If repairing or remodeling is necessary, contact the dealer or nearest CHINO's sales office. Only the service engineers appointed by CHINO will change the parts, do the repairing and remodeling.

1-2 Before use

After opening the package, confirm the following before using RZ-EC6. Although it is rare but if you notice any suspicion, contact the dealer or nearest CHINO's sales office.

Request

1. Do not drop RZ-EC6 while taking it out of the box
2. When transporting RZ-EC6, pack in a box in an outer case with a bed of cushions.
3. If not using RZ-EC6 for a long time, store it in normal ambient temperature and dust free place.
4. Preserve this instruction manual until you scrap RZ-EC6.
5. When disposing RZ-EC6, follow the garbage collection method of the each community, and cooperates to recycle.

Cautions on handling CD-ROM

- Remove CD-ROM media from a drive, when not using it.
- Make sure to put CD-ROM in a CD case and store.
- Do not put CD-ROM in a place with direct sunlight or high temperature and humidity.
- If not using CD-ROM for a long time, put it in a CD case and store it in a place where is normal ambient temperature and free of dust.
- Pay attention not to put finger print, stain, dust, scratch and water (oil) drop etc. on a label surface and signal surface.
- Clean stains such as finger print on the signal surface with soft cloth. (Do not use paint thinner, benzene or organic solvent etc.)
- Physical or external cause of deterioration of CD-ROM is unavoidable.

1-2-1 Confirm the exterior

Confirm that RZ-EC6 is not broken on the outer side.

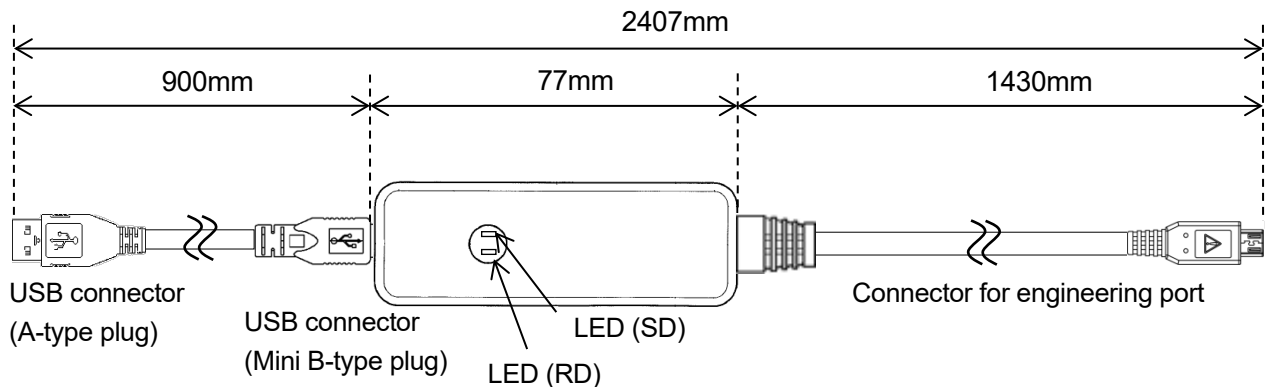
1-2-2 Confirm the attachments

The following attachments are included to RZ-EC6, confirm them.

Name	Quantity
Driver software (CD-ROM) *Include instruction manual	1

2 Operation environment and connection to peripherals

2-1 External dimensions



Unit: mm

LED indication

LED name	Color	Status	Description
RD	Yellow-green	ON	The PC is receiving data from CHINO product.
		OFF	The PC is NOT receiving data from CHINO product.
SD	Orange	ON	Data is transmitted from the PC to CHINO product.
		OFF	Data is NOT transmitted from the PC to CHINO product.

2-2 Installation condition

1. Environment

- (1) In a room
- (2) Away from direct sunlight.
- (3) Away from high temperature and humidity.
- (4) Where there are no vibrations and shocks
- (5) Away from liquids (water etc.).
- (6) Away from condensation.
- (7) Condition under EN standard "Overvoltage category II, Pollution degree 2"

2. Atmosphere

- (1) Away from strong noise, static electricity, electric field, magnetic field etc.
- (2) Surrounding temperature within -10 to 50°C, surrounding humidity within 10 to 90% rh.
- (3) Variation in temperature is less.
- (4) Away from corrosive gas, explosive gas, ignition gas and combustible gas.
- (5) Away from salt, iron and conductive material (Carbon, iron etc.).
- (6) Away from steam, oil and chemicals etc.
- (7) Away from dust etc.
- (8) Away from the surroundings where high temperature is generated.
- (9) Away from places where temperature remains stored.

2-3 Operation environment

1. PC

Any DOS/V PC equipped with a USB port.

*The function of the USB port must be guaranteed by the maker of the personal computer.

* Operation verification of RZ-EC6 is done using USB port of USB2.0 / 3.0.

2. Supported OS

Microsoft Windows 10 (32bit/64bit)

Microsoft Windows 11 (64bit)

3. CD-ROM drive

Used at installation.



Caution

To perform Windows Update or version up of your computer OS, uninstall the driver first then proceed to the action. After OS version up is completed, install the driver again. If OS version up is done while the driver is still installed in your computer, driver may malfunction or the driver may not be able to uninstall.

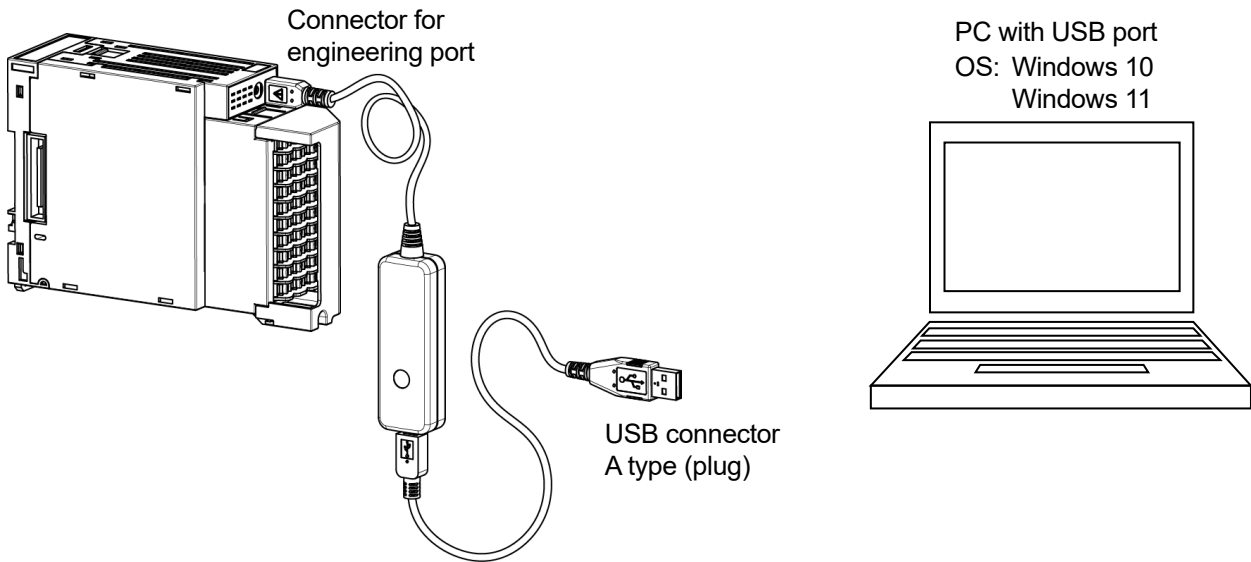
2-4 Connection

Warning

To avoid accidents, make sure to read and understand the following items.

RZ-EC6 is a cable dedicated for setting parameter of a device. Do not use it for data acquisition of the device or do not connect it to a device regularly. Error may occur on a device

e.g.) Connection to SB100



3 Installation of driver

*Following figures are windows of Windows 10.



Warning

To avoid accidents, make sure to read and understand the following items.

<Procedure>

(1) Start Windows

Start Windows.

*Log ON by the user who belongs to a computer administrator (administrator) group.

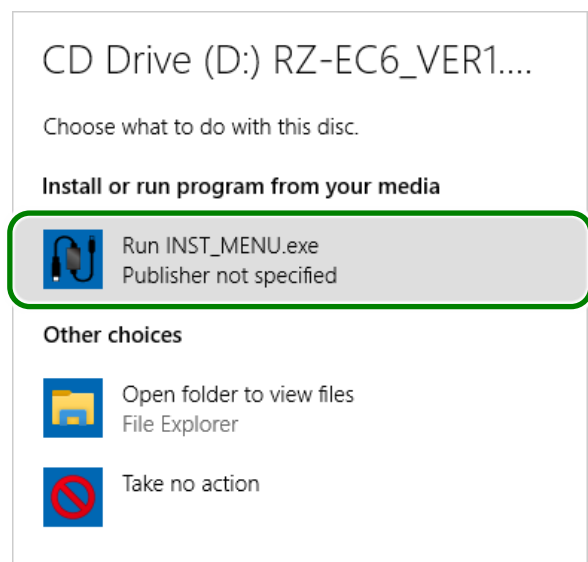
(2) Insert CD-ROM

Set attached CD-ROM to a CD-ROM drive.

Select operation of this disc displayed on right bottom corner of the window.

Click [Run INST_MENU.exe].

CD Drive (D:) RZ-EC6_VER1.00
Select to choose what happens with this disc.



(3) Language Selection

Language selection window of the installer is displayed.

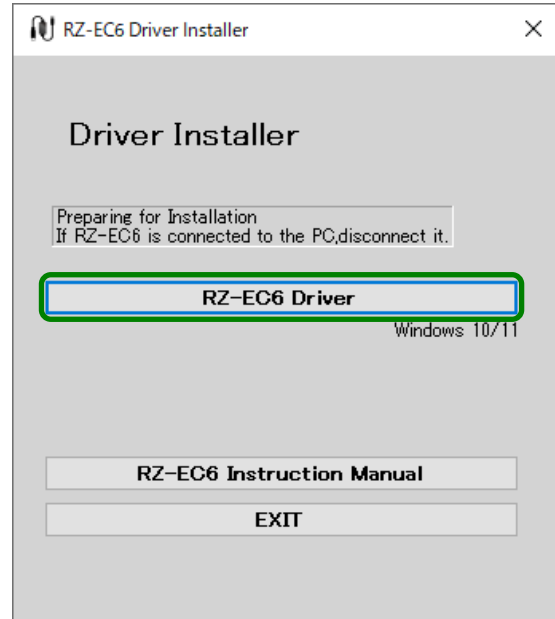
Click [English] button.



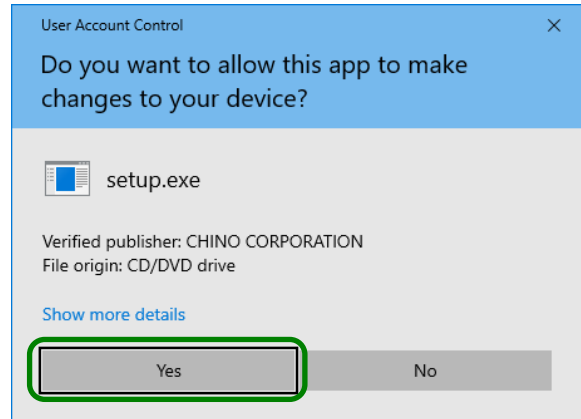
(4) Start Install

Click [RZ-EC6 Driver] button.

*If RZ-EC6 is connected to the PC, disconnect it.



If user account control window is displayed, click [Yes] button.



(5) Click [Next]

Install start window is displayed.

Click [Next] button.

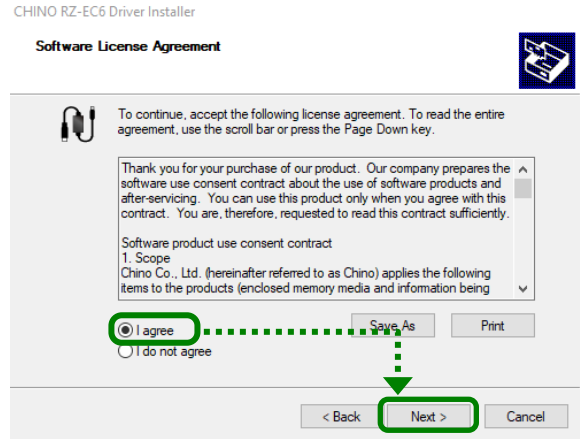


(6) Agree to a software license agreement

Software license agreement is displayed. Read the contents thoroughly.

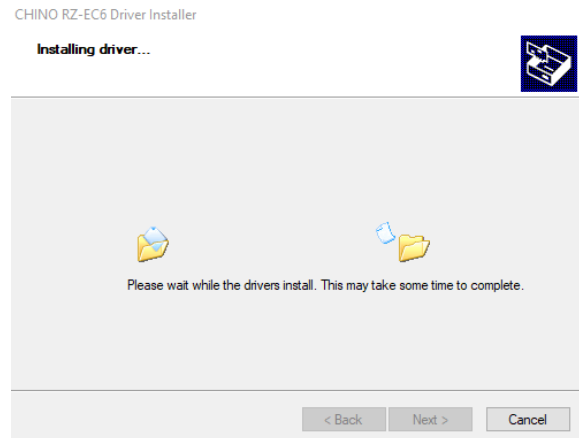
If you agree to the contents, select [I agree] and click [Next] button.

*If you select [I do not agree], you can not use RZ-EC6.



(7) Installation starts

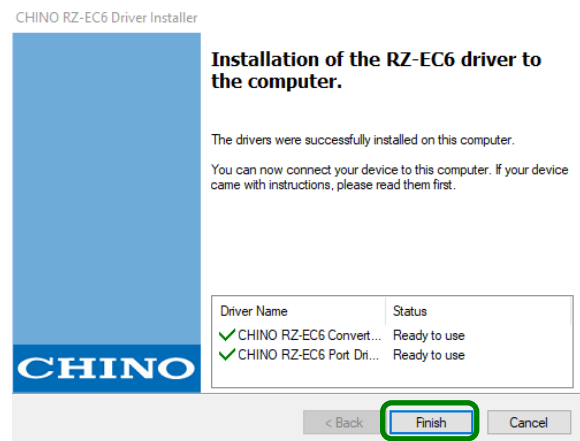
Installation is started.



(8) Installation complete

Installation complete window is displayed.

Click [Finish] button.



(9) Connect RZ-EC6

Connect RZ-EC6 to an USB port of the PC. Driver software is automatically installed.

*If installation is failed during procedure (1) to (8), start again from (1).

4 Checking after installation

*Following figures are windows of Windows 10.

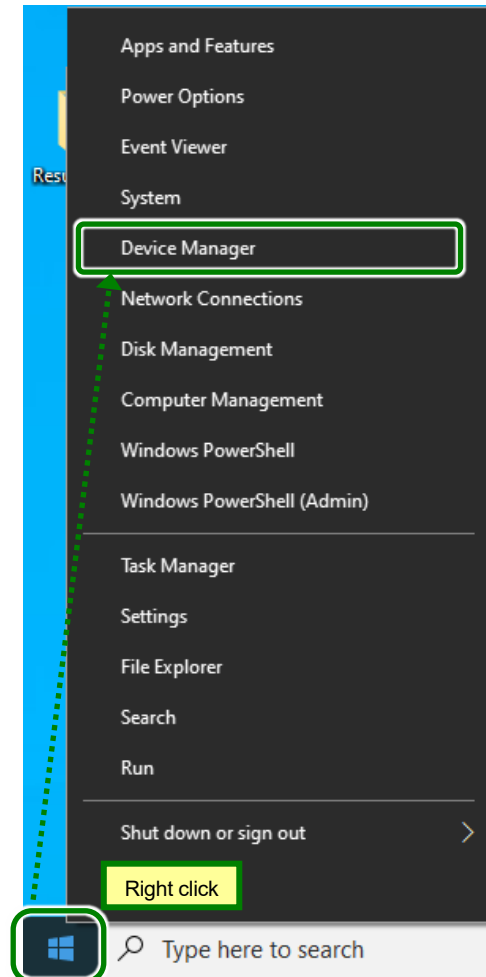
<Procedure>

(1) Connect to PC

Connect RZ-EC6 to the PC.

(2) Start [Device Manager]

Right click [Start] button, when menu is displayed,
click [Device Manager].



(3) Check Ports and Universal Serial Bus controllers

Device Manager window is displayed.

Double-click each [Ports (COM&LPT)] and [Universal Serial Bus controllers] and confirm that following is displayed.

[Ports (COM&LPT)]

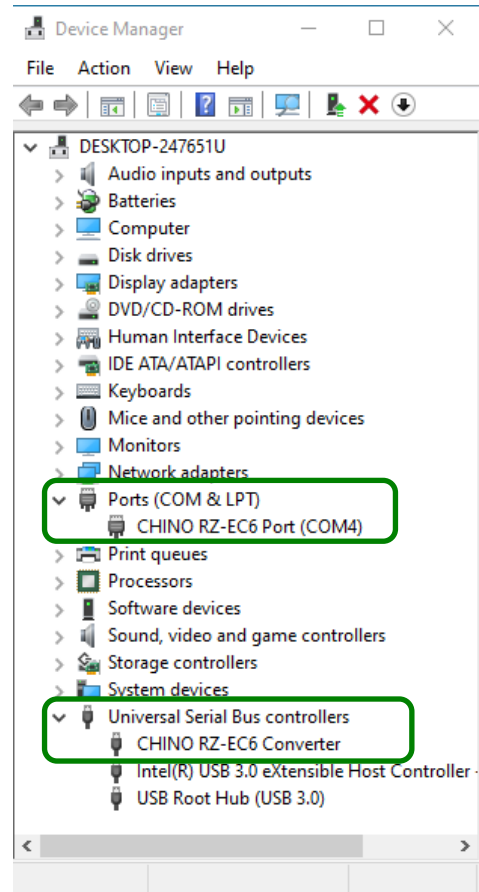
CHINO RZ-EC6 Port (COM*)

[Universal Serial Bus controllers]

CHINO RZ-EC6 Converter

*COM port number varies depending on the environment of the PC.

*It may take sometimes to the PC to recognize RZ-EC6 after connecting it to the PC. Check COM port number first and start communication.

**(4) Check complete**

Close device manager window after the check.

It is confirmed that RZ-EC6 is surely recognized by the PC and available to use.

**Caution**

- (1) For the COM number of RZ-EC6, the smallest available number on your PC is automatically assigned.
(The COM number depends on the environment of your PC.)**
- (2) The COM number can be changed from the property of [CHINO RZ-EC6 Port (COM*)] on the [Device Manager] window.**
- (3) If changing the COM port number, do not overlap COM port number. Make sure to use unused COM port number.**

5 Uninstalling of driver

*Following figures are windows of Windows 10.

<Procedure>

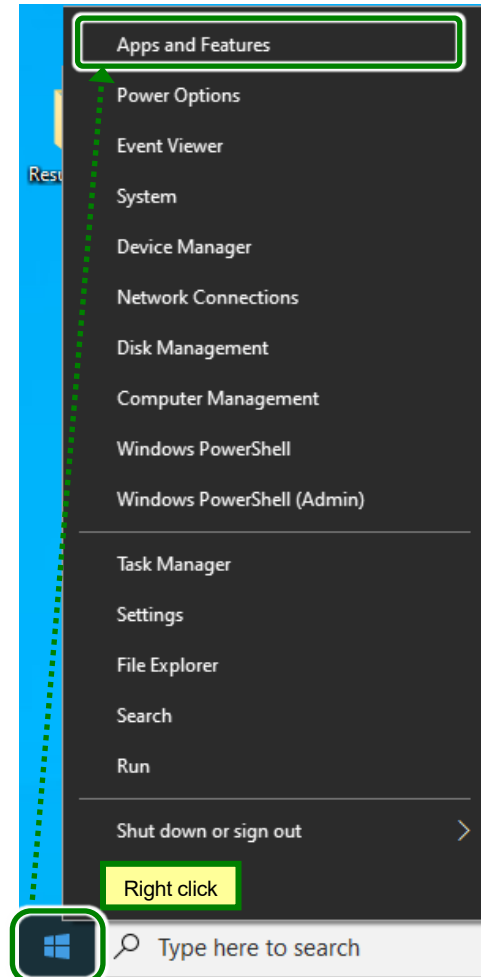
(1) Remove RZ-EC6

If RZ-EC6 is connected to the PC, remove it.

(2) Start [Apps and Features]

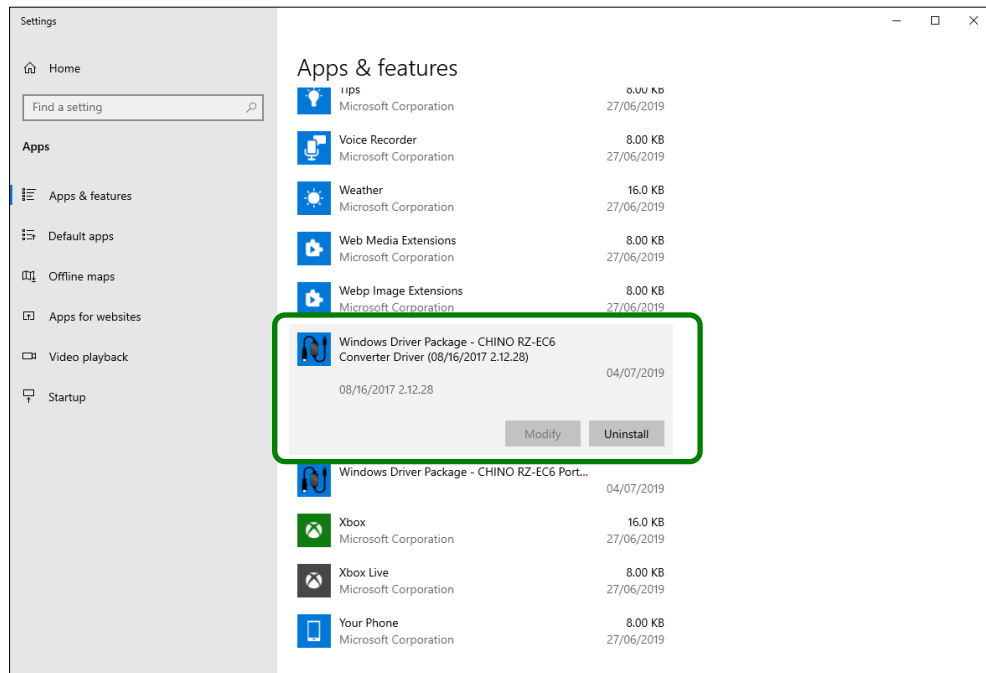
Right click [Start] button, when menu is displayed, click [Apps and Features]*.

* For Windows 11, [Installed apps].

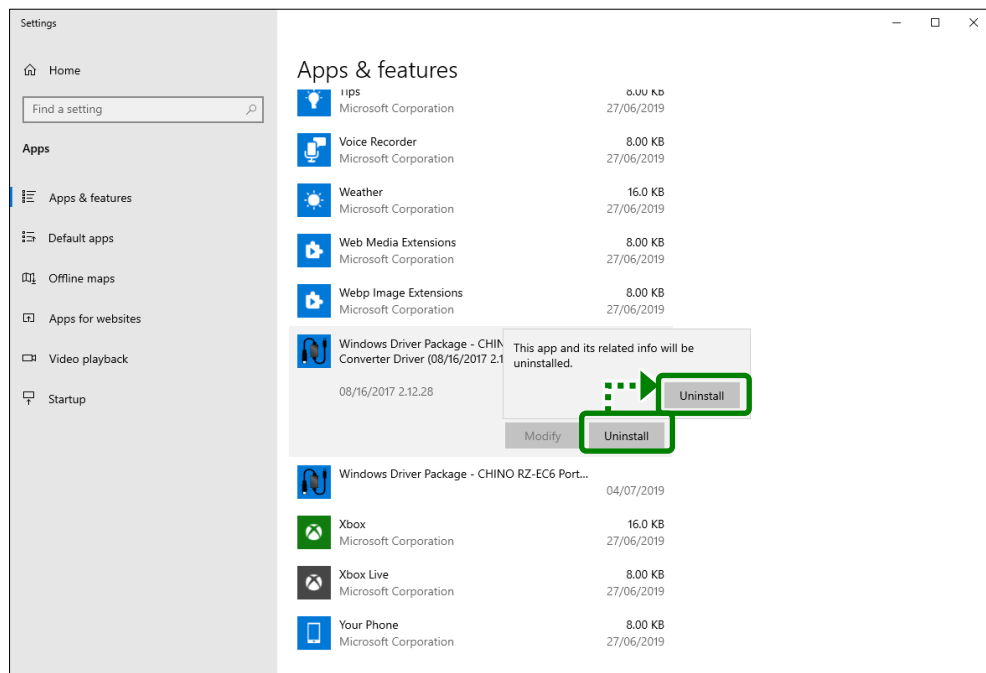


(3) Select [Converter Driver]

When the list of apps and features is displayed, click [CHINO RZ-EC6 Converter Driver].
Click [Uninstall].

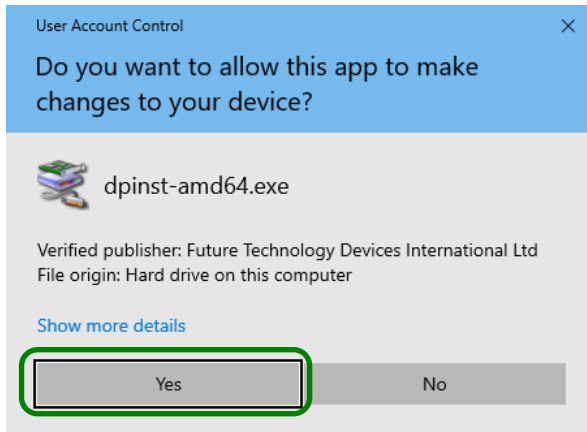
**(4) Delete [Converter Driver]**

[Uninstall] button is displayed again, so click it.



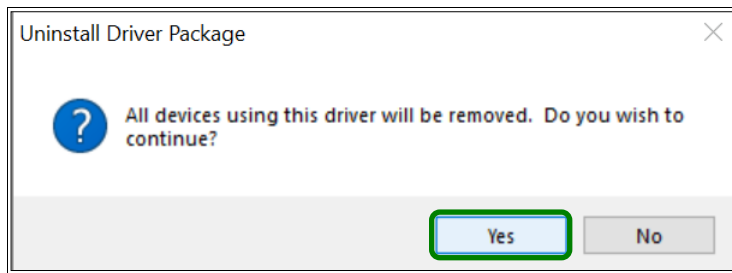
(5) Start uninstalling

If user account control window is displayed, click [Yes] button.



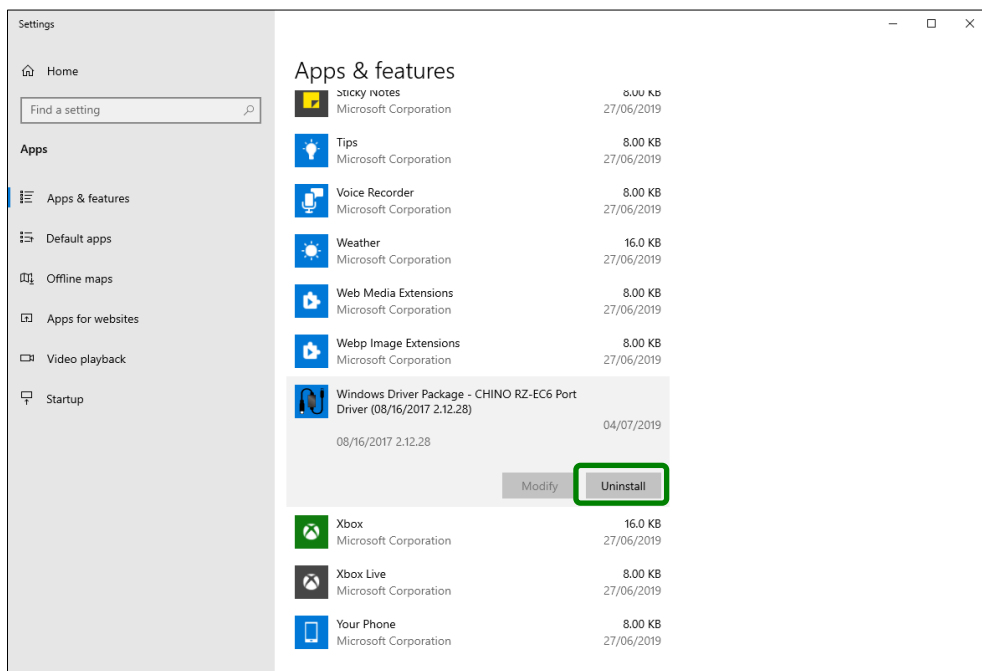
(6) Click [Yes]

When confirmation window is displayed, click [Yes] button.
Uninstalling starts.



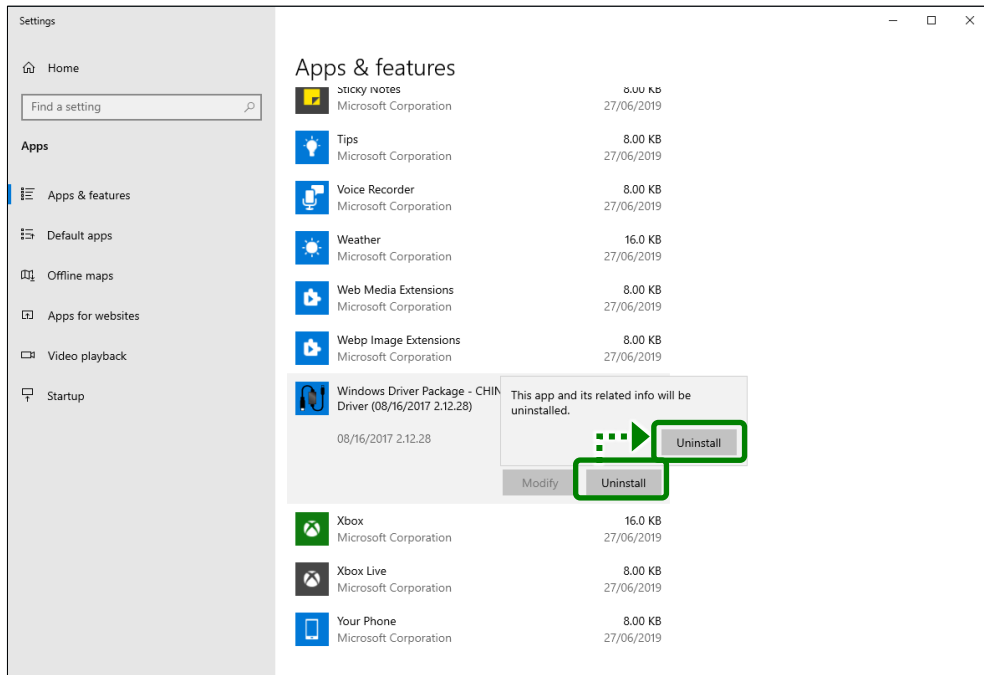
(7) Select [Port Driver]

From Apps & features, confirm that [CHINO RZ-EC6 Converter Driver] is deleted.
Then select [CHINO RZ-EC6 Port Driver] and click [Uninstall].



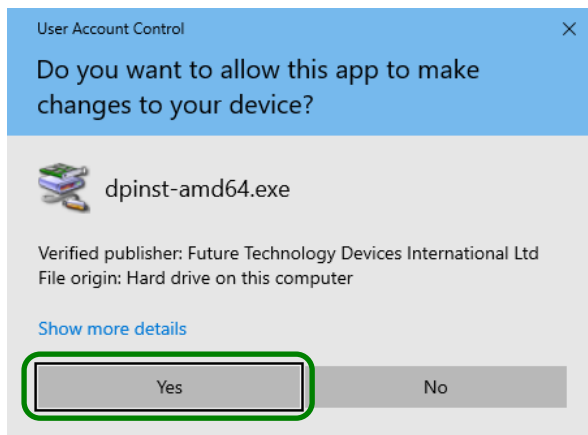
(8) Delete [Port Driver]

[Uninstall] button is displayed again, so click it.



(9) Start uninstalling

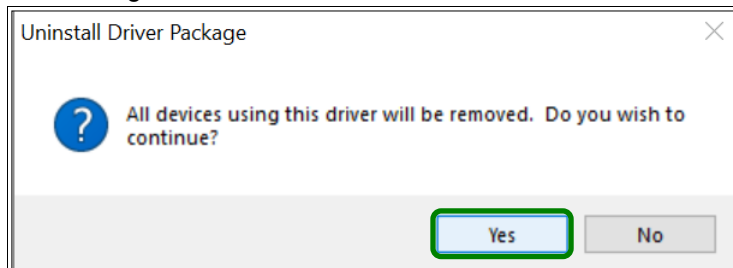
If user account control window is displayed, click [Yes] button.



(10) Click [Yes]

When confirmation window is displayed, click [Yes] button.

Uninstalling starts.



(11) Uninstall complete

6 Troubleshooting

Cause and countermeasure is explained if abnormal operation or function of RZ-EC6 is found.

Phenomenon	Cause and Countermeasure
Communication to a device is disable.	<ul style="list-style-type: none"> • Check that the connection between the PC and CHINO product is made properly. • Check that driver of RZ-EC6 is installed correctly. • Check the COM port number set to the PC.
PC does not recognize RZ-EC6.	<ul style="list-style-type: none"> • If USB hub or USB extension cable is in use, it is rare but PC can not recognize RZ-EC6. Connect RZ-EC6 to USB port of the PC directly. • It may take sometimes for PC to recognize RZ-EC6 after the connection. Check COM port from device manager after a few minutes. • RZ-EC6 does not operate on a driver of CHINO engineering cable (RZ-EC4 or RZ-EC5). Install specific driver from attached CD-ROM.
Unable to install to a PC.	<ul style="list-style-type: none"> • If installation is failed, start again from procedure (1) of "3. Installation of driver".

When problems are not improved after executing troubleshooting above, contact the dealer (instrumentation, installation or sales agent) or nearest CHINO's sales agent.



Warning

If repairing is necessary, contact the dealer or nearest CHINO's sales office. Only the service engineers appointed by our company will change the parts, do the repairing and remodeling.

7 Inspection and disposal

7-1 Inspection

1. Inspection according to the trial operation

Every time before starting the operation, perform a trial operation and check that the final product is normal.

7-2 Disposal



Caution

- (1) The components of RZ-EC6 contain a slight amount of hazardous chemical substance below the specified level by RoHS directive.
- (2) When disposing RZ-EC6, it must be treated by a waste-disposal service vendor or in accordance with local regulations.
- (3) A box, plastic bags, cushioning materials, stickers, etc. used for packing RZ-EC6 should be separated and treated in accordance with local regulations and cooperate to recycle.

8 Specifications

Supporting operation environment	: Microsoft Windows 10 / Windows 11
Interface	: USB Ver 2.0 compatible
Communication speed	: 38400bps
Connector specification	: PC sideUSB connector (A type plug)
Power supply system	: Bus power (powered from the USB port of a PC)
Power supply voltage	: 5V DC
Current consumption	: About 50mA
Operating temperature	: -10 to 50°C
Operating humidity	: 10 to 90%rh (No condensation)
Operating altitude	: 2000m or lower
Weight	: About 80g

CHINO

CHINO CORPORATION

32-8, KUMANO-CHO, ITABASHI-KU, TOKYO
173-8632

Telephone: 81-3-3956-2171
Facsimile: 81-3-3956-0915
E-mail: inter@chino.co.jp
Website: <https://www.chino.co.jp/>



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