PCI-AD-x16HE-BG4 User’s Guide

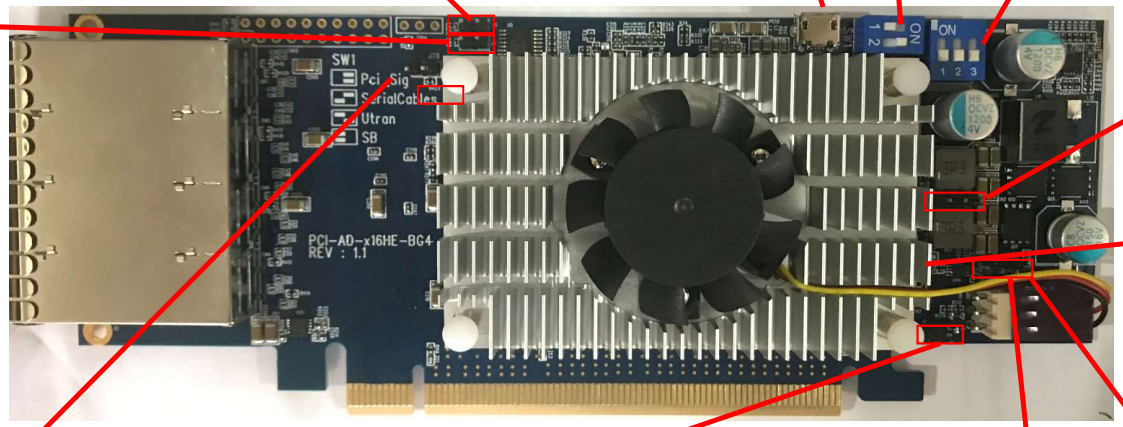
J3
ON: uP in USB boot mode(disable uP FW)
OFF: uP is normal operation(default)

J4
ON: uP without SDB of switch control
OFF: uP is allowed to access switch information via SDB(default)

Side-band select switch

Micro USB connector

Reserve for further used



CN2
Header for Atlas UART
(Required FW)

TX	RX	GND

Blue LED for switch heartbeat.
Without FW, default state is ON

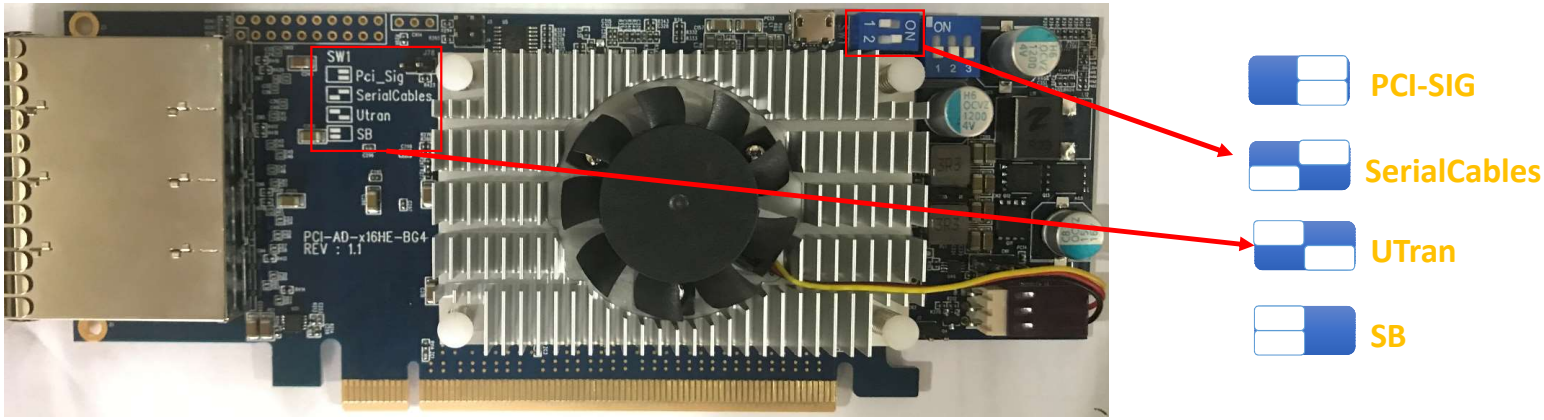
RED LED for switch error

J78
ON: FW upgrading for uP
OFF: uP in normal operation(default)

J2
ON: Disable Atlas loading SBR(configuration)
OFF: Atlas loading SBR enable(default)

CN1
Header for Atlas SDB UART

TX	RX	GND

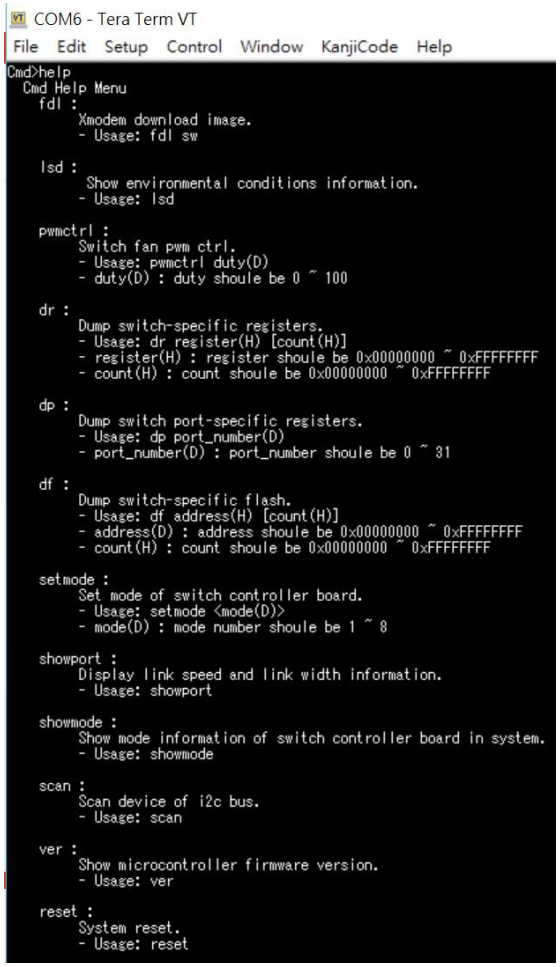


Host card side-band mode				
	PCI-SIG	SC	UT	SB
A1	CADDR	CLK_0_N	CLK_0_N	CLK_0_N
A2	CABLE_INT#	CLK_0_P	CLK_0_P	CLK_0_P
B1	VCT(NC)	CLK_4_N	DP_EN#_0	DP_EN#_0
B2	CABLE_PRE#	CLK_4_P	*drive present#	*drive present#
C1	uP_SCL	ATLAS_SCL	ATLAS_SCL	ATLAS_SCL
C2	uP_SDA	ATLAS_SDA	ATLAS_SDA	ATLAS_SDA
D1	VACT	PERST#_0	PERST#_0	PERST#_0
D2	VMAN	PERST#_1	PERST#_1	PERST#_1

A host card reset is required to apply the selected side-band setting.

1. In SB mode, the C1/C2 are always kept at “high state” as requested to power on the SB switch board.
2. Other side-bands are “NC” in the SB switch board design.

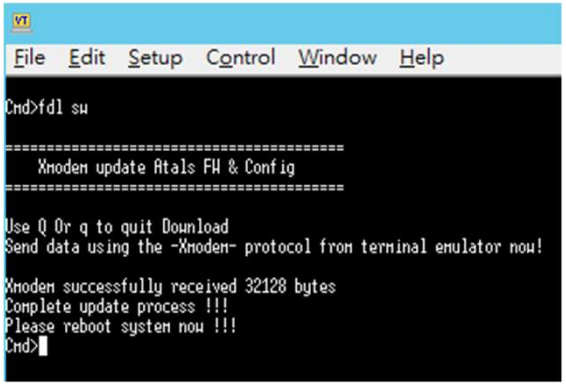
Atlas EXT Host card commands list(preliminary)

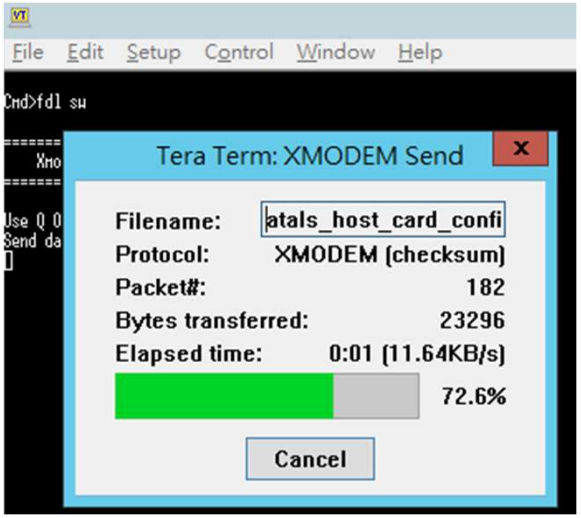


fdl sw

Xmodem download image.(Firmware update and config for Atlas)

-Usage: fdl sw

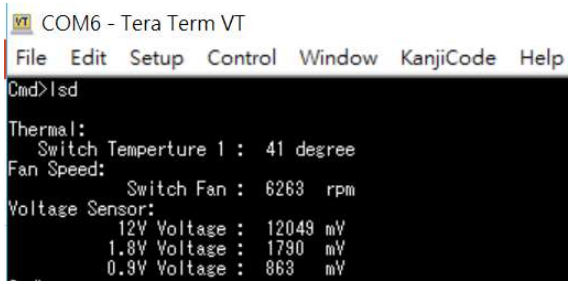




lsd

Show environmental conditions information.

- Usage: lsd



pwmctrl

Control the PWM duty for FAN-sink on the Atlas switch

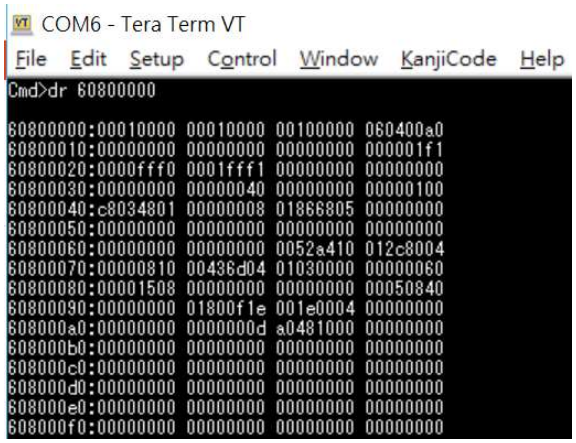
- Usage: pwmctrl duty(D)
- duty(D) : duty shoule be 0 ~ 100

It isn’t suggested to adjust FAN speed manually, it may cause the Atlas switch over-heat

dr

Dump switch-specific registers.

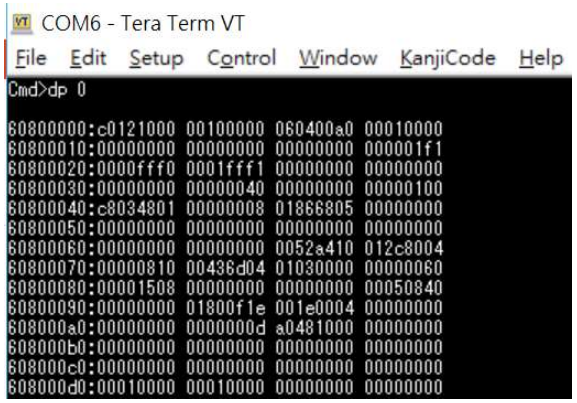
- Usage: dr register(H) [count(H)]
- register(H) : register shoule be 0x00000000 ~ 0xFFFFFFFF
- count(H) : count shoule be 0x00000000 ~ 0xFFFFFFFF



dp

Dump switch port-specific registers.

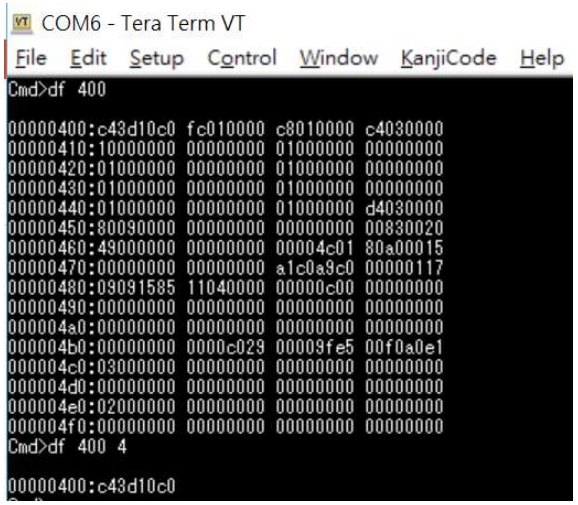
- Usage: dp port_number(D)
- port_number(D) : port_number shoule be 0 ~ 31



df

Dump switch-specific flash.

- Usage: df address(H) [count(H)]
- address(D) : address shoule be 0x00000000 ~ 0xFFFFFFFF
- count(H) : count shoule be 0x00000000 ~ 0xFFFFFFFF



Setmode

Set mode of switch controller board.

- Usage: setmode <mode(D)>
- mode(D) : mode number shoule be 1 ~ 8

```
Cmd>setmode 8

Image size = d58
Erase block region #0 at offset 400
Write block erase command into control register : Done
Issue the block erase command to the flash :Done
```

It will start to write the selected mode(configuration) into Atlas for a while, and then it required server cold reset(power cycle the server rather than reset the server) to apply the setting

```
Verify Offset:00000d14, Buffer value:a003047b, Flash value:a003047b
Verify Offset:00000d18, Buffer value:1700fa00, Flash value:1700fa00
Verify Offset:00000d1c, Buffer value:a803047b, Flash value:a803047b
Verify Offset:00000d20, Buffer value:1700fa00, Flash value:1700fa00
Verify Offset:00000d24, Buffer value:3800047b, Flash value:3800047b
Verify Offset:00000d28, Buffer value:02000000, Flash value:02000000
Verify Offset:00000d2c, Buffer value:3c00047b, Flash value:3c00047b
Verify Offset:00000d30, Buffer value:8002a080, Flash value:8002a080
Verify Offset:00000d34, Buffer value:3800047b, Flash value:3800047b
Verify Offset:00000d38, Buffer value:07000000, Flash value:07000000
Verify Offset:00000d3c, Buffer value:3c00047b, Flash value:3c00047b
Verify Offset:00000d40, Buffer value:8542a180, Flash value:8542a180
Verify Offset:00000d44, Buffer value:3c00047b, Flash value:3c00047b
Verify Offset:00000d48, Buffer value:8542a100, Flash value:8542a100
Verify Offset:00000d4c, Buffer value:c803047b, Flash value:c803047b
Verify Offset:00000d50, Buffer value:400b0000, Flash value:400b0000
Verify Offset:00000d54, Buffer value:19000000, Flash value:19000000
Verify success.
Set operation mode to mode 8.
Need to reset controller to take effect.
```

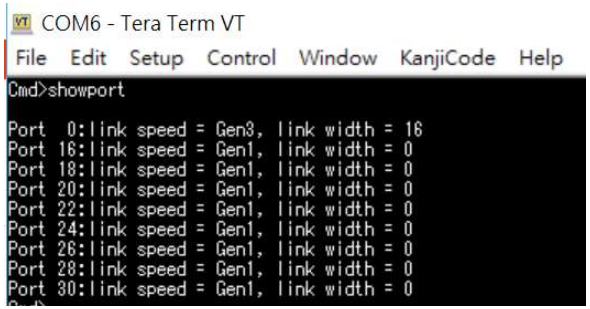
Mode 1 Hx16I
Mode 2 Hx16N
Mode 3 Hx8I
Mode 4 Hx8N
Mode 5 Hx4I
Mode 6 Hx4N
Mode 7 Hx2I
Mode 8 Hx2N

“I” means support SRIS
“N” means support SRNS

Showport

Display link speed and link width information.

-Usage: showport



Showmode

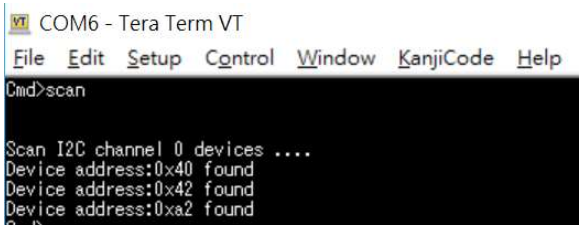
Show mode information of switch controller board in system.

-Usage: showmode

Scan

Scan device of i2c bus.

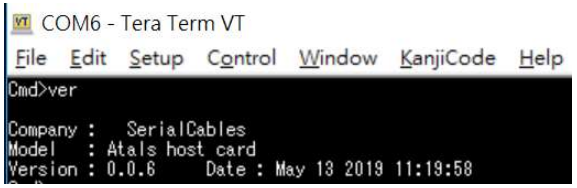
- Usage: scan



ver

Show microcontroller firmware version.

- Usage: ver



reset

System reset.

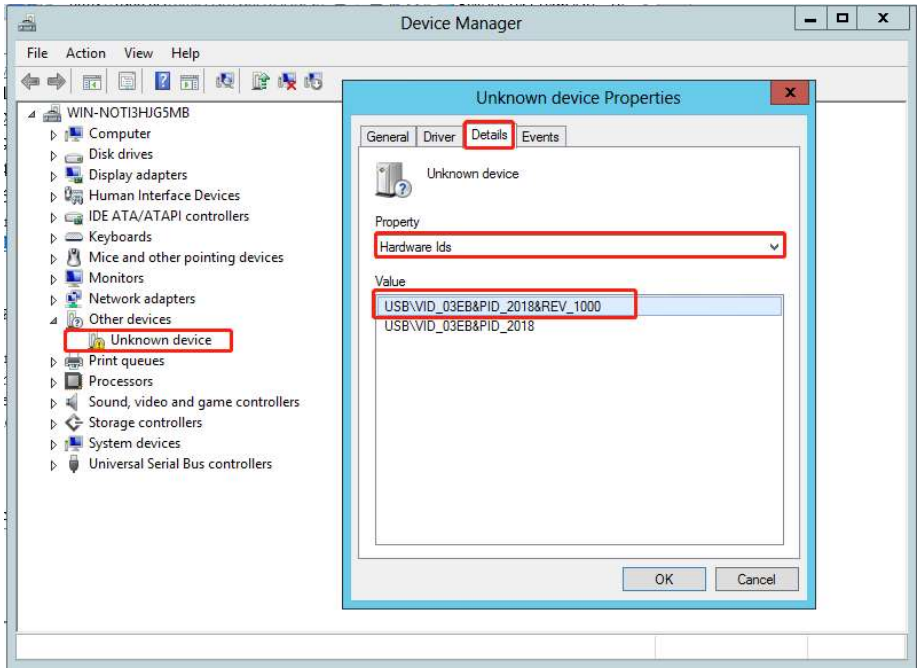
- Usage: reset

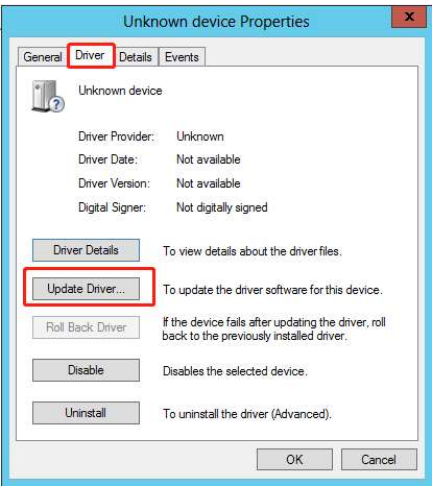
Install USB Driver for CLI

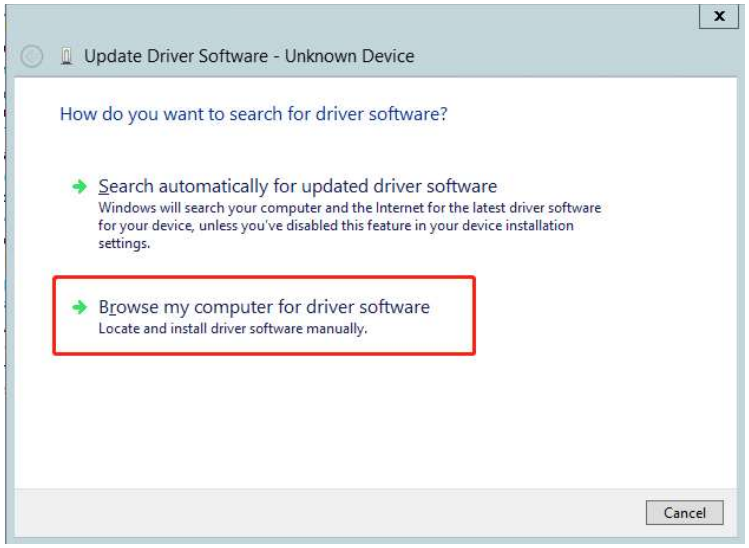
Step1: Download and install the CDC driver for unidentified device (VID_03EB&PID_2018)

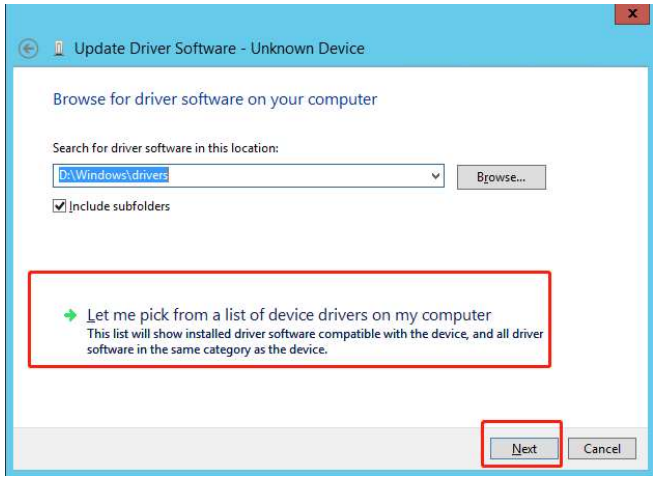
Available at: https://www.serialcables.com/wp-content/uploads/2018/11/SynergyUSBCDC_20180518.rar

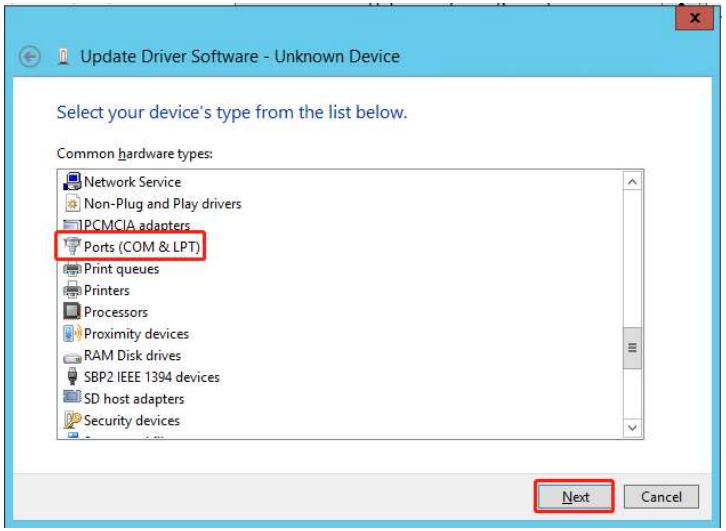
Note: No USB driver is required for Windows 10 and Linux

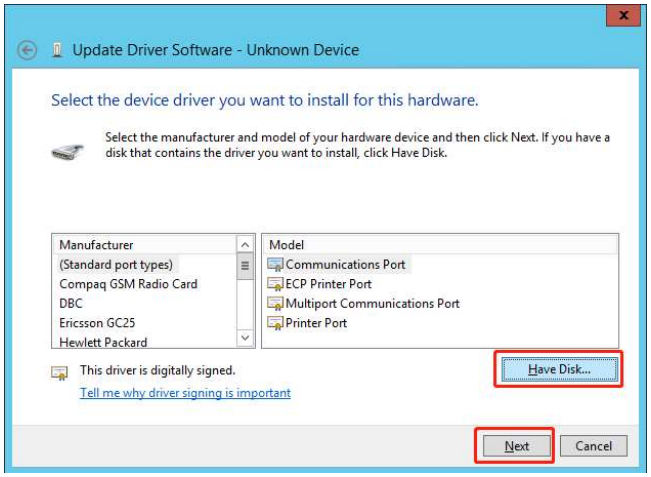


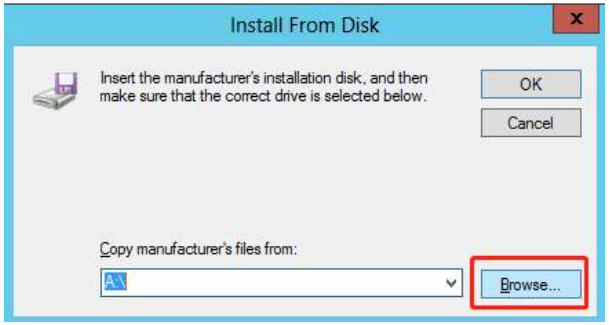

Unknown device Properties
General
Driver
Details
Events
Unknown device
Driver Provider: Unknown
Driver Date: Not available
Driver Version: Not available
Digital Signer: Not digitally signed
Driver Details
To view details about the driver files.
Update Driver...
To update the driver software for this device.
Roll Back Driver
If the device fails after updating the driver, roll back to the previously installed driver.
Disable
Disables the selected device.
Uninstall
To uninstall the driver (Advanced).
OK
Cancel

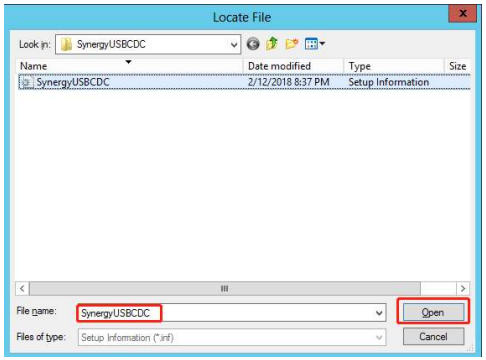

Update Driver Software - Unknown Device
How do you want to search for driver software?
Search automatically for updated driver software
Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.
Browse my computer for driver software
Locate and install driver software manually.
Cancel

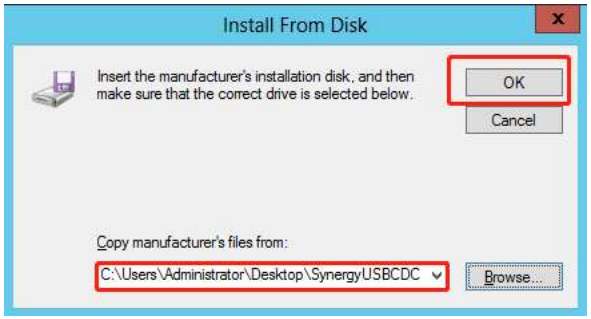

Update Driver Software - Unknown Device
Browse for driver software on your computer
Search for driver software in this location:
D:\Windows\drivers
Browse...
Include subfolders
Let me pick from a list of device drivers on my computer
This list will show installed driver software compatible with the device, and all driver software in the same category as the device.
Next
Cancel

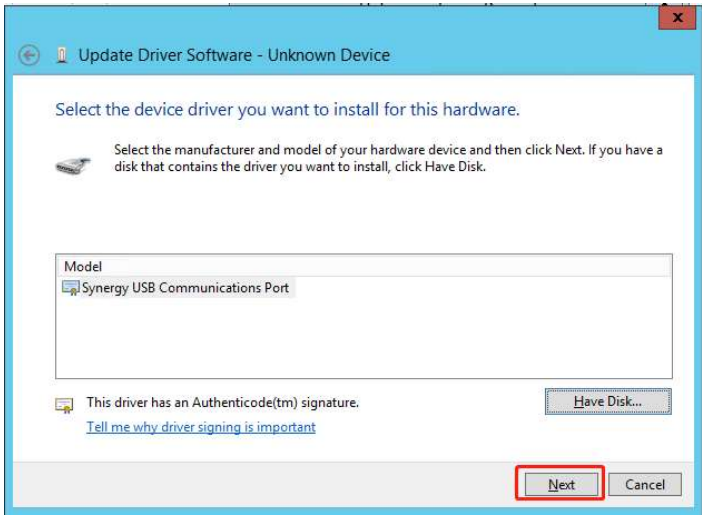

Update Driver Software - Unknown Device
Select your device's type from the list below.
Common hardware types:
Network Service
Non-Plug and Play drivers
PCMCIA adapters
Ports (COM & LPT)
Print queues
Printers
Processors
Proximity devices
RAM Disk drives
SBP2 IEEE 1394 devices
SD host adapters
Security devices
Next
Cancel

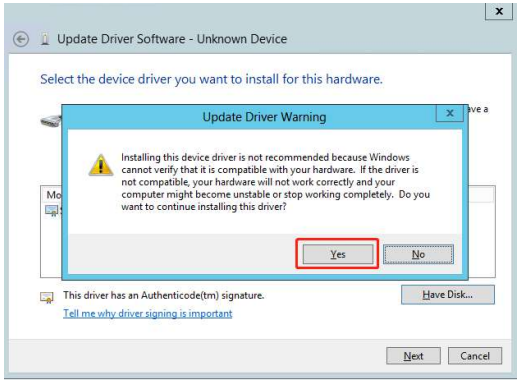

Update Driver Software - Unknown Device
Select the device driver you want to install for this hardware.
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
Manufacturer
(Standard port types)
Compaq GSM Radio Card
DBC
Ericsson GC25
Hewlett Packard
Model
Communications Port
ECP Printer Port
Multiport Communications Port
Printer Port
This driver is digitally signed.
Tell me why driver signing is important
Have Disk...
Next
Cancel


Install From Disk
Insert the manufacturer's installation disk, and then make sure that the correct drive is selected below.
OK
Cancel
Copy manufacturer's files from:
A:\
Browse...

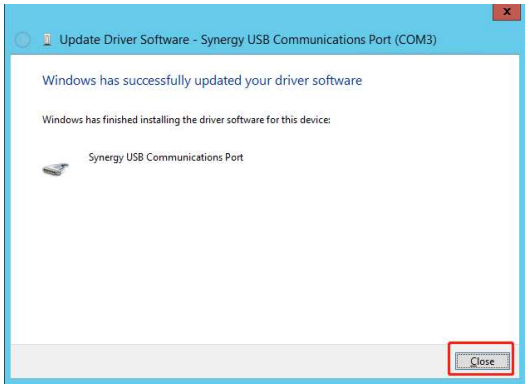

Locate File
Look in: SynergyUSBCDC
Name
Date modified
Type
Size
SynergyUSBCDC
2/12/2018 8:37 PM
Setup Information
File name: SynergyUSBCDC
Open
Files of type: Setup Information (*.inf)
Cancel

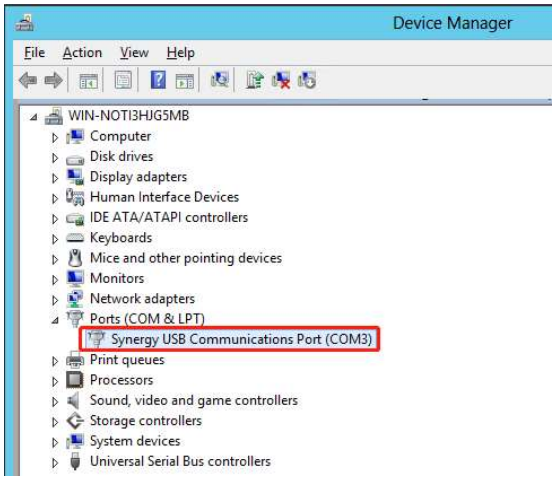

Install From Disk
Insert the manufacturer's installation disk, and then make sure that the correct drive is selected below.
OK
Cancel
Copy manufacturer's files from:
C:\Users\Administrator\Desktop\SynergyUSBCDC
Browse...

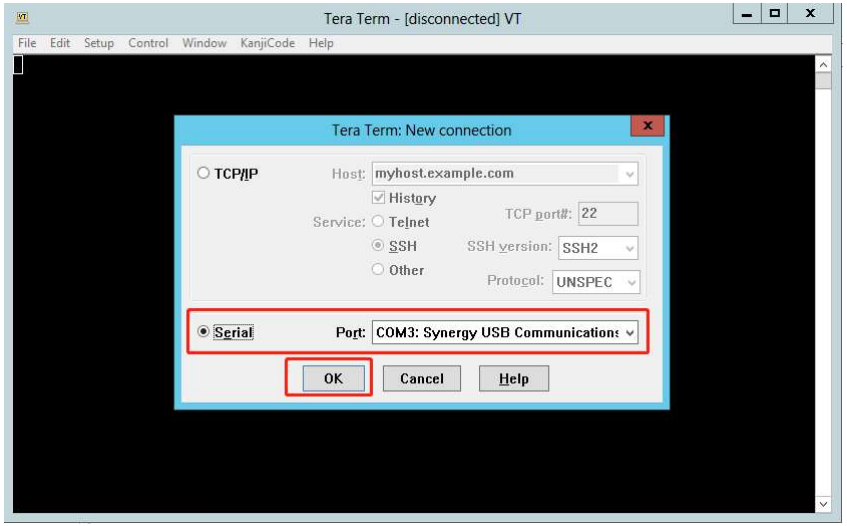

Update Driver Software - Unknown Device
Select the device driver you want to install for this hardware.
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
Model
Synergy USB Communications Port
This driver has an Authenticode(tm) signature.
Tell me why driver signing is important
Have Disk...
Next
Cancel


Update Driver Software - Unknown Device
Select the device driver you want to install for this hardware.
Update Driver Warning
Installing this device driver is not recommended because Windows cannot verify that it is compatible with your hardware. If the driver is not compatible, your hardware will not work correctly and your computer might become unstable or stop working completely. Do you want to continue installing this driver?
Yes
No
This driver has an Authenticode(tm) signature.
Tell me why driver signing is important
Have Disk...
Next
Cancel


Windows Security
Would you like to install this device software?
Name: Renesas Electronics Corporation Ports (C...
Publisher: Renesas Electronics America
Always trust software from "Renesas Electronics America".
Install
Don't Install
You should only install driver software from publishers you trust. How can I decide which device software is safe to install?


Update Driver Software - Synergy USB Communications Port (COM3)
Windows has successfully updated your driver software
Windows has finished installing the driver software for this device:
Synergy USB Communications Port
Close


Device Manager
File Action View Help
WIN-NOTI3HJG5MB
Computer
Disk drives
Display adapters
Human Interface Devices
IDE ATA/ATAPI controllers
Keyboards
Mice and other pointing devices
Monitors
Network adapters
Ports (COM & LPT)
Synergy USB Communications Port (COM3)
Print queues
Processors
Sound, video and game controllers
Storage controllers
System devices
Universal Serial Bus controllers


Tera Term - [disconnected] VT
File Edit Setup Control Window KanjiCode Help
Tera Term: New connection
TCP/IP
Host: myhost.example.com
History
Service: Telnet
SSH
Other
TCP port#: 22
SSH version: SSH2
Protocol: UNSPEC
Serial
Port: COM3: Synergy USB Communications
OK
Cancel
Help