



serial
C A B L E S

PCIe Gen4 U2/U3 8Bay Passive JBOF



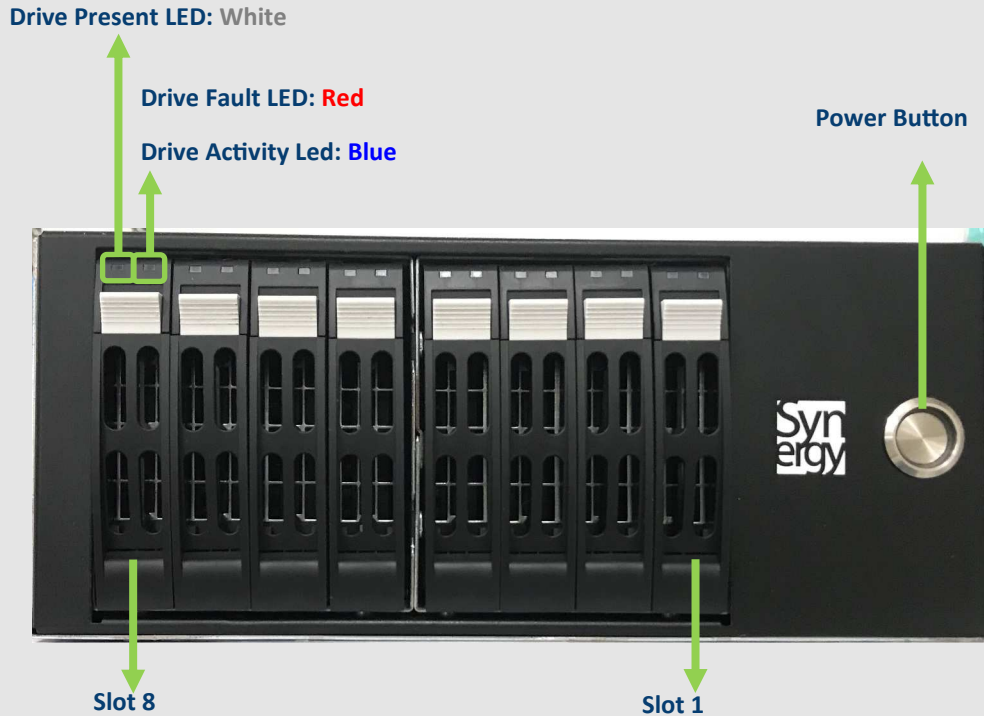
User's Manual

REV: 1.2

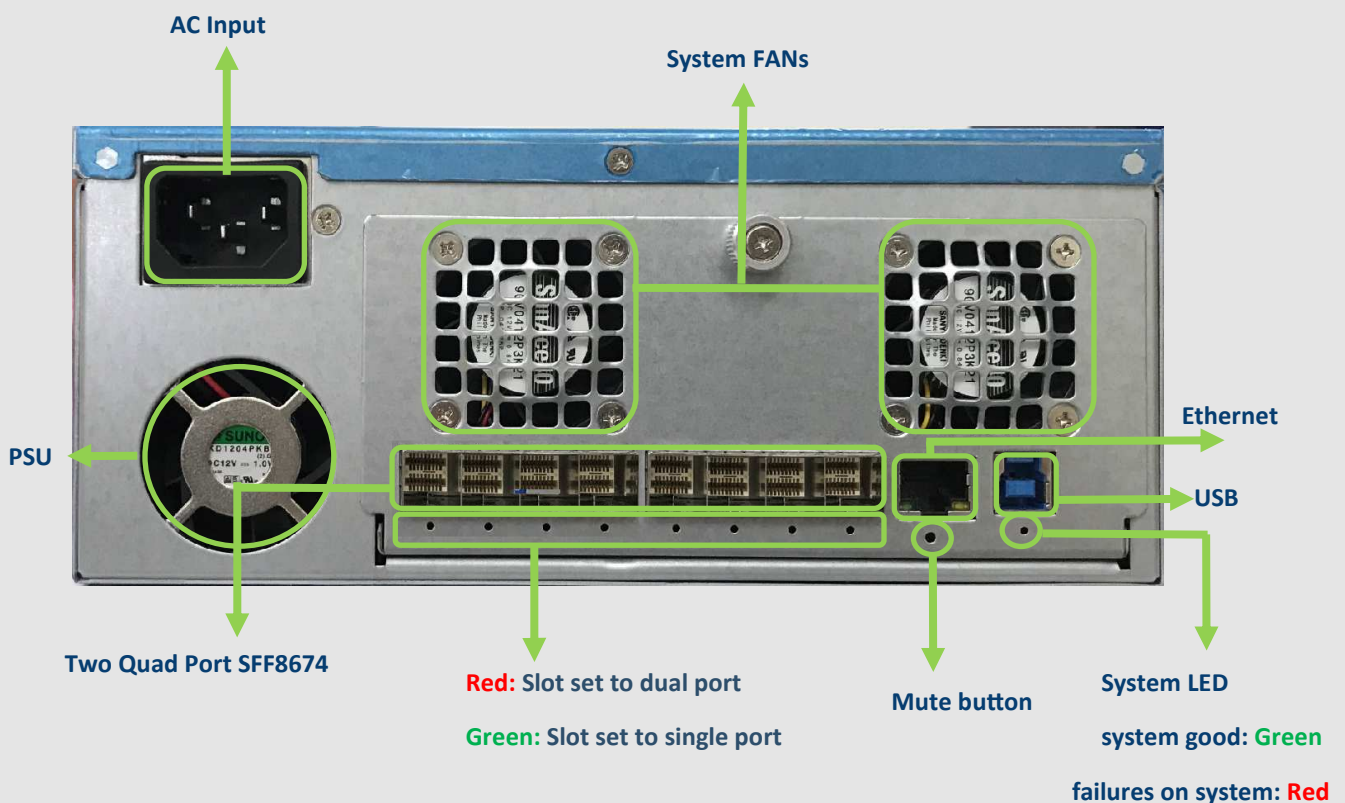
Oct. 2020



Front Panel

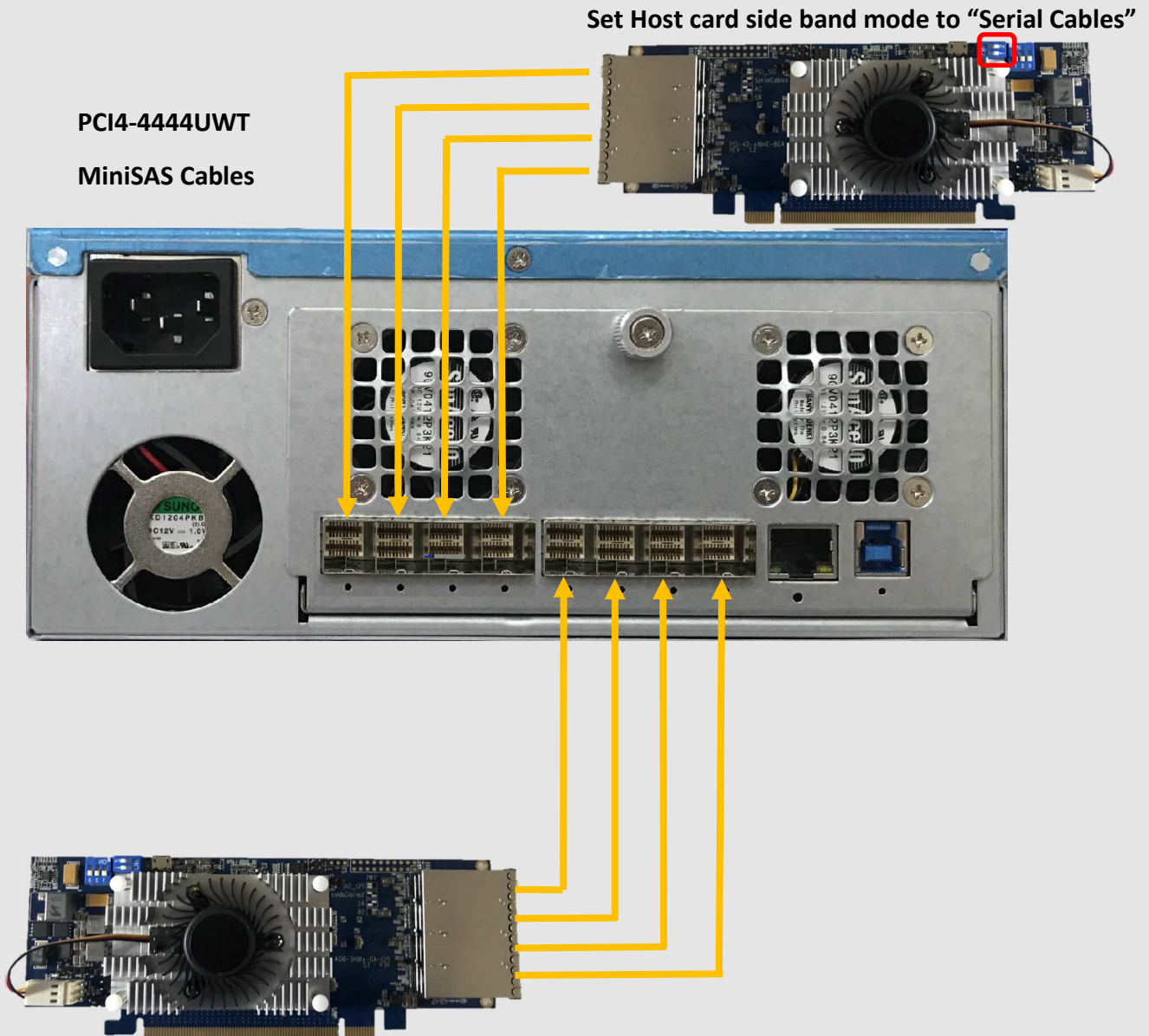


Rear I/O





Connecting Passive JBOF to Host card





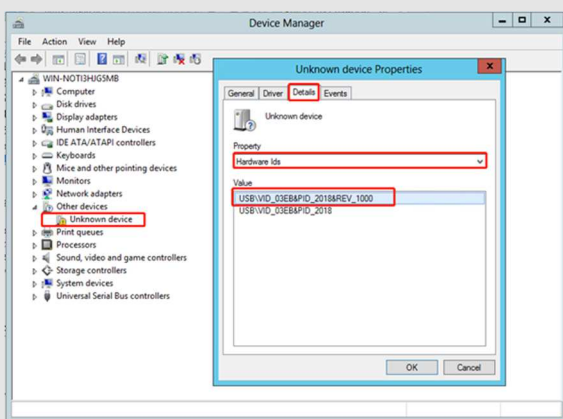
USB Driver Installation

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

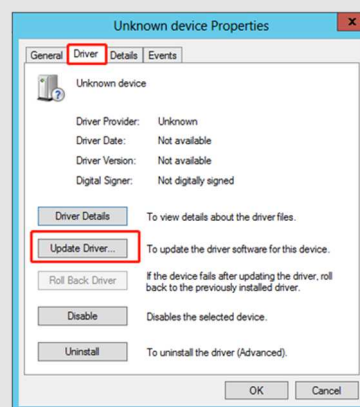
Available at:

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

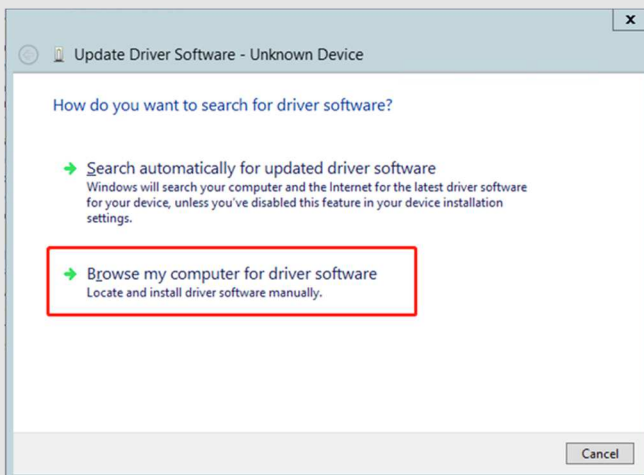
Note: No USB driver is required for Windows 10 and Linux



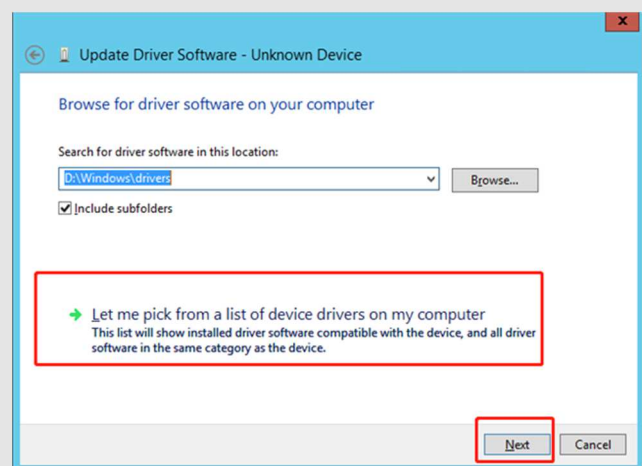
[Figure 1]



[Figure 2]



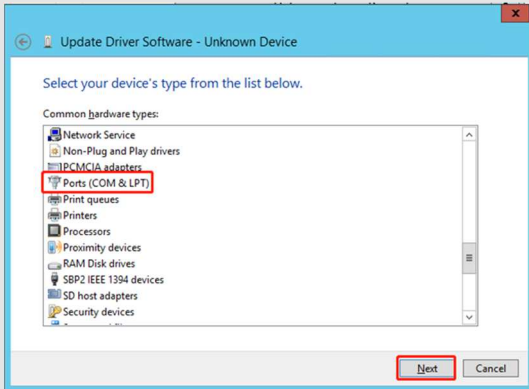
[Figure 3]



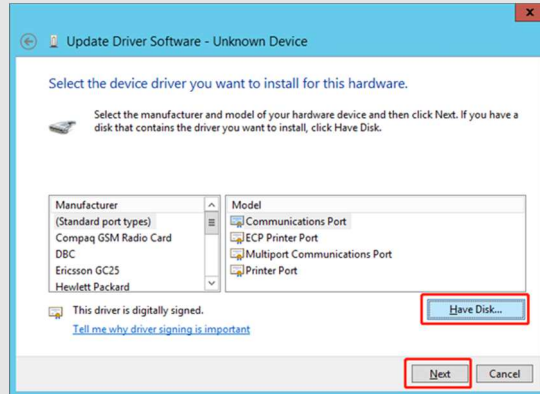
[Figure 4]



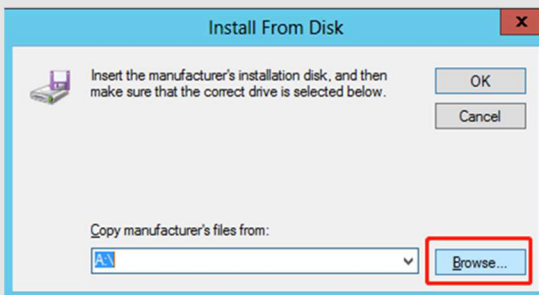
USB Driver Installation



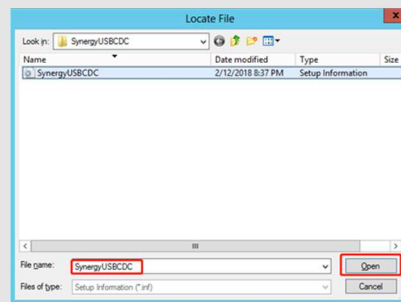
[Figure 5]



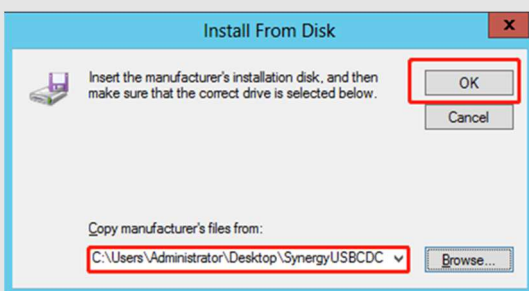
[Figure 6]



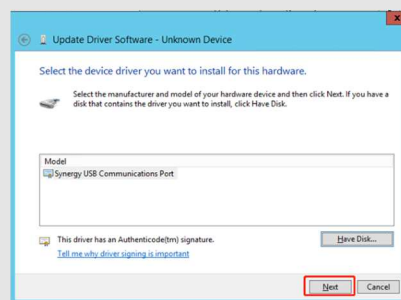
[Figure 7]



[Figure 8]



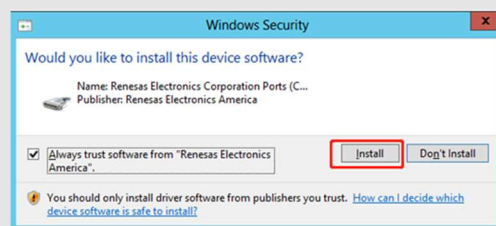
[Figure 9]



[Figure 10]



[Figure 11]



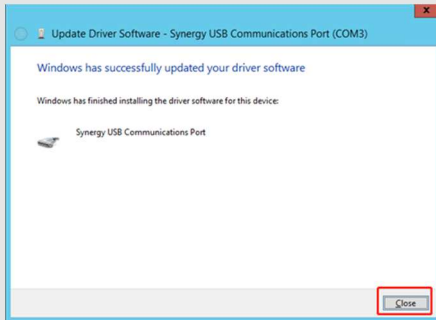
[Figure 12]



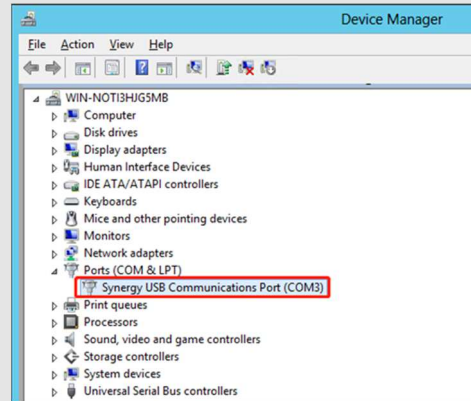
serial
C A B L E S

PCIe Gen4 U2/U3 8Bay Passive JBOF

USB Driver Installation



[Figure 13]



[Figure 14]

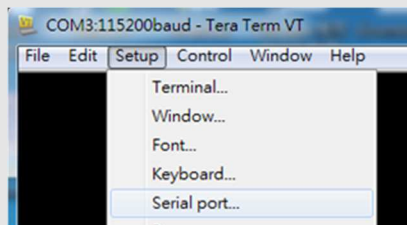


CLI Setup

Step 1. Install and launch Tera Term application
(or Hyper Terminal requires version 3.0 or higher).



Step 2: To ensure proper communications between Active 8bays JBOF controller and the VT100 Terminal emulation, please configure the VT100 Terminal emulation settings to the values shown below:



Step 3:

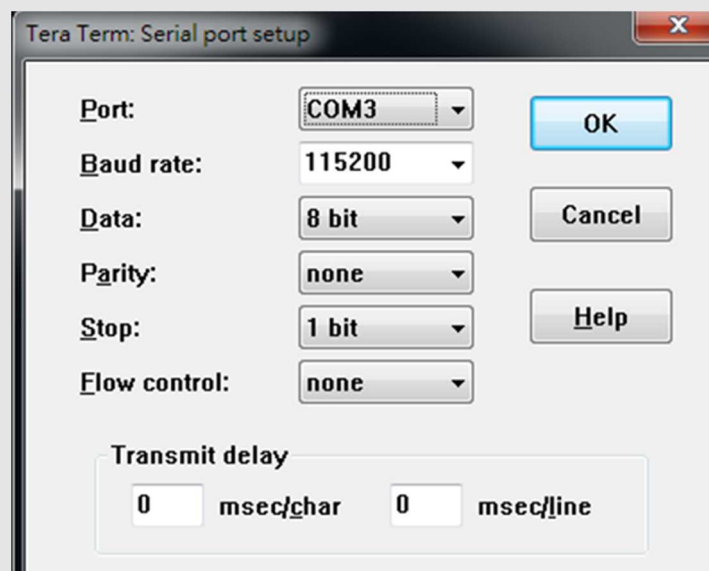
For “Port”, select COM3 in this example. (Depend on which COM port used on Host)

For “Baud rate”, select 115200.

For “Data”, select 8 bit. For “Parity”, select none.

For “Stop”, select 1 bit. For “Flow control”, select: none.

Click OK when you have finished your selections.





uP Synergy FW Upgrading

Step 1. Connect the USB port of JBOF to PC or laptop

Step 2. Press the mute button in the rear of JBOF then power on.



Step 3.

- a.) it will show an added USB device in PC or laptop.
- b.) Put upgrading FW(i.e **SC8BAY_U3_JBOF_v006.srec**) into the folder of FW.
- c.) Put update.txt in the root folder.

名稱	日期	類型	大小	權限
Config	2017/1/1 上午 12:00	檔案資料夾		
FW	2017/1/1 上午 12:00	檔案資料夾		
Web	2017/1/1 上午 12:00	檔案資料夾		
device_info.txt	2017/1/1 上午 12:00	文字文件	1 KB	
update.txt	2018/2/9 下午 06:02	文字文件	1 KB	

Step 4. Power cycle JBOF to apply the new FW.



Active JBOF Commands List

```
File Edit Setup Control Window KanjiCode Help
Cmd>help
Cmd Help Menu
eth :
  Set Ethernet IP Configuration.
  - Usage: eth <ipaddr(*)> <subnet(*)> <gateway(*)>

setmac :
  Set Ethernet MAC address.
  - Usage: setmac <xx:xx:xx:xx:xx:xx>

lsd :
  Show environmental conditions information.
  - Usage: lsd

pwmctrl :
  Fan pwm ctrl.
  - Usage: pwmctrl <fan_id(D)> <duty(D)|off>
  - fan_id(D) : fan_id should be 1 ~ 2
  - duty(D) : duty should be 0 ~ 100

ssdpwr :
  slot power control.
  - Usage: ssdpwr [<slot(D)>] <on|off>]
  - slot(D) : slot number should be 1 ~ 8

ssdrst :
  Reset slot.
  - Usage: ssdrst <slot(D)|all> [channel(C)]
  - slot(D) : slot number should be 1 ~ 8
  - channel(C) : channel number should be a or b
  - Ex: ssdrst 1
  - Ex: ssdrst 1 a
  - Ex: ssdrst all
  - Ex: ssdrst all a

showtype :
  Show backplane type.
  - Usage: showtype

dual :
  Set dual channel enable on/off.
  - Usage: dual [<slot(D)|all>] <on|off>]
  - slot(D) : slot number should be 1 ~ 8
  - Ex: dual all on
  - Ex: dual 1 on

buz :
  buzzer control.
  - Usage: buz [on|off|en|dis]
```

```
File Edit Setup Control Window KanjiCode Help
scan :
  Scan devices of I2C bus.
  - Usage: scan

iicwr :
  iicwr <Addr(H)> <Slot(D)> <ReadByte(D)> <WriteData(H)>
  - Addr(H) : Device address
  - Slot(D) : Slot should be 1 ~ 8
  - ReadByte(D) : Max read byte is 32 byte
  - WriteData(D) : Max write byte is 32 byte
  - Ex : iicwr d4 1 8 0

iicw :
  iicw <Addr(H)> <Slot(D)> <WriteData(H)>...
  - Addr(H) : Device address
  - Slot(D) : Slot should be 1 ~ 8
  - WriteData(D) : Max write byte is 32 byte
  - Ex : iicw d4 1 ff

ver :
  Show microcontroller firmware version.
  - Usage: ver

eventmask :
  Set System Event Mask.
  - Usage: eventmask [<number(D)>] <on|off>]
  - number(D): number should be 1 ~ 3

quit :
  Close telnet.
  - Usage: quit

reset :
  System reset.
  - Usage: reset
```



eth Command

Set Ethernet IP configuration.

Usage: eth <ipaddr(*)> <subnet(*)> <gateway(*)>

```
File Edit Setup Control Window Help
Cmd>eth 192.168.100.211 255.255.255.0 0.0.0.0

Set Ethernet - save configuration ok
Cmd>
```

```
File Edit Setup Control Window Help
Cmd>eth

=====
Physical Address . . . . . : 2E-09-0A-00-76-C7
Ethernet Link Status . . . . . : Up
IP Address . . . . . : 192.168.100.211
Subnet Mask . . . . . : 255.255.255.0
Gateway . . . . . : 0.0.0.0
MTU . . . . . : 1500
=====
```

setmac Command

Set Ethernet MAC (Media Access Control) address

Usage: setmac <xx:xx:xx:xx:xx:xx>

```
File Edit Setup Control Window Help
Cmd>setmac 38:26:2B:00:00:00

MacAddress[0] 38
MacAddress[1] 26
MacAddress[2] 2B
MacAddress[3] 0
MacAddress[4] 0
MacAddress[5] 0

Set MAC - save configuration ok
Cmd>
```



Isd Command

Shows environmental information (etc. temperature, fan, voltage) of Active 8bays JBOF.

Usage: Isd

```
File Edit Setup Control Window KanjiCode Help
Cmd>Isd
Thermal:
  Switch Temperture 1 : 28 degree
Fan Speed:
  System Fan1 : 16363 rpm
  System Fan2 : 16317 rpm
```

pwmctrl Command

Set the PWM duty for all FANs in JBOF

Usage: pwmctrl <fan_id(D)> <duty(D)|off>

fan_id=1, System Fan1

fan_id=2, System Fan2

```
File Edit Setup Control Window KanjiCode Help
Cmd>pwmctrl 1 100
Cmd>Isd
Thermal:
  Switch Temperture 1 : 27 degree
Fan Speed:
  System Fan1 : 16438 rpm
  System Fan2 : 8130 rpm
```

```
File Edit Setup Control Window Help
Cmd>pwmctrl 1 off
Fan1: smart fan enable
Cmd>
```



ssdpwr Command

Slot power status checking and ON/OFF control

Usage: Usage: ssdpwr [<slot(D)> <on|off>]

```
File Edit Setup Control Window Help
Cmd>ssdpwr
Backplane slot 01 power status turn off.
Backplane slot 02 power status turn off.
Backplane slot 03 power status turn off.
Backplane slot 04 power status turn off.
Backplane slot 05 power status turn off.
Backplane slot 06 power status turn off.
Backplane slot 07 power status turn off.
Backplane slot 08 power status turn on.
```

```
File Edit Setup Control Window Help
Cmd>ssdpwr 8 off
Slot 08 turn off success.
Cmd>ssdpwr
Backplane slot 01 power status turn off.
Backplane slot 02 power status turn off.
Backplane slot 03 power status turn off.
Backplane slot 04 power status turn off.
Backplane slot 05 power status turn off.
Backplane slot 06 power status turn off.
Backplane slot 07 power status turn off.
Backplane slot 08 power status turn off.
```

```
File Edit Setup Control Window Help
Cmd>ssdpwr 8 on
Slot 08 turn on success.
Cmd>ssdpwr
Backplane slot 01 power status turn off.
Backplane slot 02 power status turn off.
Backplane slot 03 power status turn off.
Backplane slot 04 power status turn off.
Backplane slot 05 power status turn off.
Backplane slot 06 power status turn off.
Backplane slot 07 power status turn off.
Backplane slot 08 power status turn on.
```

The slot power is turned off automatically when drive is plug out from slot, the use case of power control command is when drive is plugging into slot.



ssdrst Command

Issue PERST# from uP to device

Usage: Usage: ssdrst <slot(D)|all> [channel(D)]

Channel a: The 1st PHY of dual port drive

Channel b: The 2nd PHY of dual port drive

```
File Edit Setup Control Window KanjiCode Help
Cmd>ssdrst 1
Reset slot 1 success
Cmd>
```

```
File Edit Setup Control Window KanjiCode Help
Cmd>ssdrst 1 a
Reset channel a of slot 1 success
Cmd>
```

```
File Edit Setup Control Window KanjiCode Help
Cmd>ssdrst all
Reset all slot success
Cmd>
```

```
File Edit Setup Control Window KanjiCode Help
Cmd>ssdrst all b
Reset channel b of all slot success
Cmd>
```



showtype Command

Shows the Back plane board type(U2 or U3) in Passive 8 bays JBOF.

Usage: showtype

```
File Edit Setup Control Window KanjiCode Help
Cmd>showtype
Backplane type: U2
```

```
File Edit Setup Control Window KanjiCode Help
Cmd>showtype
Backplane type: U3
```

Dual Command

Enable dual port control per slot or for all slots.

Usage: dual <slot(D)|all> <on|off>

```
File Edit Setup Control Window KanjiCode Help
Cmd>dual all on
Slot 1 dual channel: on
Slot 2 dual channel: on
Slot 3 dual channel: on
Slot 4 dual channel: on
Slot 5 dual channel: on
Slot 6 dual channel: on
Slot 7 dual channel: on
Slot 8 dual channel: on
```

```
File Edit Setup Control Window KanjiCode Help
Cmd>dual 1 on
Slot 1 dual channel: on
Slot 2 dual channel: off
Slot 3 dual channel: off
Slot 4 dual channel: off
Slot 5 dual channel: off
Slot 6 dual channel: off
Slot 7 dual channel: off
Slot 8 dual channel: off
```

It requires drive power cycle, drive hot plug to apply the dual port enable/disable setting.



buz Command

The command is for controlling the buzzer on switch controller board

Usage: buz <on|off|en|dis>

[en]: enable the buzzer function

[dis]: disable the buzzer function

[on]: set buzzer to beep in one time

[off]: mute buzzer beeping

```
File Edit Setup Control Window Help
Cmd>buz
Buzzer status:disable
Cmd>
```

```
File Edit Setup Control Window Help
Cmd>buz on
OK, turn on buzzer
Cmd>
```

```
File Edit Setup Control Window Help
Cmd>buz off
OK, turn off buzzer
Cmd>
```

```
File Edit Setup Control Window Help
Cmd>buz en
OK, enable buzzer
Cmd>
```

```
File Edit Setup Control Window Help
Cmd>buz dis
OK, turn off buzzer
OK, disable buzzer
Cmd>
```



scan Command

Scan all devices in 8bays Active JBOF

Usage: scan

```
File Edit Setup Control Window KanjiCode Help
Cmd>scan

Scan I2C channel 0 devices ....
Device address:0xa2 found
Device address:0x42 found
Device address:0x44 found
Device address:0x46 found
Device address:0x48 found
Device address:0x50 found
Device address:0xe0 found
Device address:0x52 found
```

iicwr Command

Data read for U.2/M.2 drives from SMBus

Usage: iicwr <Addr(H)> <Slot(D)> <ReadByte(D)> <WriteData(H)>

- Addr(H) : Device address
- Slot(D) : Slot should be 1 ~ 8
- ReadByte(D) : Max read byte is 32 byte
- WriteData(D) : Max write byte is 32 byte
- Ex : iicwr d4 1 8 0

```
File Edit Setup Control Window KanjiCode Help
Cmd>iicwr d4 1 8 0

Data [0] = 6
Data [1] = 7b
Data [2] = 1f
Data [3] = 1a
Data [4] = 0
Data [5] = 0
Data [6] = 0
Data [7] = 26
```



iicw Command

Byte or page write data to U.2/M.2 drive from SMBus

Usage: iicw <Addr(H)> <Slot(D)> <WriteData(H)...>

- Addr(H) : Device address
- Slot(D) : Slot should be 1 ~ 8
- WriteData(D) : Max write byte is 32 byte
- Ex : iicw d4 1 ff

```
File Edit Setup Control Window KanjiCode Help
Cmd>iicw d4 1 ff
Write Data [0] = ff
```

ver Command

Show S/N, company and model names, the FW version for uP

Usage: ver

```
File Edit Setup Control Window KanjiCode Help
S/N      : 400052001010012
Company  : Serial Cables
Model    : PASSIVE 8BAY JBOF
Version  : 0.0.6   Date : Feb 13 2020 16:14:23
```



eventmask Command

Use for following events mask

Usage: eventmask <event ID> <on|off>

Event ID from 1 to 3

1. System Fan1 Event
2. System Fan2 Event
3. Switch Temp Event

```
File Edit Setup Control Window KanjiCode Help
Cmd>eventmask
1.      System Fan1 Event : enable
2.      System Fan2 Event : enable
3.      Switch Temp Event : enable
```

```
File Edit Setup Control Window KanjiCode Help
Cmd>eventmask 2 off
Set Event Mask success.
```

reset Command

Reset uP in passive JBOF

Usage: reset

```
File Edit Setup Control Window Help
Cmd>reset
System Reset...
Cmd>
```