



# serial CABLES Atlas2 MCIO Host Adapter Card User Manual

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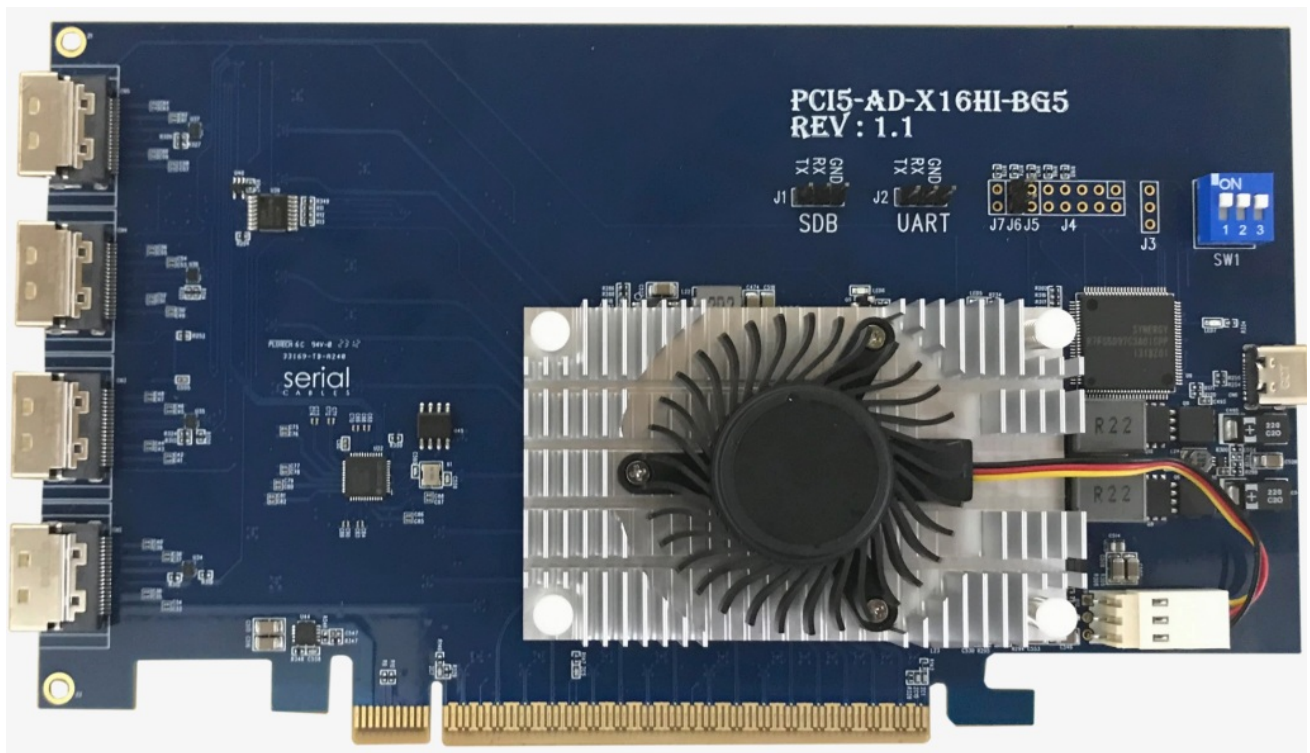
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**serial**  
C A B L E S

**serial CABLES Atlas2 MCIO Host Adapter Card**



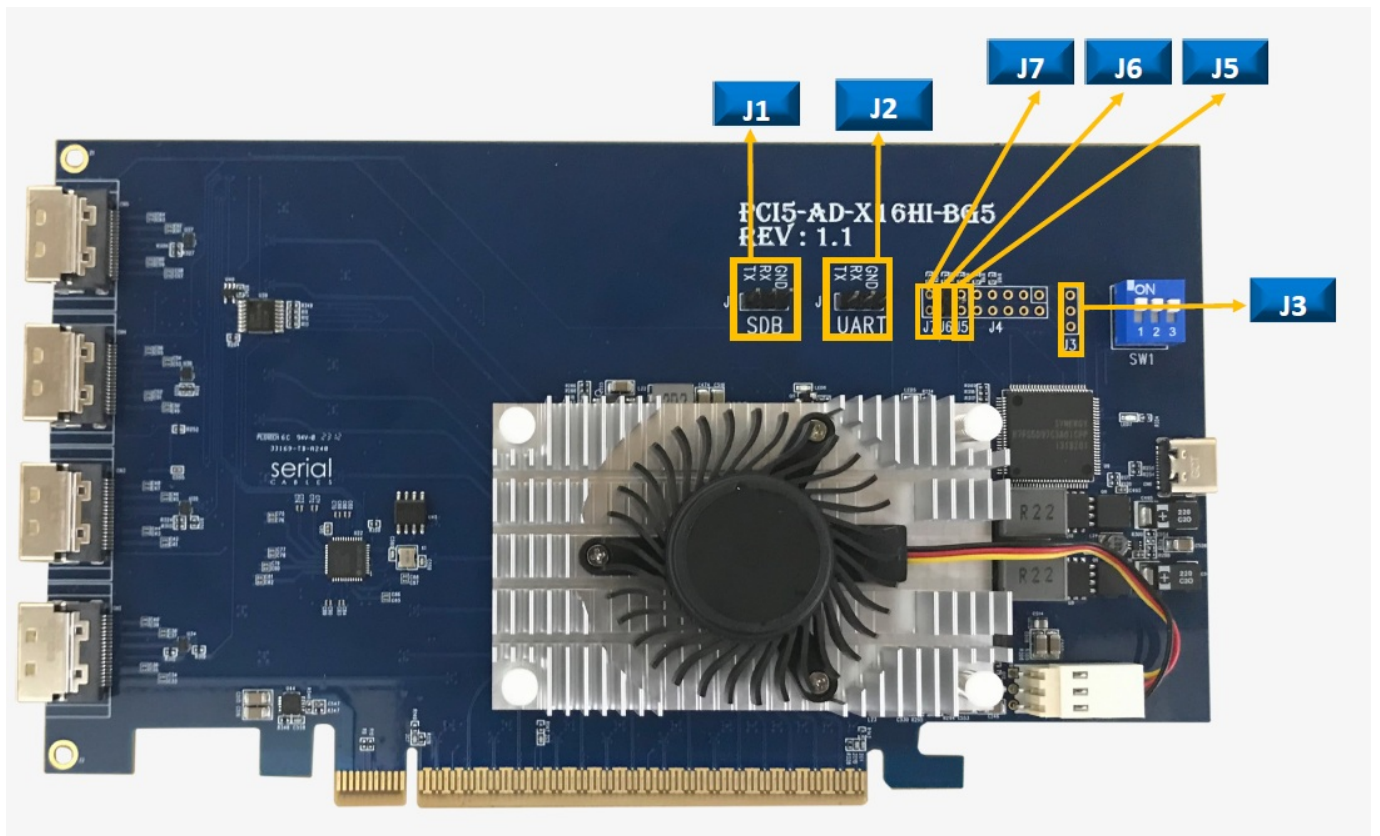
**Product Specifications**

- Product Name: Atlas2 MCIO Host Adapter Card
- Revision: 1.0 May. 2023
- Connector Type: CN2:CN5 X4 MCIO(mini-cool edge IO), SFF-TA-1016 connector
- USB Connector: Type-C USB connector for CLI commands
- Supported Modes: SC mode, ACE mode, ACU mode, CM mode
- LEDs: Host card Healthy LED, Atlas2 switch Heartbeat LED, Atlas2 switch failure LED, MCIO Port link matching LEDs

**Change history**

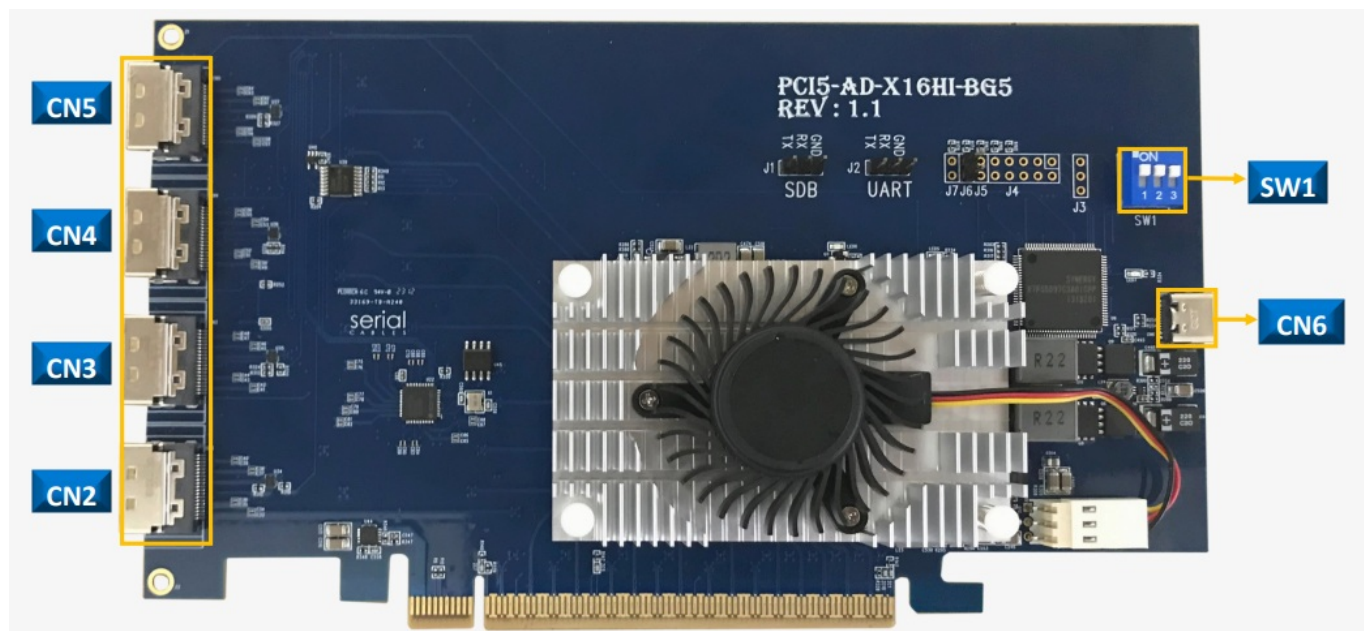
REV	Change history

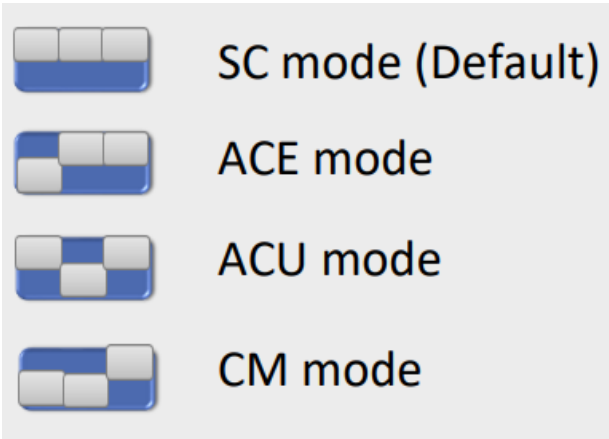
**Function Description For Headers**



Location	Descriptions	Pinout
J6	ON: MCU without SDB of switch control for debug purpose (etc. needs to access Atlas2 PCIe switch via SDB)	
J1	Atlas2 switch SDB port. UART with 3.3V TTL signals level	TX/RX/GND
J2	Atlas2 switch UART port, require Atlas2 FW support UART with 3.3V TTL signals level	TX/RX/GND
J3	Reserved I/F for MCU FW debugging	
J5	Reserved I/F for MCU boot-loader mode	
J7	Reserved I/F for MCU FW upgrading	

## Function Description For Connectors



Location	Descriptions
CN2:CN5	X4 MCIO(mini-cool edge IO), SFF-TA-1016 connector.
CN6	Type-C USB connector for CLI commands
SW1	<p>Slide switch for side-band mode selection</p> 

#### Side-Band Mode Descriptions (SW1)

Pin	SC mode	ACE mode	ACU mode	CM Mode
A8	CLK_0_P	CLK_0_P	CLK_0_P	CLK_0_P
A9	CLK_0_N	CLK_0_N	CLK_0_N	CLK_0_N
B8	CLK_1_P	PWRDIS	PWRDIS	PERST#
B9	CLK_1_N	HOST_LED	LINKFAT	PWRON
A11	ATLAS_SCL	ATLAS_SCL	ATLAS_SCL	ATLAS_SCL
A12	ATLAS_SDA	ATLAS_SDA	ATLAS_SDA	ATLAS_SDA
B11	PERST#_0	PERST#_0	PERST#_0	PERST#_0
B12	PERST#_1	PERST#_1	PERST#_1	PERST#_1

### SC: Serial cables mode

Use for drive direct attached via MCIO cables, support single port U2/U3 and dual ports U2/U3 cables. visit the website below for more details in cables support <https://www.serialcables.com/product-category/gen5-mcio-cables/>

### ACE: Adapter Card EDSFF

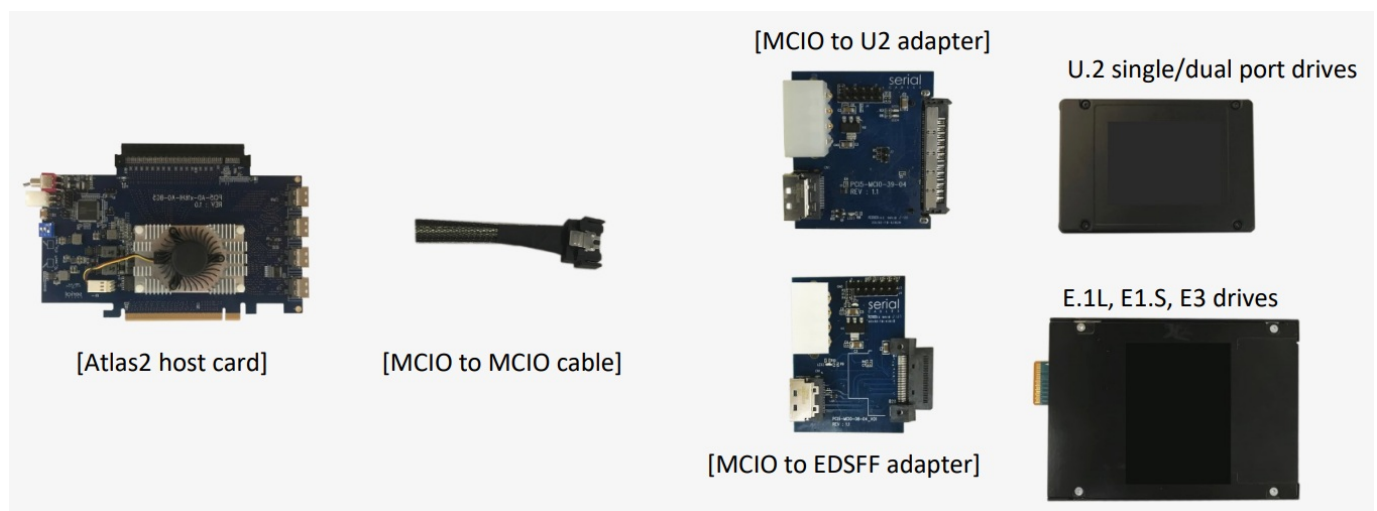
Using MCIO to MCIO cables connect with “MCIO to EDSFF adapter card”.

- It is able set PWRDIS in “H” or “L” in EDSFF drives via CLI.
- Turn ON/OFF the Host LED inside EDSFF drives via CLI.

### ACU: Adapter Card U2

Use MCIO to MCIO cable to connect with “MCIO to U2 adapter card”.

- It is able set PWRDIS in “H” or “L” in U2 drives via CLI.
- Turn ON the link match LEDs in adapter if link width isn't x4.

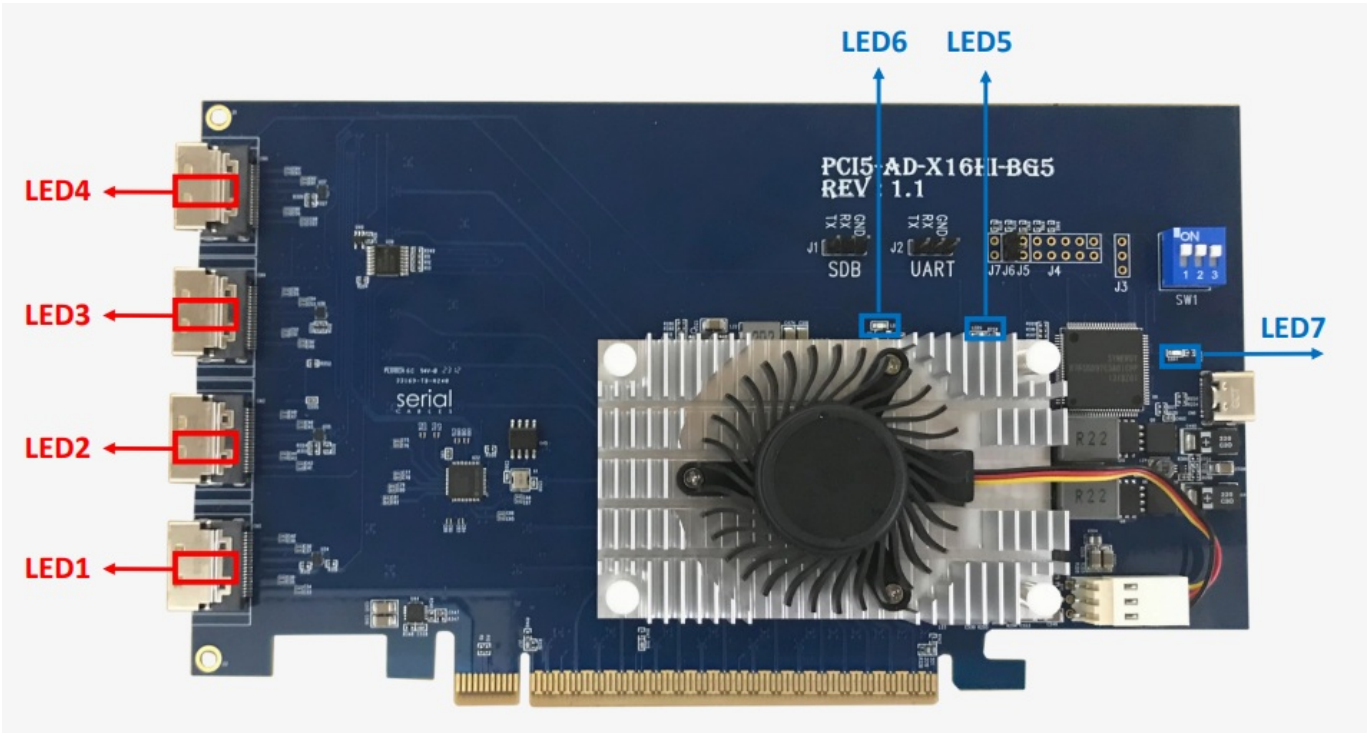


### CM: Common mode

- Pin B8 of MCIO connector is PERST#.
- Pin B9 is “PWRON”, always keep in “H” state after host server power on.

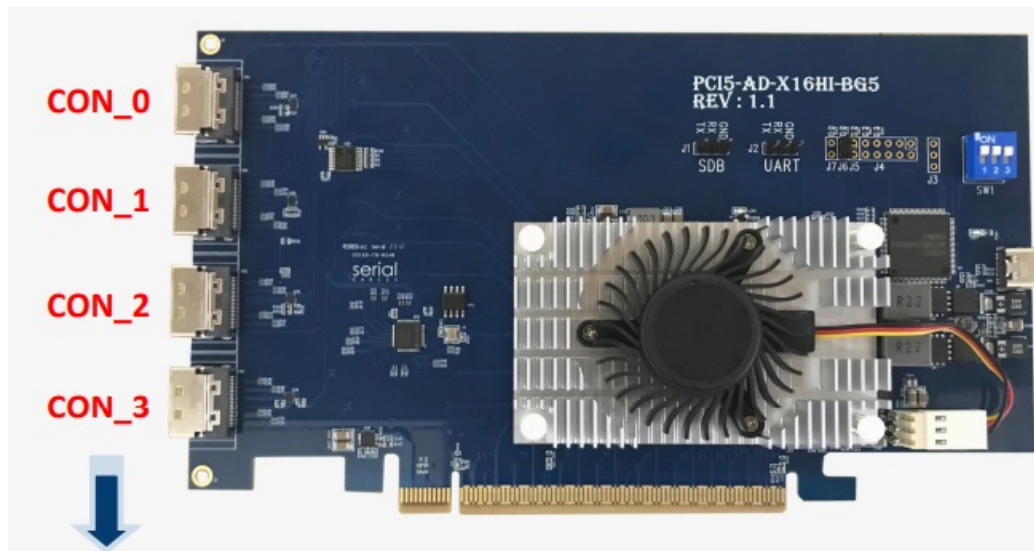


Function Description For LEDs



Location	Color	Description
LED7	Green	<u>Host card Healthy LED</u> 0.5Hz blinking for Host card good 2Hz blinking if any failure events detected, etc. voltages, FAN, and temperatures failed
LED6	Blue	<u>Atlas2 switch Heartbeat LED</u> Blinking: Indicates the Atlas2 switch working in Synthetic switch mode Solid ON: Indicates the Atlas2 switch working in base fanout switch mode
LED5	Red	<u>Atlas2 switch failure LED</u> Solid ON: indicates failure detected in Atlas2 switch
LED1/2/3/4	Red	<u>MCIO Port link matching LEDs</u> Each LED corresponds to MCIO port. LED1, LED4, LED3 and LED2 light when attached devices in MCIO port not link at x4 or 2x2 link width.

MCIO Pin Definition



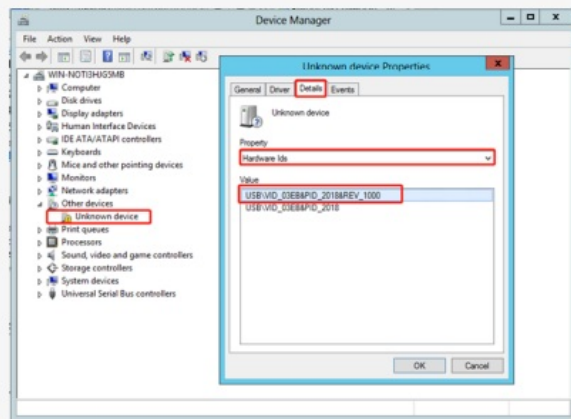
CON_0		2	3	5	6	8	9
	A	PERN16	PERP16	PERN17	PERP17	CLKP1	CLKN1
	B	PETN16	PETP16	PETN17	PETP17	CLKP0	CLKN0
		14	15	17	18	11	12
	A	PERN18	PERP18	PERN19	PERP19	I2C_SCL3	I2C_SDA3
	B	PETN18	PETP18	PETN19	PETP19	PERST#_6	PERST#_7
CON_1		2	3	5	6	8	9
	A	PERN20	PERP20	PERN21	PERP21	CLKP3	CLKN3
	B	PETN20	PETP20	PETN21	PETP21	CLKP2	CLKN2
		14	15	17	18	11	12
	A	PERN22	PERP22	PERN23	PERP23	I2C_SCL2	I2C_SDA2
	B	PETN22	PETP22	PETN23	PETP23	PERST#_4	PERST#_5
CON_2		2	3	5	6	8	9
	A	PERN24	PERP24	PERN25	PERP25	CLKP5	CLKN5
	B	PETN24	PETP24	PETN25	PETP25	CLKP4	CLKN4
		14	15	17	18	11	12
	A	PERN26	PERP26	PERN27	PERP27	I2C_SCL1	I2C_SDA1
	B	PETN26	PETP26	PETN27	PETP27	PERST#_2	PERST#_3
CON_3		2	3	5	6	8	9
	A	PERN28	PERP28	PERN29	PERP29	CLKP7	CLKN7
	B	PETN28	PETP28	PETN29	PETP29	CLKP6	CLKN6
		14	15	17	18	11	12
	A	PERN30	PERP30	PERN31	PERP31	I2C_SCL0	I2C_SDA0
	B	PETN30	PETP30	PETN31	PETP31	PERST#_0	PERST#_1

**Note:** Host card supports 4 types of side-band modes (SC,ACE, ACU, and CM). The sideband signals listed in table above is for SC mode.

## Install USB Driver

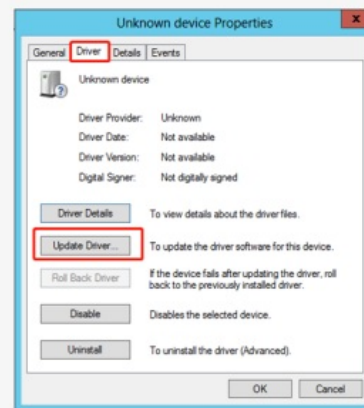
Download and install the CDC driver for unidentified device (VID\_03EB&PID\_2018)

Available at: [https://www.serialcables.com/wp-content/uploads/2018/11/SynergyUSBCDC\\_20180518.rar](https://www.serialcables.com/wp-content/uploads/2018/11/SynergyUSBCDC_20180518.rar)



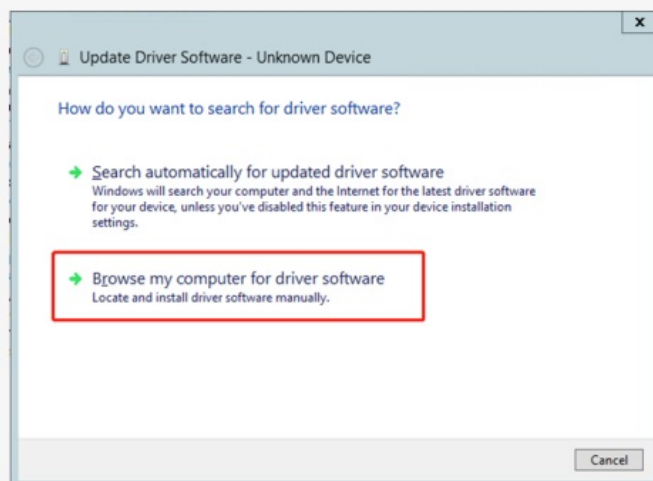
[Figure 1]

**Note:**

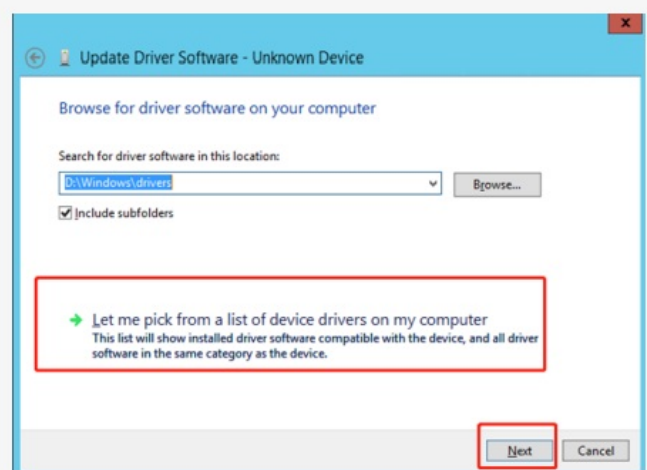


[Figure 2]

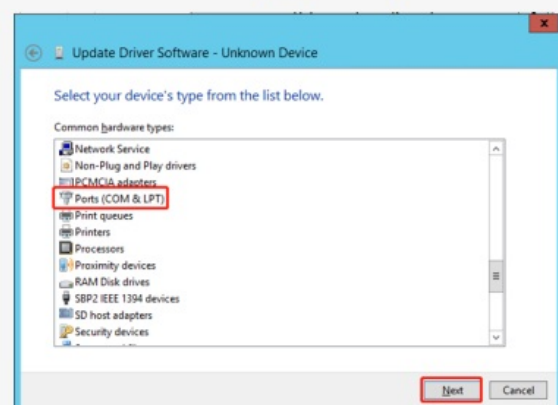
No USB driver is



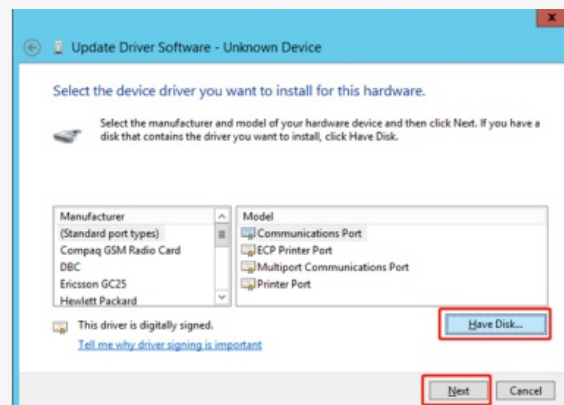
[Figure 3]



[Figure 4]

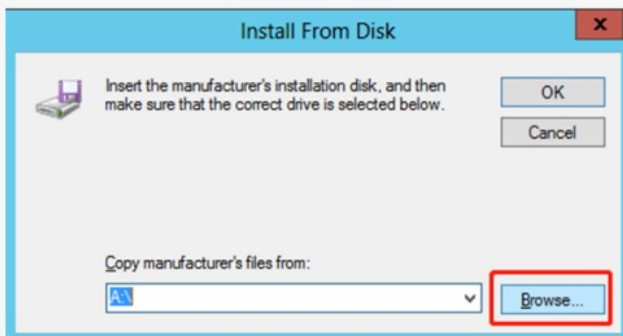


[Figure 5]

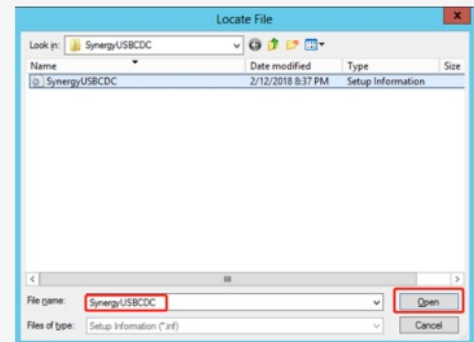


[Figure 6]

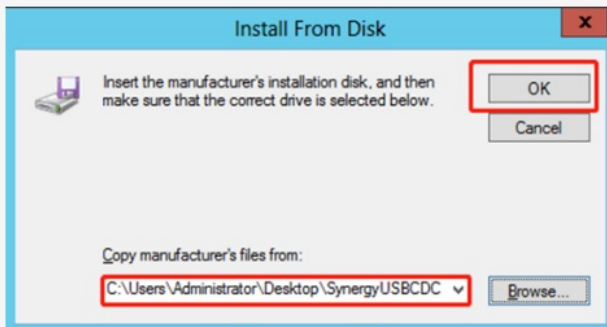




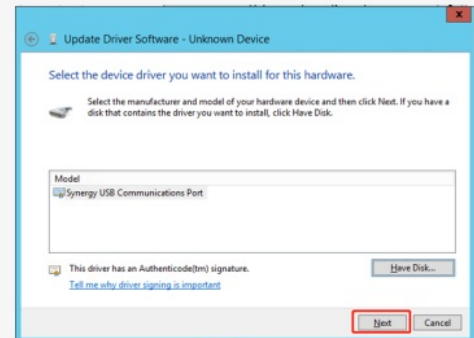
[Figure 7]



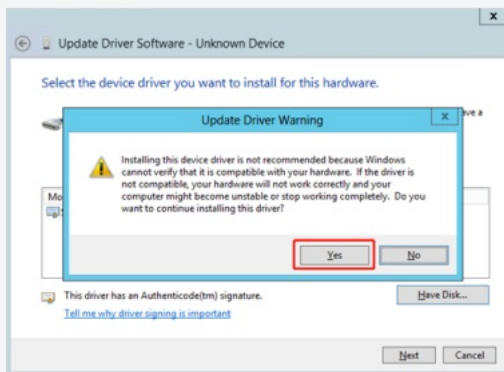
[Figure 8]



[Figure 9]



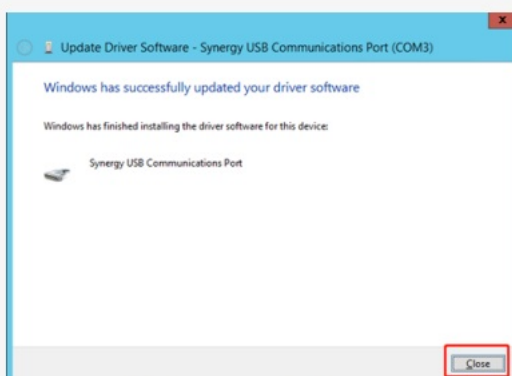
[Figure 10]



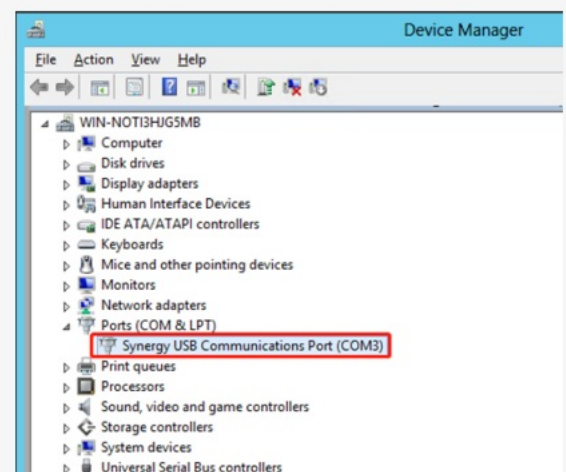
[Figure 11]



[Figure 12]



[Figure 13]



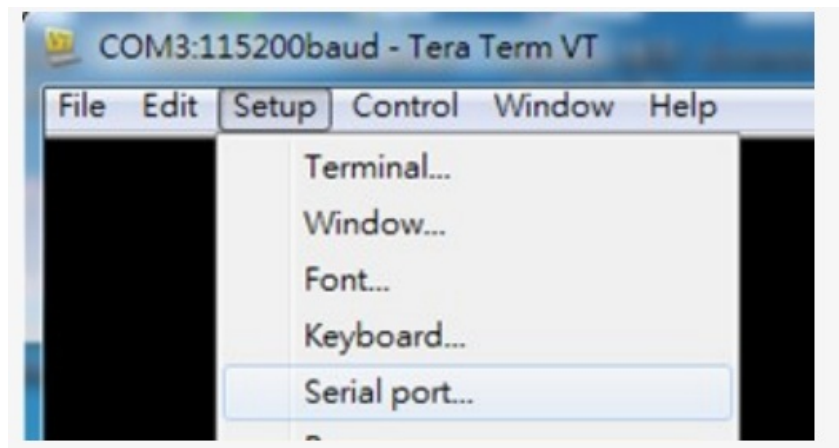
[Figure 14]

## MCU CLI Setup

**Step 1.** Install and launch Tera Term application



**Step 2:** To ensure proper communications between host adapter card and the VT100 Terminal emulation, please configure the VT100 Terminal emulation settings to the values shown below:



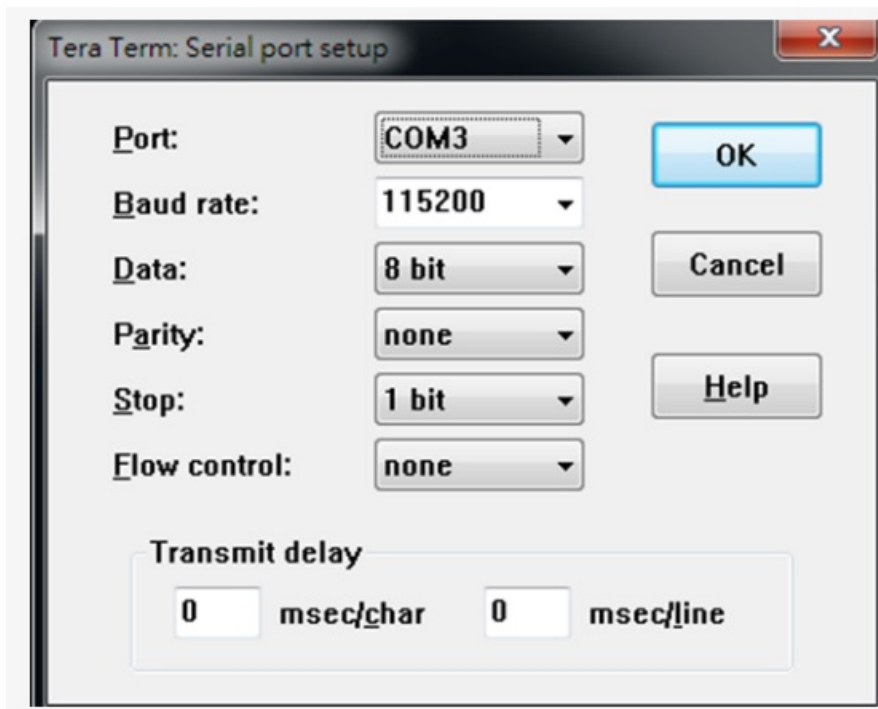
**Step 3:**

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.



### MCU FW Upgrading (Option 1)

**Step 1.** Type “fdl mcu” in CLI commands

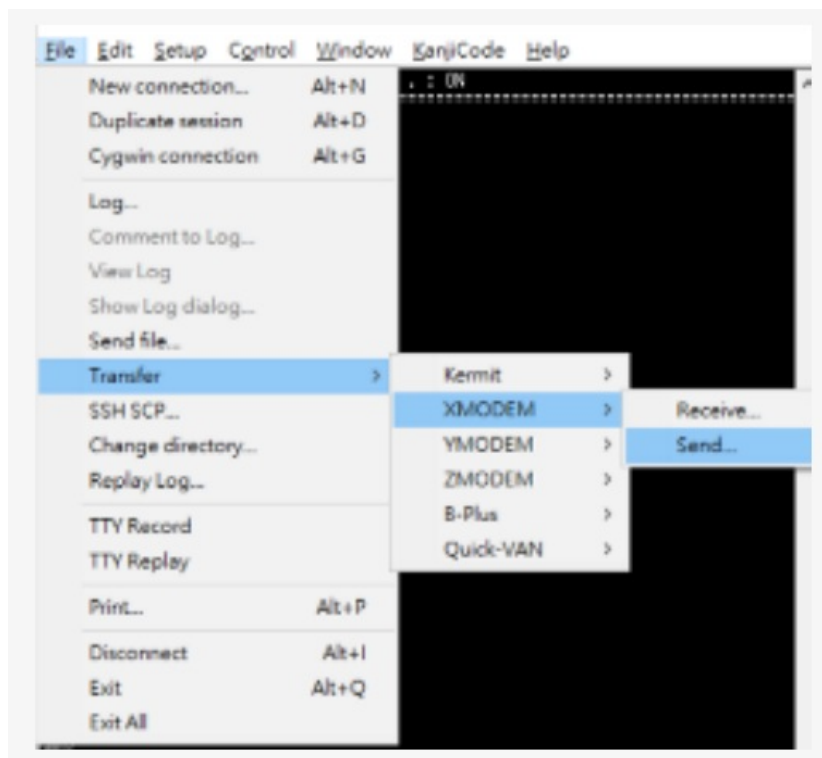
```
File Edit Setup Control Window KanjiCode Help
Cmd>fdl mcu

=====
Xmodem update Atlas2 FW & Config
=====

Use Q Or q to quit Download
Send data using the -Xmodem- protocol from terminal emulator now!

Xmodem successfully received 244736 bytes
Complete update process !!!
Please reboot system now !!!
```

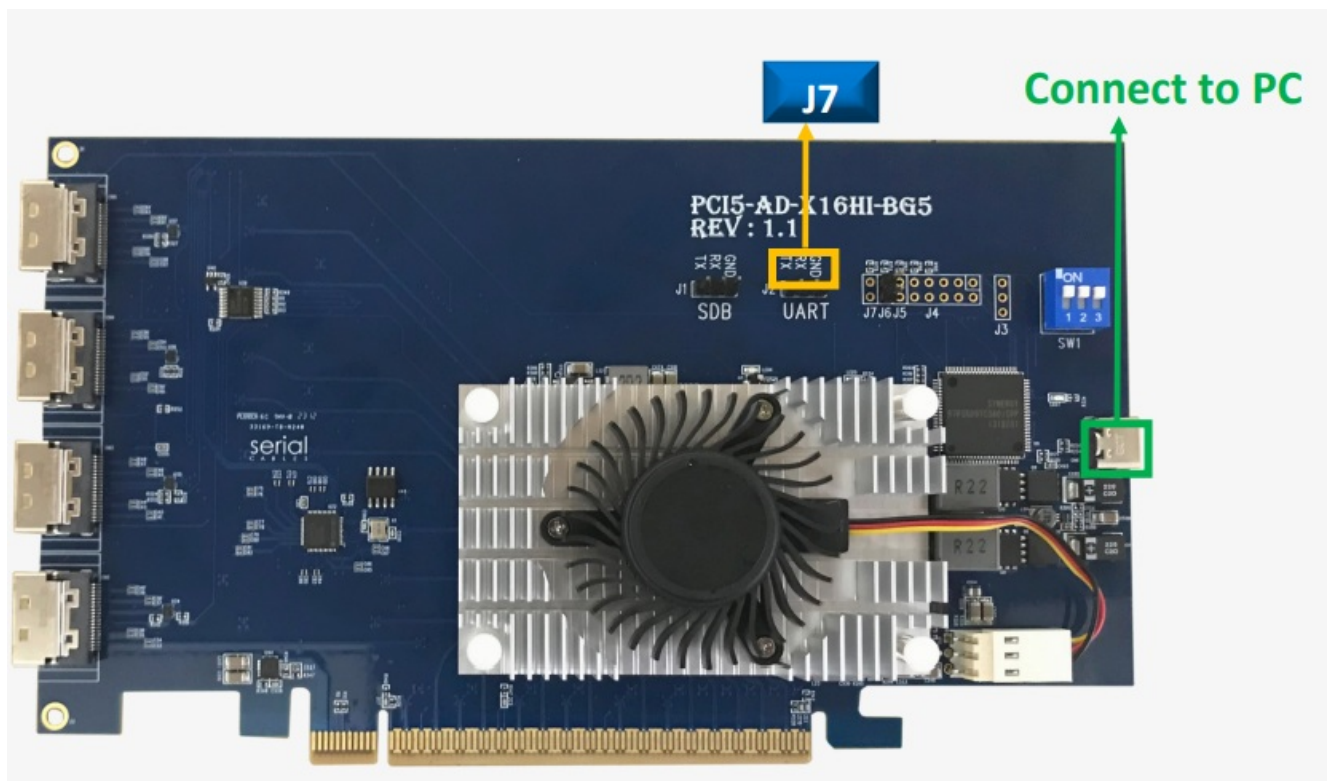
**Step 2:** Sending updated FW(i.e Atlas2\_MCIO\_Host\_Card\_Fw\_v001) via XMODEM.  
It will take few seconds to complete update process.



**Step 3.** Power cycle host card to apply new FW setting.

### MCU FW Upgrading (Option 2)

**Step 1.** Jumper J7 ON to force MCU entering FW upgrading mode.



**Step 2:** Install host adapter card into PCIe slot of server, and connect Micro USB port to PC which uses for FW upgrading, then power on the server.

**Step 3**

- it will show an added USB device in PC or laptop.
- Put upgrading FW(i.e PCI5\_AD\_x16HI\_BG5\_V01.srec) into the folder of FW.
- Put update.txt in the root folder.

名稱	日期	類型	大小	時間
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 host card to apply new FW setting.

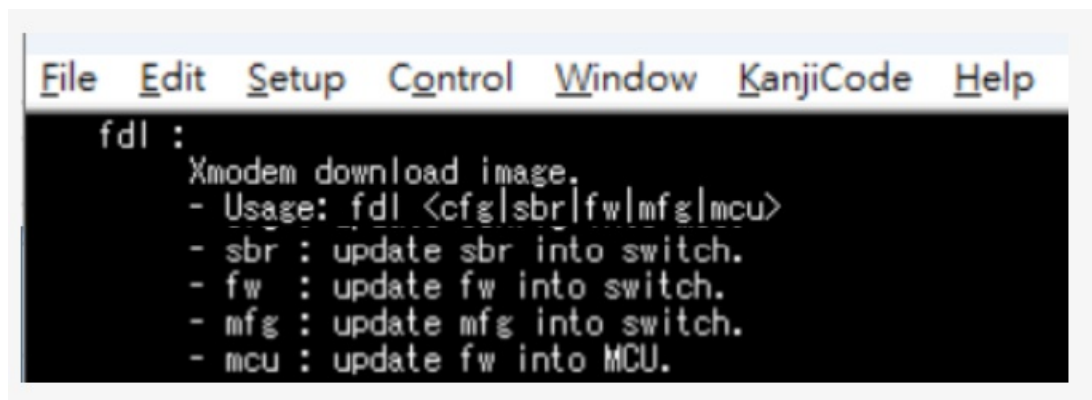
## MCU Commands List

Commands	Description
<b>fdl</b>	Update the configuration file or firmware for Atlas2 PCIe switch and MCU FW upgrading
<b>lsd</b>	Shows switch temperature, FAN speed, voltages and Side-band modes.
<b>mw</b>	Write 32bits data into any register as defined in Atlas2 switch
<b>dr</b>	Dump the values of Atlas2 switch for any register with specified address.
<b>dp</b>	Dump the values of Atlas2 switch for any register with specified port number.
<b>df</b>	Dump the values of Atlas2 flash with specified address.
<b>ssdrst</b>	Issue 300ms duration PERST# to attached devices in MCIO ports or straddlePCIe connector.
<b>pwrdis</b>	Set PWRDIS to H state (disable SSD power), or L state (enable SSD power)
<b>hled</b>	Turn ON/OFF the host LED inside EDSFF drive
<b>showport</b>	Show link status for USP in golden finger, DSP for MCIO ports and Straddle port.
<b>bist</b>	On-board I2C devices diagnostic.
<b>spread</b>	Show spread information, set -0.3% or -0.5% SSC in PCIe reference clock to Atlas2 switch.
<b>clk</b>	Show the clock output status or disable/enable the clock output for all MCIO ports.
<b>iicwr</b>	SMBus data read from drive attached in MCIO port.
<b>iicw</b>	SMBus data write to drive attached in MCIO port.
<b>ver</b>	Shows card information, MCU FW and Atlas2 FW version.
<b>sysinfo</b>	Shows system information
<b>reset</b>	MCU FW reset (not including Atlas2 PCIe switch)

### fdl Command

Update the configuration file or firmware for Atlas2 PCIe switch. -Usage: fdl sbr|fw|mfg|MCU

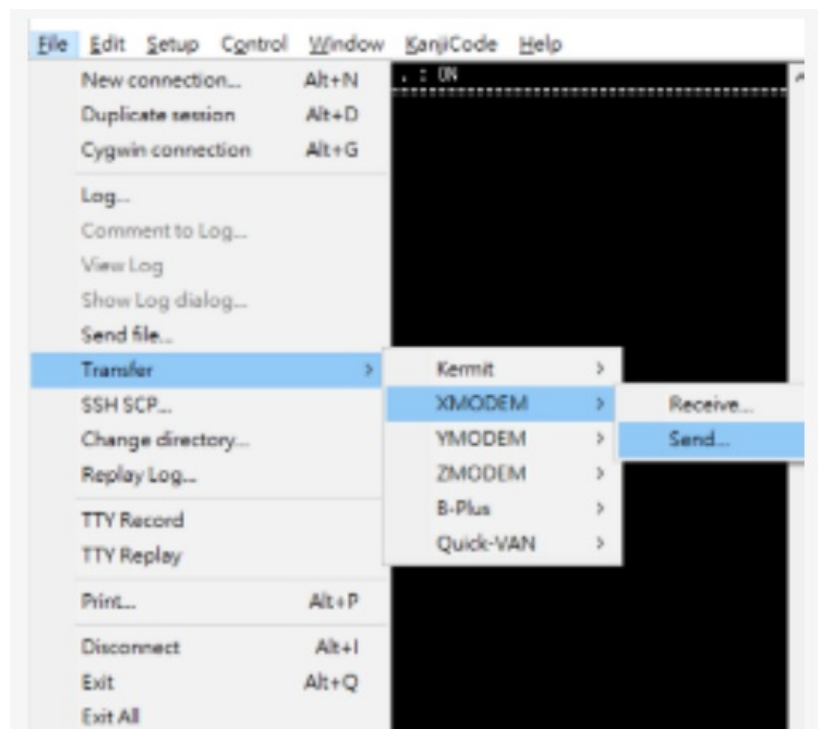




```
File Edit Setup Control Window KanjiCode Help
fdl :
  Xmodem download image.
  - Usage: fdl <cfg|sbr|fw|mfg|mcu>
  - sbr : update sbr into switch.
  - fw  : update fw into switch.
  - mfg : update mfg into switch.
  - mcu : update fw into MCU.
```

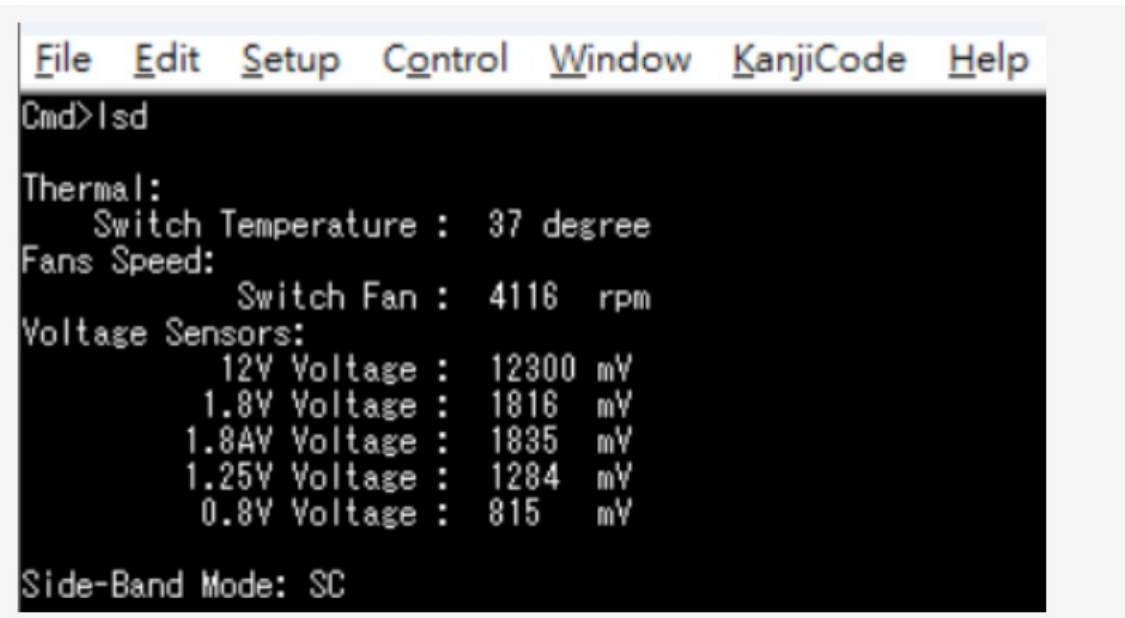
- sbr=update the SBR file into flash of Atlas2 switch. (Applicable in base switch mode)
- fw=program or upgrade FW into flash of Atlas2 switch (Applicable in Synthetic mode)
- mfg=update mfg file into flash of Atlas2 switch (Reserved for further used).

**mcu=on-board MCU FW upgrading**



### Isd Command

Shows switch temperature, FAN speed, voltages and Side-band modes. -Usage: Isd



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

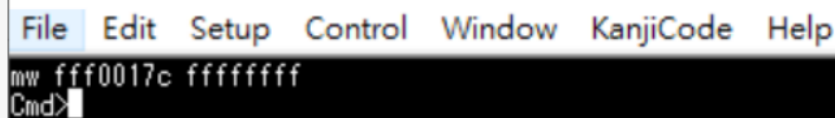
Thermal:
  Switch Temperature : 37 degree
Fans Speed:
  Switch Fan : 4116 rpm
Voltage Sensors:
  12V Voltage : 12300 mV
  1.8V Voltage : 1816 mV
  1.8A Voltage : 1835 mV
  1.25V Voltage : 1284 mV
  0.8V Voltage : 815 mV

Side-Band Mode: SC
```

- Thermal: Temperature sensor near Atlas2 PCIe switch
- Fan Speed: The FAN TACH value reading.
- Voltage sensors: Main voltages monitoring in Atlas2 host card.
- Side-Band Mode: Shows the side-band mode in running.

#### mw Command

- Write 32bits data into any register as defined in Atlas2 switch
- Usage: mw <register(H)> <data(H)>
- register(H) : register should be 0x00000000 ~ 0xFFFFFFFFC
- data(H) : data should be 0x00000000 ~ 0xFFFFFFFF



```
File Edit Setup Control Window KanjiCode Help
mw fff0017c ffffffff
Cmd>
```

Write data “0xFFFFFFFF” into register address “0xFFF0017C” of Atlas2 PCIe switch

#### dr Command

- Dump the values of Atlas2 switch for any register with specified address.
- Usage: dr <register(H)> [count(H)]
- register(H) : register should be 0x00000000 ~ 0xFFFFFFFFC
- count(H) : count should be 0x00000000 ~ 0xFFFFFFFFC

```

File Edit Setup Control Window KanjiCode Help
Cmd>dr 60800000

60800000:c0341000 00100006 060400a0 00010010
60800010:fa000000 00000000 00160403 000001f1
60800020:0000ffff 0001fff1 00000000 00000000
60800030:00000000 00000040 00000000 00000128
60800040:c8034801 00000008 03866805 00000000
60800050:00000000 00000000 00000000 00000000
60800060:00000000 00000000 0052a410 012c8004
60800070:00090020 0042ed05 01030000 00000000
60800080:00000000 00000000 00000000 00350840
60800090:00000000 81803f3e 011e0003 00000000
608000a0:00000000 0000000d 00321000 00000000
608000b0:00000000 00000000 00000000 00000000
608000c0:00000000 00000000 00000000 00000000
608000d0:00000000 00000000 00000000 00000000
608000e0:00000000 00000000 00000000 00000000
608000f0:00000000 00000000 00000000 00000000

```

Dump the values in Atlas2 switch registers, start from address "0x60800000" .

```

File Edit Setup Control Window KanjiCode Help
Cmd>dr 60800000 4

60800000:c0341000

```

Dump the values in Atlas2 switch registers, start from address "0x60800000" with 4bytes count.

## dp Command

- Dump the values of Atlas2 switch for any register with specified port number.
- Usage: dp port\_number(D)
- port\_number(D) : port\_number should be 0 ~ 31

```

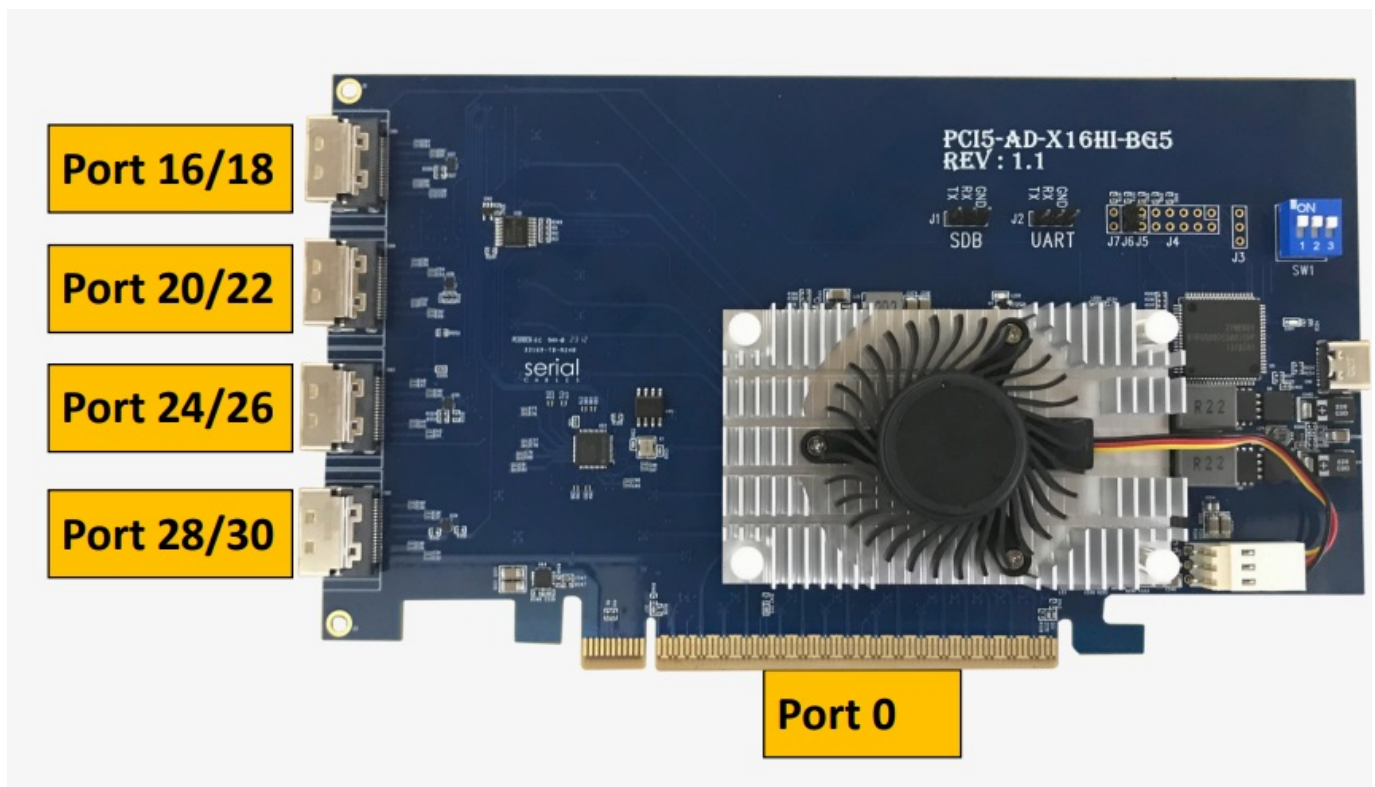
File Edit Setup Control Window KanjiCode Help
Cmd>dp 0

60800000:c0341000 00100006 060400a0 00010010
60800010:fa000000 00000000 00160403 000001f1
60800020:0000ffff 0001fff1 00000000 00000000
60800030:00000000 00000040 00000000 00000128
60800040:c8034801 00000008 03866805 00000000
60800050:00000000 00000000 00000000 00000000
60800060:00000000 00000000 0052a410 012c8004
60800070:00090020 0042ed05 01030000 00000000
60800080:00000000 00000000 00000000 00350840
60800090:00000000 81803f3e 011e0003 00000000
608000a0:00000000 0000000d 00321000 00000000

```

Dump the values in Atlas2 switch registers for Port "0".

## Port number mapping



#### df Command

Dump the values of Atlas2 flash with specified address.

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

```
File Edit Setup Control Window KanjiCode Help
Cmd>df 400
00000400:3ba234c0 00020000 60020000 60040000
00000410:10000000 70040000 10000000 00000000
00000420:01000000 00000000 01000000 00000000
00000430:01000000 00000000 01000000 00000000
00000440:01000000 00000000 01000000 00000000
00000450:01000000 00000000 01000000 00000000
00000460:01000000 00000000 01000000 80040000
00000470:38040000 00000000 01000000 00240040
00000480:92000000 00000000 00000000 00000000
00000490:4c30308c 80000100 01000000 02000000
000004a0:3c140128 051ebb00 00022805 00000000
000004b0:00000000 00ff7100 00000000 0000c029
000004c0:08f09fe5 00f020e3 00f020e3 08f09fe5
000004d0:00000000 00000000 00000000 00000000
000004e0:00000000 00000000 00000000 00000000
000004f0:00000000 00000000 00000000 00000000
```

Dump the values in Atlas2 flash registers, start from address "0x00000400".

```
File Edit Setup Control Window KanjiCode Help
Cmd>df 400 4
00000400:3ba234c0
```

Dump the values in Atlas2 flash registers, start from address "0x00000400" with 4bytes count.

#### ssdrst Command

Issue PERST# with 300ms duration to attached devices in MCIO ports.



- Usage: ssdrst <con(D)|all> [channel(C)]
- con(D) : con number should be 0 ~ 3
- channel(C) : channel number should be a or b

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

Issue PERST# signals in MCIO CON1.

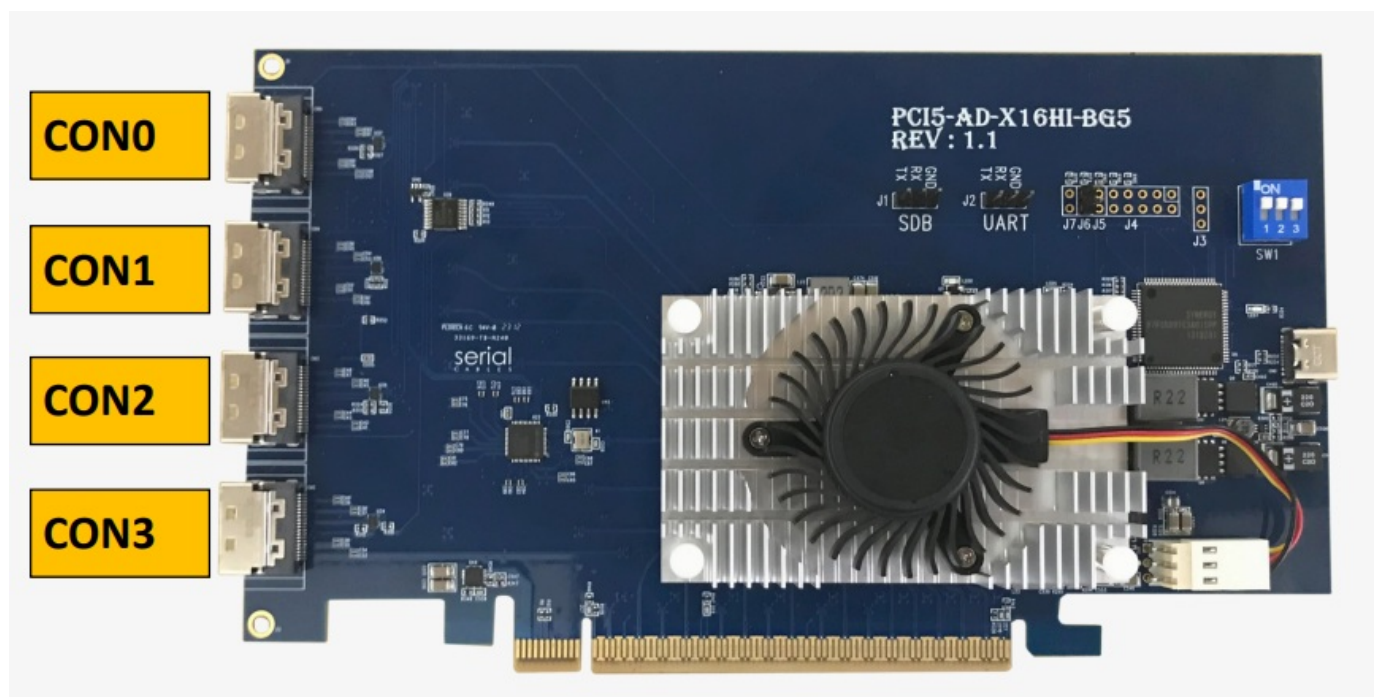
```
File Edit Setup Control Window KanjiCode Help
Cmd>ssdrst all
Reset all con success
```

Issue PERST# signals in MCIO CON0 to CON3.

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

Issue PERST# signals in MCIO CON1 for channel A.

## CON Mapping



## pwrdis Command (Applicable in ACE and ACU modes)

Set the signal level of pwrdis in MCIO connectors to be high or low.

- Usage: pwrdis [<con(D)|all> <h/l>(C)]
- con(D) : con number should be 0 ~ 3
- h(C) : disable SSD power
- l(C) : enable SSD power
- Ex : pwrdis all h
- Ex : pwrdis 1 h



File Edit Setup Control Window KanjiCode Help

Cmd>pwrdis all h

Set con 0 pwrdis level to high success.  
Set con 1 pwrdis level to high success.  
Set con 2 pwrdis level to high success.  
Set con 3 pwrdis level to high success.

Set PWRDIS to "H" state in all of MCIO ports

File Edit Setup Control Window KanjiCode Help

Cmd>pwrdis 1 h

Set con 1 pwrdis level to high success.

Cmd>pwrdis 1 l

Set con 1 pwrdis level to low success.

Set PWRDIS to "H" or "L" state in MCIO port 1

### hled Command (Applicable in ACE mode)

Set hled signals in EDSFF SSD to be on or off.

- Usage: htled <con(D)|all> <on|off>
- con(D) : con number should be 0 ~ 3
- Ex : hled all on
- Ex : hled 1 on

File Edit Setup Control Window KanjiCode Help

Cmd>hled all on

Set con 0 host led on success.  
Set con 1 host led on success.  
Set con 2 host led on success.  
Set con 3 host led on success.

Turn on all of host LEDs in EDSFF drives.

File Edit Setup Control Window KanjiCode Help

Cmd>hled 1 on

Set con 1 host led to on success.

Cmd>lend 1 off

Unsupported Cmd Command

Cmd>hled 1 on

Set con 1 host led to on success.

Cmd>hled 1 off

Set con 1 host led to off success.

Turn ON/OFF host LED in EDSFF drive which attached in MCIO port1

### showport Command

Show link status for USP in golden finger, DSP for MCIO ports and Straddle port. -Usage: showport

Negotiated link speed/width
Maximum link speed/width

```

File Edit Setup Control Window KanjiCode Help
Cmd>showport

Atlas2 chip ver: A0
=====
Upstream
=====
USP: port 0, speed = Gen3, width = 16, max_speed = Gen5, max_width = 16
=====
Downstream
=====
Con0: port 16 speed = Gen5, width = 4, max_speed = Gen5, max_width = 4
Con1: port 20 speed = Gen4, width = 2, max_speed = Gen5, max_width = 2
Con1: port 22 speed = Gen4, width = 2, max_speed = Gen5, max_width = 2
Con2: port 24 speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con2: port 25 speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con2: port 26 speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con2: port 27 speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con3: port 28 speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con3: port 29 speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con3: port 30 speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con3: port 31 speed = Gen1, width = 0, max_speed = Gen5, max_width = 1

```

**USP** (Upstream port), the port in Golden finger.  
etc.  
The maximum link speed is Gen5 and link width to x16 in default.  
The negotiated link speed and width to Gen3 x16.

**DSP** (Downstream ports), the ports in MCIO connectors.  
Atlas2 PCIe switch supports DPR (Dynamic Port Reconfiguration), it configures Gen5 x1 for 16 lanes in MCIO ports 16 to 31.  
etc.

1. A Gen5 x4 device attached in CON0, it shows the negotiated speed/width to be Gen5x4 in Port 16.
2. A Gen4 dual port SSDs attached in CON1, it shows Gen4x2 in Port 20 and Port 22.

**bist Command**  
On-board I2C devices diagnostic.

- Usage: bist

File Edit Setup Control Window KanjiCode Help

Cmd>bist

Scan I2C channel 0 devices ....  
Device address:0xa0 ok.  
Device address:0x12 ok.  
  
Scan I2C channel 1 devices ....  
Device address:0xe2 ok.

Show all of on-board I2C devices for debug purpose.

## Spread Command

Set the PCIe reference clock to Show spread information or set -0.5% SSC in PCIe reference clock to Atlas2 switch.

- Usage: spread [1|2|off]
  1. : Down spreading 3000PPM.
  2. : Down spreading 5000PPM.
- off : Turn off spread.

## Spread command usually used for SRIS testing.

It requires to power cycle host card to apply new “spread” setting.

```
File Edit Setup Control Window KanjiCode Help
Cmd>spread
Spread status:off
Cmd>
```

```
File Edit Setup Control Window KanjiCode Help
Cmd>spread
Spread status:Down spreading 3000PPM.
```

```
File Edit Setup Control Window KanjiCode Help
Cmd>spread
Spread status:Down spreading 5000PPM.
```

Shows the reference clock of Atlas2 switch running in CFC (spread off) or SSC (3000ppm or 5000ppm).

```
File Edit Setup Control Window KanjiCode Help
Cmd>spread 1
Set down spreading 3000PPM success.
Cmd>spread 2
Set down spreading 5000PPM success.
```

Set to PCIe reference clock to SSC(3000ppm or 5000ppm).

## clk Command

Show the clock output status or disable/enable the clock output for all MCIO ports. Usage: clk [en|dis] clk command usually used for SRNS or SRIS testing.

File Edit Setup Control Window KanjiCode Help

```
Cmd>clk
DIFF0 output enable
DIFF1 output enable
DIFF2 output enable
DIFF3 output enable
DIFF4 output enable
DIFF5 output enable
DIFF7 output enable
DIFF8 output enable
```

Show the clock output status for Atlas2 PCIe switch and all MCIO ports.

File Edit Setup Control Window KanjiCode Help

```
Cmd>clk dis
OK, clock output disable
Cmd>
```

File Edit Setup Control Window KanjiCode Help

```
Cmd>clk
Out00: clk disable
Out01: clk disable
Out02: clk disable
Out03: clk disable
Out04: clk disable
Out05: clk disable
Out06: clk disable
Out07: clk disable
Out08: clk enable
```

1. Enable or disable clock output are for all of clocks in MCIO ports, the PCIe reference clock to Atlas2 PCIe switch is always enabled.
2. Clock output/disable feature is allowed for dynamically changed, it doesn't need to power cycle host card to apply new setting.
3. The clock enable/disable setting will be stored in MCU and applied automatically in next time host card power on.

### iicwr Command

SMBus data read from drive attached in MCIO ports.

- Usage: iicwr <Addr(H)> <con(D)> <ReadByte(D)> <WriteData(H)>
- Addr(H) : Device address C-on(D) : Con should be 0 ~ 3
- 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

```

Read 8 bytes data starts from register "0" of I2C slave address "0xd4" in drive which attaches in MCIO CON1.

### iicw Command

SMBus data write to drive attached in MCIO port.

- Usage: iicw <Addr(H)> <conD> <WriteData(H)...>
- Addr(H) : Device address
- con(D) : Con should be 0 ~ 4
- WriteData(D) : Max write byte is 128 byte

Ex : iicw d4 1 ff

```

File Edit Setup Control Window KanjiCode Help
Cmd>iicw d4 1 ff

Write Data [0] = ff

```

Write data "0xff" to I2C slave address "0xd4" in drive which attaches in MCIO CON 1.

### ver Command

Shows card information, MCU FW and Atlas2 FW version. -Usage: ver

```

File Edit Setup Control Window KanjiCode Help
Cmd>ver

S/N      : B5A042305010001
Company  : Serial Cables
Model    : ATLAS2 MCIO HOST CARD
Version  : 0.0.2      Date : May  2 2023 15:49:11
=====
Atlas2 Firmware Revision Information:-
=====
Active Firmware: unknown
Version : unknown
Platform: unknown

```

### sysinfo Command

Show system information.

Sysinfo command is for host card diagnostic, it combines ver, lsd, pwrdis, spread, clk, showport, and bist commands.

- Usage: sysinfo



```

File Edit Setup Control Window KanjiCode Help
Cmd>sysinfo
=====
ver
=====
S/N      : B5A042305010001
Company  : Serial Cables
Model    : ATLAS2 MCIO HOST CARD
Version  : 0.0.2   Date : May 2 2023 15:49:11
=====
Atlas2 Firmware Revision Information:-
=====
Active Firmware: unknown
Version : unknown
Platform: unknown
=====
lsd
=====
Thermal:
  Switch Temperature : 38 degree
Fans Speed:
  Switch Fan : 4122 rpm
Voltage Sensors:
  12V Voltage : 12294 mV
  1.8V Voltage : 1826 mV
  1.84V Voltage : 1848 mV
  1.25V Voltage : 1288 mV
  0.8V Voltage : 819 mV
Side-Band Mode: SC
=====
pwrdis
=====
Not support in SC mode
=====
spread
=====
Spread status:OFF
=====
clk
=====
Out00: clk enable
Out01: clk enable
Out02: clk enable
Out03: clk enable
Out04: clk enable
Out05: clk enable
Out06: clk enable
Out07: clk enable
Out08: clk enable
=====
showport
=====
Atlas2 chip ver: A0
=====
Upstream
=====
USP: port 0, speed = Gen3, width = 16, max_speed = Gen5, max_width = 16
=====
Downstream
=====
Con0: port 16, speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con0: port 17, speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con0: port 18, speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con0: port 19, speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con1: port 20, speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con1: port 21, speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con1: port 22, speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con1: port 23, speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con2: port 24, speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con2: port 25, speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con2: port 26, speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con2: port 27, speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con3: port 28, speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con3: port 29, speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con3: port 30, speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
Con3: port 31, speed = Gen1, width = 0, max_speed = Gen5, max_width = 1
=====
bist
=====
Scan I2C channel 0 devices ....
Device address:0xa0 ok.
Device address:0x12 ok.
Scan I2C channel 1 devices ....
Device address:0xe2 ok.

```

## reset Command

MCU FW reset (It won't reset Atlas2 PCIe switch) -Usage: reset

```

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

```

## Cables interoperability

PCI5-ENC8-E3-08



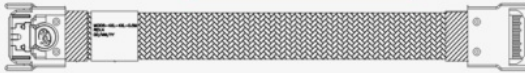
PCI5-AD-MCIOU2



U.2 1x4 or 2x2



MCIO5-4XL-4XL



PCI5-AD-MCIOEDSFF



E.1L, E1.S, E3



PCI5-ENC8-E3-08



PCI5-AD-MCIOU2



U.2 1x4 or 2x2



MCIO5-4XL-4XL

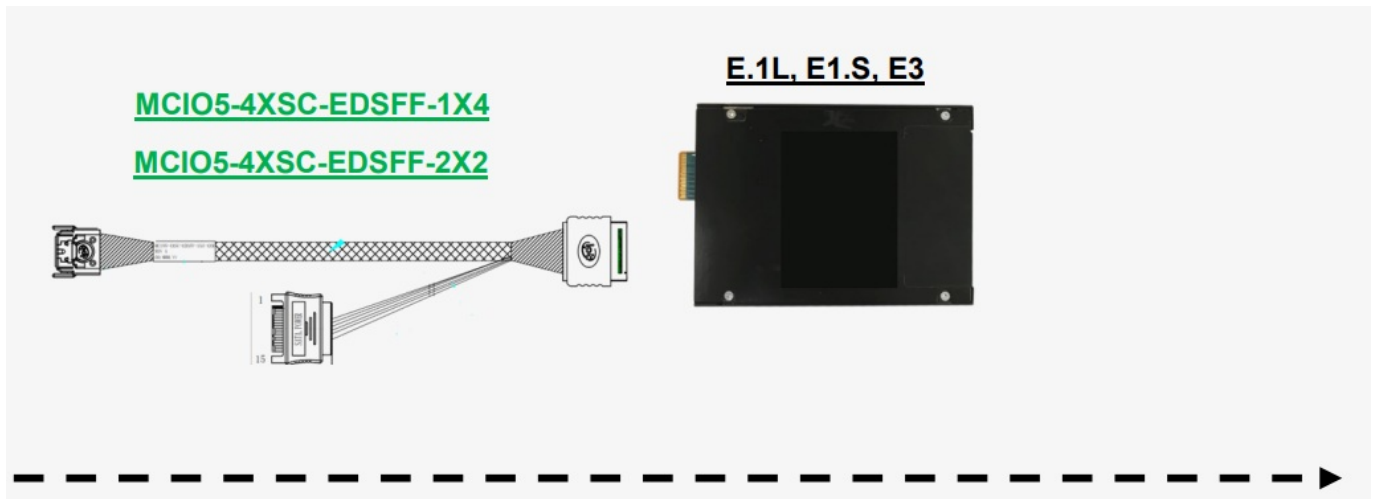
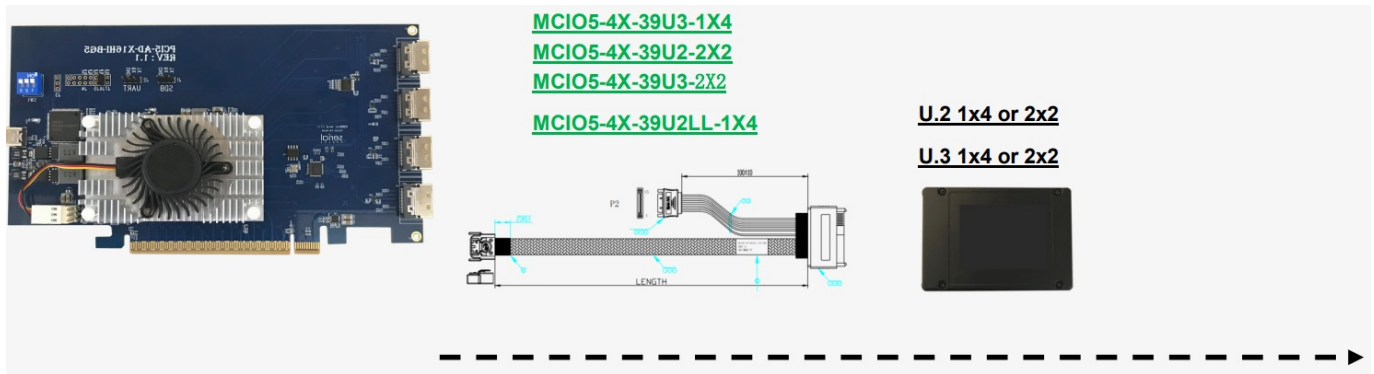


PCI5-AD-MCIOEDSFF



E.1L, E1.S, E3






## Frequently Asked Questions

- Q: What are the different modes supported by the Atlas2 MCIO Host Adapter Card?**  
 A: The card supports SC mode, ACE mode, ACU mode, and CM mode for various connectivity options.
- Q: How do I connect external devices to the host adapter card?**  
 A: Use the appropriate cables and adapters based on the desired mode of operation (SC, ACE, ACU, CM) as described in the user manual.
- Q: What does each LED on the host adapter card signify?**  
 A: LED7 indicates the health status of the host card, while other LEDs provide information on switch operation and port link status.

## Documents / Resources

 <p>Atlas2 MCIO Host Adapter Card</p> <p>User's Manual Rev 1.0 May 2023</p>	<p><a href="#">serial CABLES Atlas2 MCIO Host Adapter Card</a> [pdf] User Manual</p> <p>Atlas2 MCIO Host Adapter Card, MCIO Host Adapter Card, Host Adapter Card, Adapter Card, Card</p>
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## References

- [serialcables.com/product-category/gen5-mcio-cables/](https://serialcables.com/product-category/gen5-mcio-cables/)
- [serialcables.com/wp-content/uploads/2018/11/SynergyUSBCDC\\_20180518.rar](https://serialcables.com/wp-content/uploads/2018/11/SynergyUSBCDC_20180518.rar)

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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