



serial
CABLES

Atlas3 Host Adapter Card



User's Manual

REV : 0.81

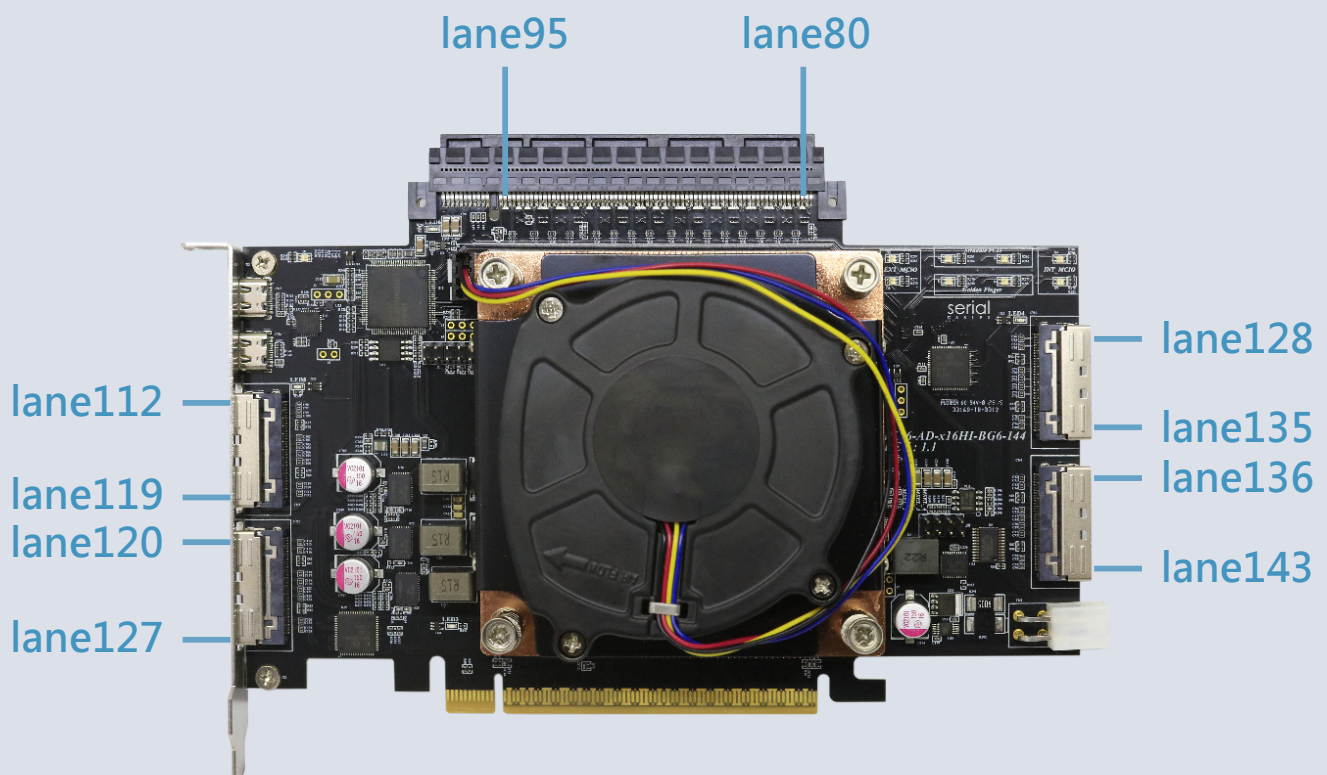
April. 2025



Change history

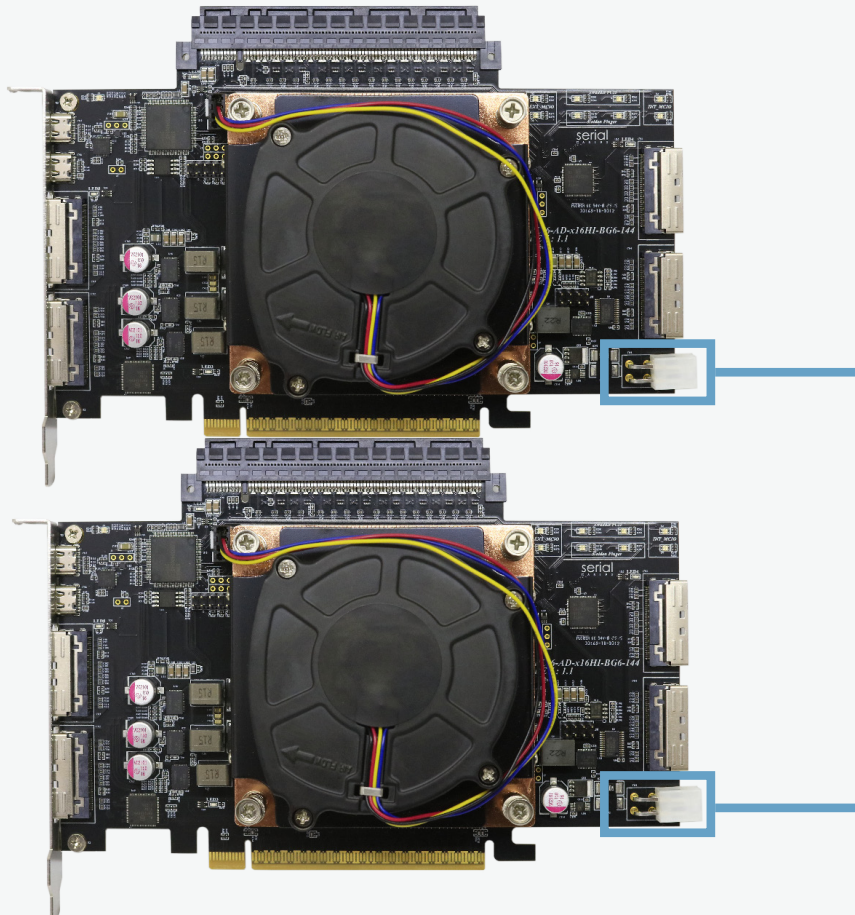
REV	Change history
0.81	

Lane Mapping





- ❌ **Make sure the ESP 12V input is connected.**
- ❌ **Make sure host card powered on together with the motherboard.**



NOTICE

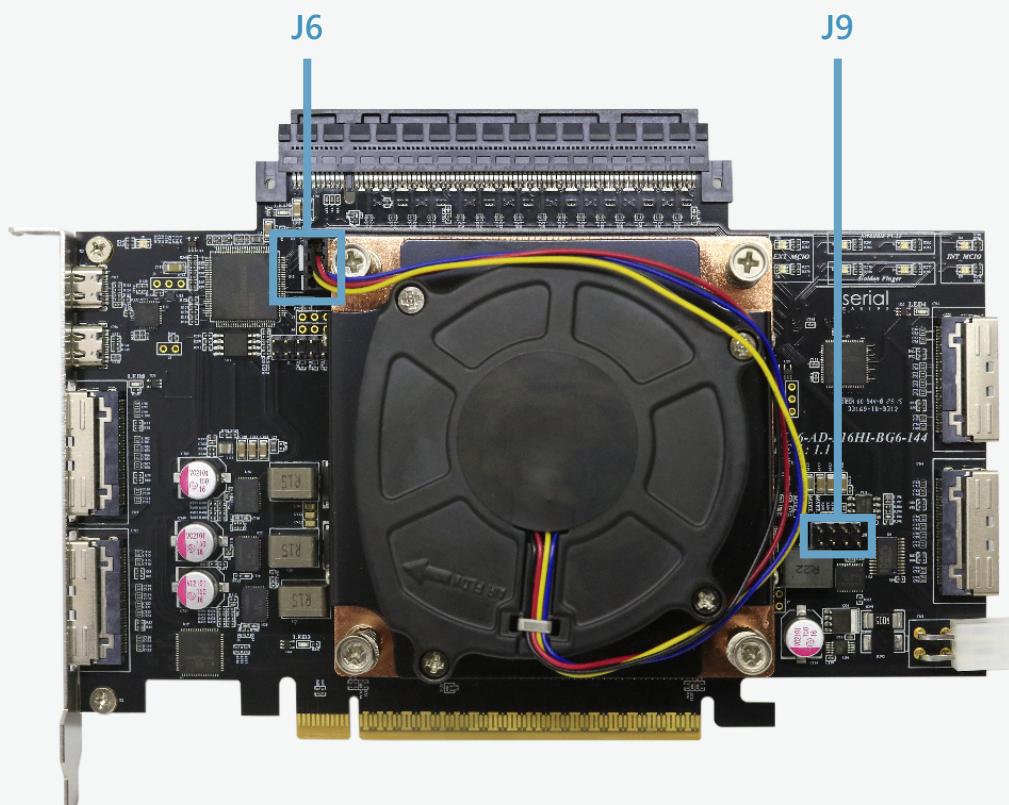
Standard PCIe x16 slots provide only 75W.
This switch requires 80–150W for proper operation.
Use the CN8 connector to supply additional power.
Please check your motherboard's PCIe power specifications.
Insufficient power may result in hardware damage.

POWER NOTICE

- **For Independent :** Minimum 12v 20A/300w
- **For combine with system (include host card and motherboard) :**
Minimum 800w



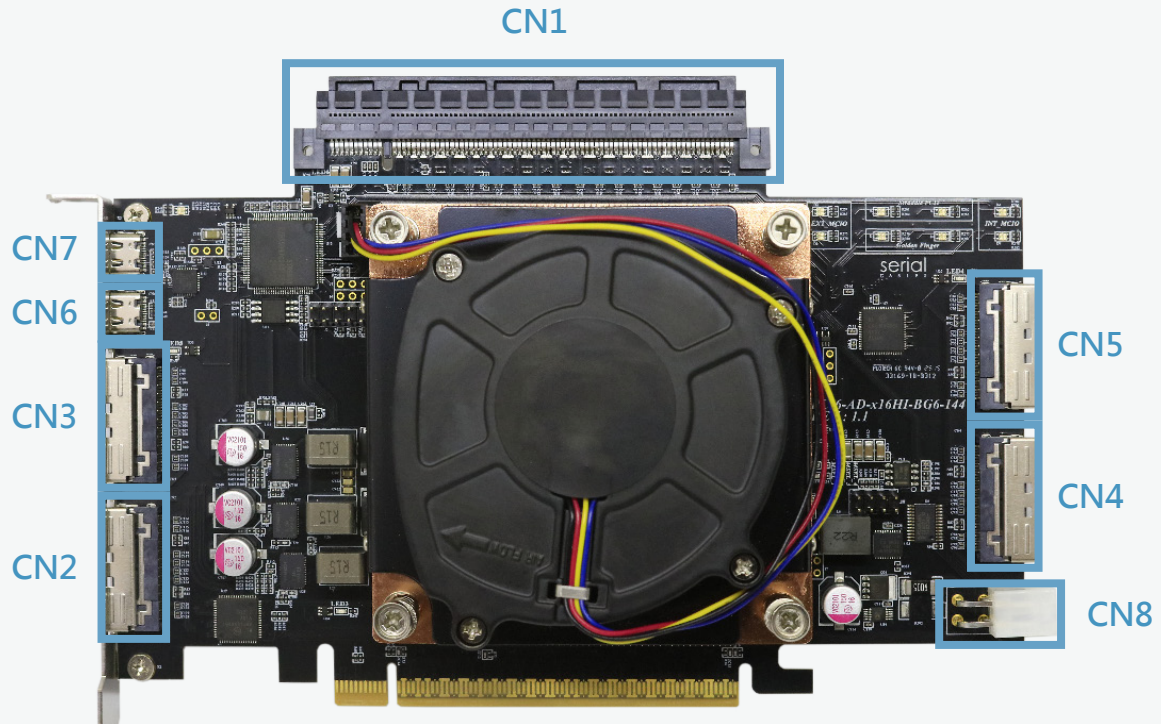
Function Description For Headers



Location	Descriptions
J6	fan power
J9	sbr mode sel



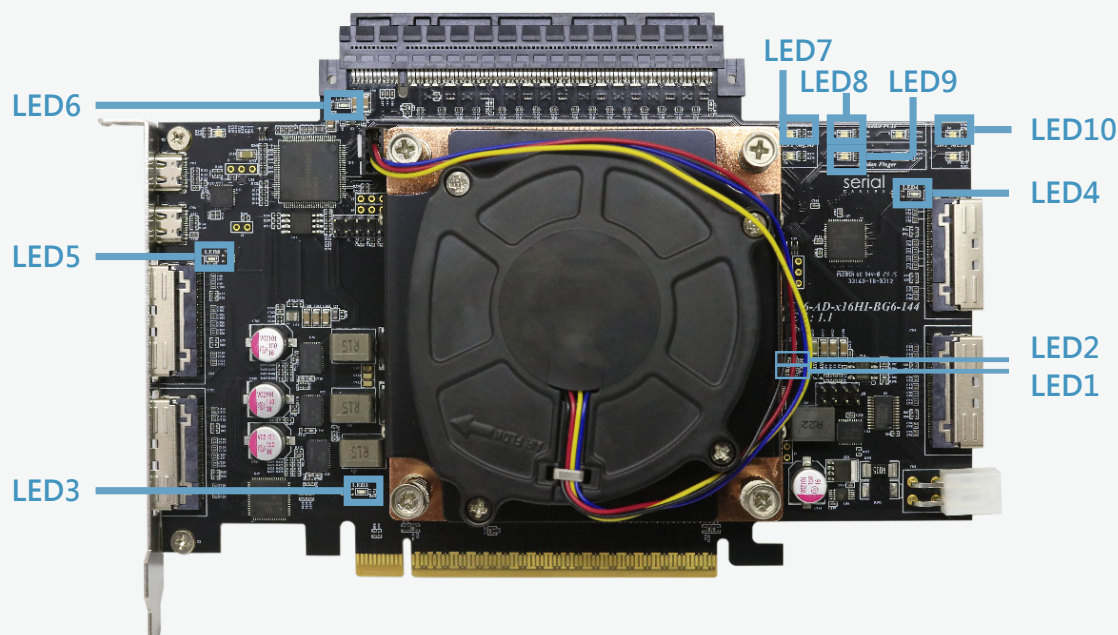
Function Description For Connectors



Location	Descriptions
CN1	Straddddle PCIE x16
CN2	MCIO x8 connector
CN3	MCIO x8 connector
CN4	MCIO x8 connector
CN5	MCIO x8 connector
CN6	Broadcom SDB/SMART port
CN7	MCU port
CN8	eps 12V power

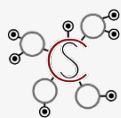


Function Description For LEDs

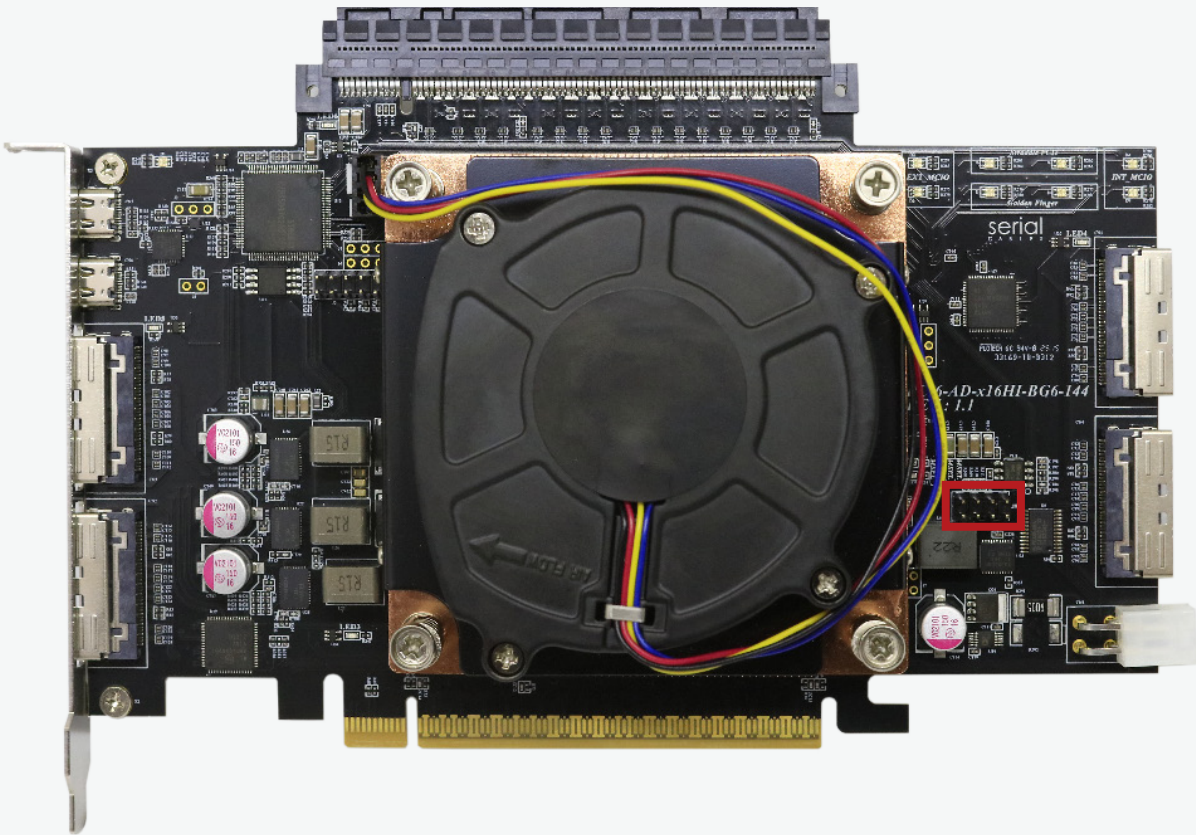


Location	Descriptions
LED1	SBR system error
LED2	power on
LED3	Golden finger link status
LED4	Right side MCIO link status
LED5	Left side MCIO link status
LED6	Straddle PCIE link status
LED7	MCIO left max link width
LED8	Straddle max link width
LED9	PCIE Golden finger max link width
LED10	MCIO right max link width

- LEDs 3, 4, 5, and 6 steadily lit indicate Gen6.
- LEDs 3, 4, 5, and 6 blink indicate Gen5.



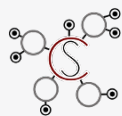
SBR Setting



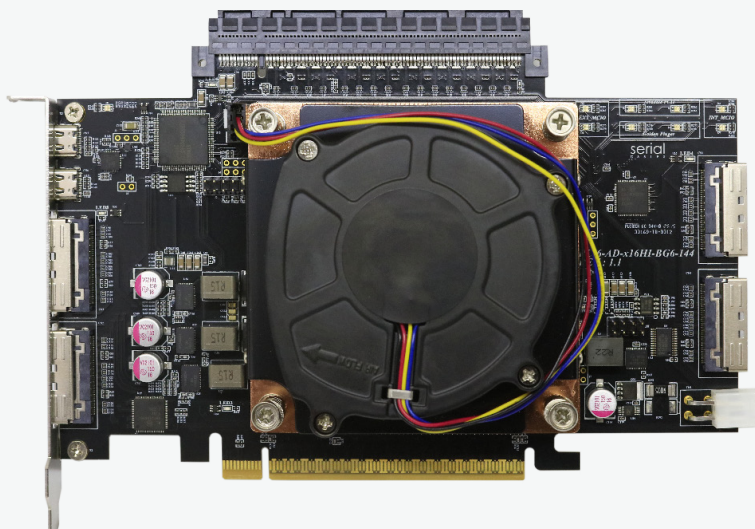
Location	Descriptions
	SBR0
	SBR1
	SBR2
	SBR3
	SBR4

Location	Descriptions
	SBR5
	SBR6

For more details, please refer to page 16. Power on the device only after the jumper has been inserted.



SBR Setting



SBR mode	Golden finger	Straddle PCIE	Left MCIO	RIGHT MCIO
0	X16(CC)	X16(CC)	X16(CC)	X16(CC)
1	X16(CC)	X16(CC)	X8(CC)	X8(CC)
2	X16(CC)	X16(CC)	X4(CC)	X4(CC)
3	X16(CC)	X16(CC)	X2(CC)	X2(CC)
4	X16(CC)	X16(CC)	X8(CC)	X16(CC)
5	X16(CC)	X16(CC)	X4(CC)	X16(CC)
6	X16(CC)	X16(CC)	X16(CC)	X4(CC)



MCIO Pins Definition

CN2		2	3	5	6	8	9	11	12	14	15	17	18
	A	PERN8	PERP8	PERP9	PERP9	CLKP	CLKN	CLKP	CLKN	PERN10	PERP10	PERP11	PERN11
	B	PETN8	PETP8	PETP9	PETN9	SCL	SDA	REST	PREST	PETN10	PETP10	PETP11	PETN11
		20	21	23	24	26	27	29	30	32	33	35	36
	A	PERN12	PERP12	PERP13	PERN13	CLKP	CLKN	CLKP	CLKN	PERN14	PERP14	PERP15	PERN15
	B	PETN12	PETP12	PETP13	PETN13	SCL	SDA	REST	PREST	PETN14	PETP14	PETP15	PETN15

CN3		2	3	5	6	8	9	11	12	14	15	17	18
	A	PERN0	PERP0	PERP1	PERN1	CLKP	CLKN	CLKP	CLKN	PERN2	PERP2	PERP3	PERN3
	B	PETN0	PETP0	PETP1	PETN1	SCL	SDA	REST	PREST	PETN2	PETP2	PETP3	PETN3
		20	21	23	24	26	27	29	30	32	33	35	36
	A	PERN4	PERP4	PERP5	PERN5	CLKP	CLKN	CLKP	CLKN	PERN6	PERP6	PERP7	PERN7
	B	PETN4	PETP4	PETP5	PETN5	SCL	SDA	REST	PREST	PETN6	PETP6	PETP7	PETN7

CN4		2	3	5	6	8	9	11	12	14	15	17	18
	A	PERN15	PERP15	PERP14	PERN14	CLKP	CLKN	CLKP	CLKN	PERN13	PERP13	PERP12	PERN12
	B	PETN15	PETP15	PETP14	PETN14	SCL	SDA	REST	PREST	PETN13	PETP13	PETP12	PETN12
		20	21	23	24	26	27	29	30	32	33	35	36
	A	PERN11	PERP11	PERP10	PERN10	CLKP	CLKN	CLKP	CLKN	PERN9	PERP9	PERP8	PERN8
	B	PETN11	PETN11	PETP10	PETN10	SCL	SDA	REST	PREST	PETN9	PETP9	PETP8	PETN8

CN5		2	3	5	6	8	9	11	12	14	15	17	18
	A	PERN7	PERP7	PERP6	PERN6	CLKP	CLKN	CLKP	CLKN	PERN5	PERP5	PERP4	PERN4
	B	PETN7	PETP7	PETP6	PETN6	SCL	SDA	REST	PREST	PETN5	PETP5	PETP4	PETN4
		20	21	23	24	26	27	29	30	32	33	35	36
	A	PERN3	PERP3	PERP2	PERN2	CLKP	CLKN	CLKP	CLKN	PERN1	PERP1	PERP0	PERN0
	B	PETN3	PETP3	PETP2	PETN2	SCL	SDA	REST	PREST	PETN1	PETP1	PETP0	PETN0



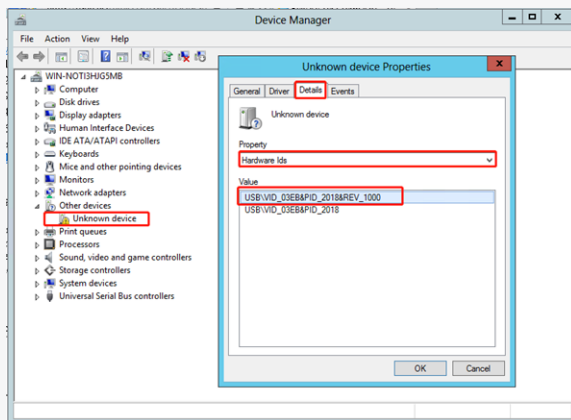
MCU CLI Setup

Step1: USB driver installation.

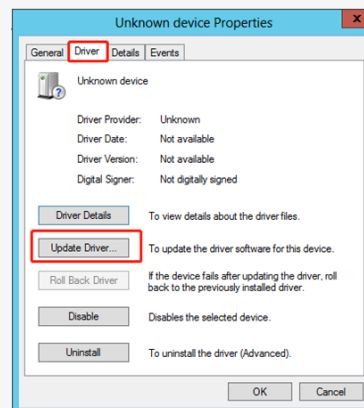
Note: No USB driver is required for Windows 10 and Linux

Download and install the CDC driver for unidentified device (VID_03EB&PID_2018), Available at:

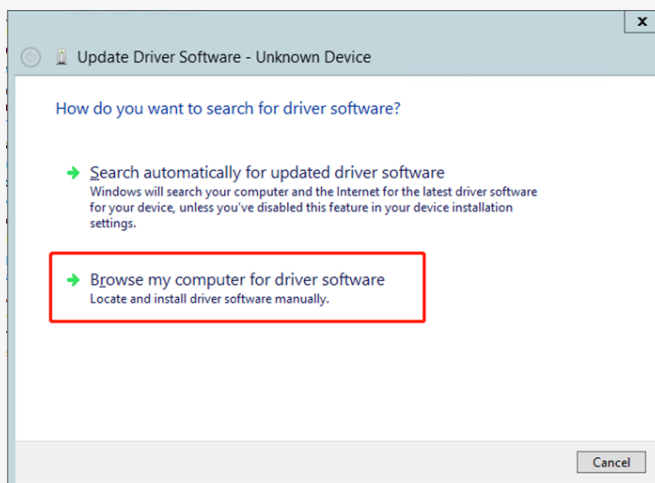
https://www.serialcables.com/wp-content/uploads/2018/11/SynergyUSBCDC_20180518.rar



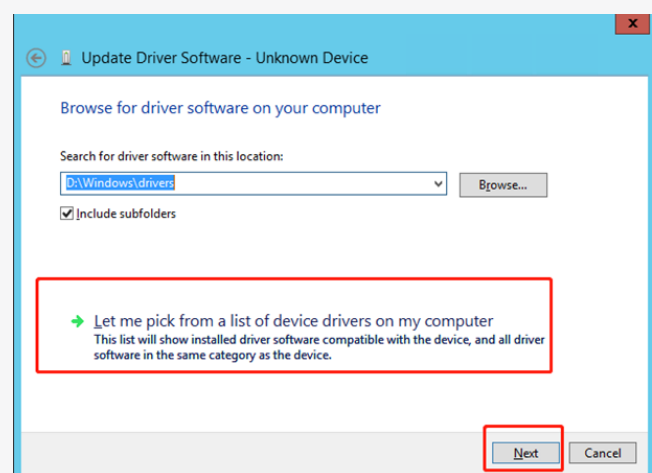
[Figure 1]



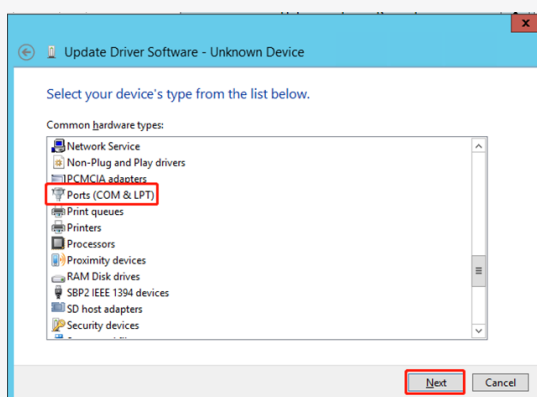
[Figure 2]



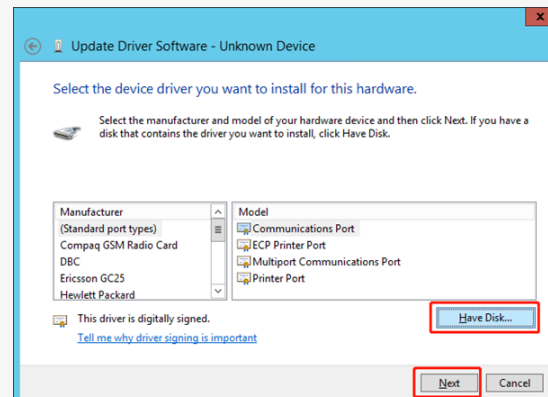
[Figure 3]



[Figure 4]



[Figure 5]

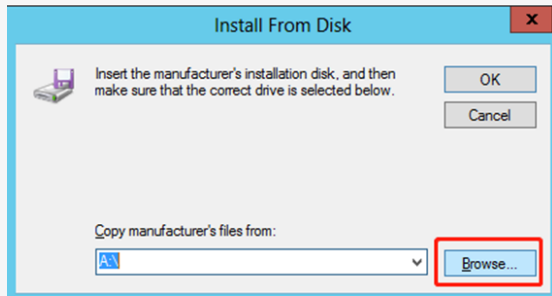


[Figure 6]

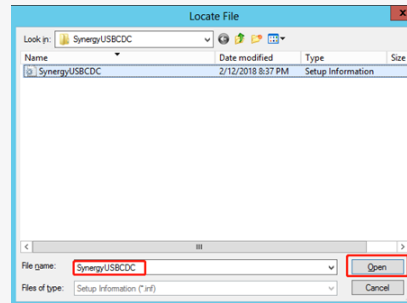


serial
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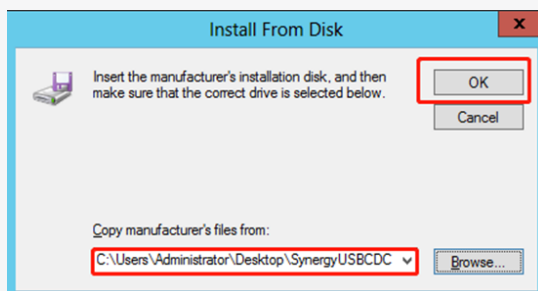
Atlas3 Host Adapter Card



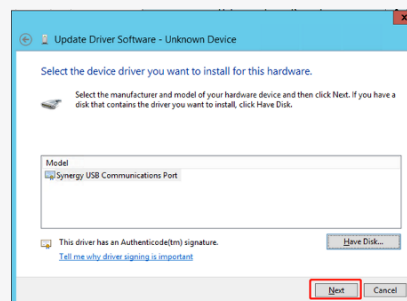
[Figure 7]



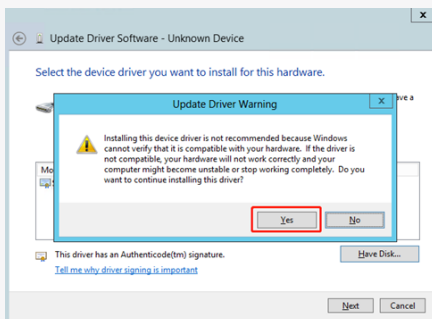
[Figure 8]



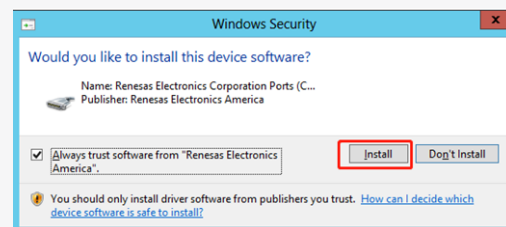
[Figure 9]



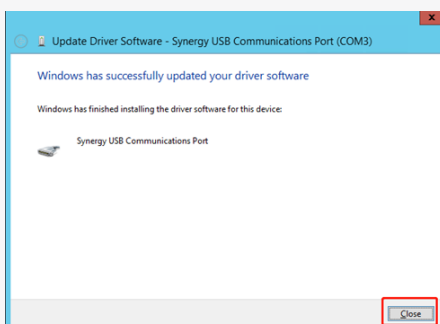
[Figure 10]



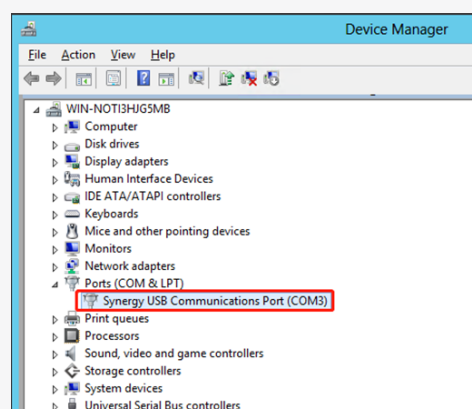
[Figure 11]



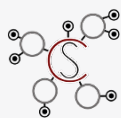
[Figure 12]



[Figure 13]



[Figure 14]

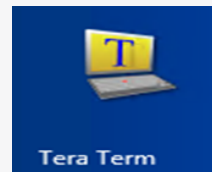


MCU CLI Setup

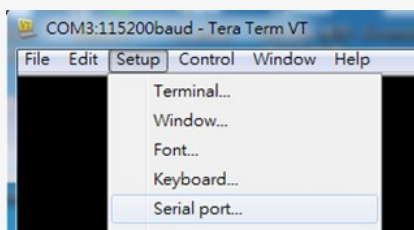
Step2: Tera-term setting

Step 1. Install and launch Tera Term application

(or Hyper Terminal requires version 3.0 or higher).



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:

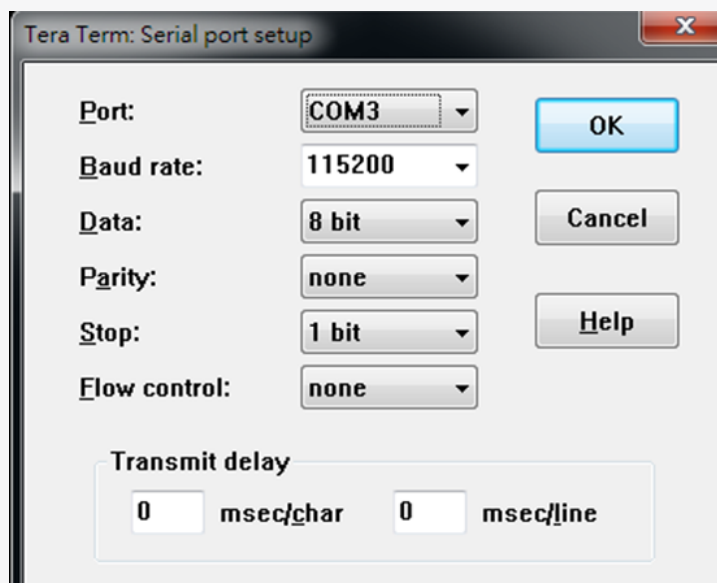
For “Port”, select COM3 in this example. (Depend on which COM port used on Host)

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 Commands List

Commands	Descriptions
fdl	Update synergy firmware.
lsd	Show switch temperature, FAN speed, voltages and Side-band modes.
setmode	Set Atlas 3 SBR mode.
showmode	Show Atlas 3 SBR mode.
swreset	Atlas 3 switch reset.
showport	Show link status for USP in golden finger, DSP for MCIO ports and straddle port.
ver	Show card information, MCU FW and Atlas3 FW version.
reset	System reset.
mrst	reset MCIO or straddle PCIE slot.
clock	Enable/Disable clock output.



fdl mcu Command

Update synergy firmware.

-Usage: fdl mcu

```
Cmd>fdl mcu

=====
Xmodem upload a new firmware image to flash
=====

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



Isd Command

Shows switch temperature, FAN speed, voltages, current and Side-band modes.

-Usage: Isd

```
Cmd>Isd

Thermal:
  Board Temperature : 54 degree

Fans Speed:
  Switch Fan : 6566 rpm

Voltage Sensors:
Board   0.8V Voltage : 902 mV
Board   0.89V Voltage : 980 mV
Board   1.2V Voltage : 1297 mV
Board   1.5v Voltage : 1503 mV

Current Status:
Current : 10880 mA

Error Status:
Voltage 0.8V error : 0
Voltage 0.89V error : 0
Voltage 1.2V error : 0
Voltage 1.5V error : 0
```



setmode Command

Set Atlas 3 SBR mode.

-Usage: setmode 0

```
Cnd>setmode 0  
Write sbr setmode enable page success.
```

SBR mode	Golden finger	Straddle PCIE	Left MCIO	RIGHT MCIO
0	X16(CC)	X16(CC)	X16(CC)	X16(CC)
1	X16(CC)	X16(CC)	X8(CC)	X8(CC)
2	X16(CC)	X16(CC)	X4(CC)	X4(CC)
3	X16(CC)	X16(CC)	X2(CC)	X2(CC)
4	X16(CC)	X16(CC)	X8(CC)	X16(CC)
5	X16(CC)	X16(CC)	X4(CC)	X16(CC)
6	X16(CC)	X16(CC)	X16(CC)	X4(CC)



showmode Command

Show Atlas 3 SBR mode.

-Usage: showmode

```
Cnd>showmode  
SBR mode: 1
```



swreset Command

Atlas 3 switch reset.

-Usage: swreset

```
Cnd>swreset  
Gen6 switch hw reset success
```



showport Command

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

-Usage: showport

```
Cmd>showport
Port Slot-----
-----

Port80 : speed 06, width 08, max_speed06, max_width08
Port112: speed 06, width 08, max_speed06, max_width16
Port128: speed 06, width 08, max_speed06, max_width16
Port Upstream-----
-----

Golden finger: speed 06, width 08, max_width = 16
Cmd>
```



ver Command

Show card information, MCU FW and Atlas3 FW version.

-Usage: ver

```
Admin>ver  
  
S/N      : 6BH144125042001  
Company  : Utran Technology, Inc  
Model    : PCI6-AD-x16HI-BG6-144  
Version  : 0.0.1-t    Date : Apr 25 2025 10:13:24
```



Broadcom

Version One

Atlas3
chip
version

6 B H 1 4 4 1 2 5 0 4 2 0 0 1

Gen 6

Host Card

144 lanes

Warranty Period
(Year/Month)

Serial Number



serial
C A B L E S

Atlas3 Host Adapter Card

reset Command

System reset.

-Usage: reset

```
Cnd>reset  
System Reset...
```



mrst Command

reset MCIO or straddle PCIE slot.

-Usage: mrst r

```
cmd>mrst r  
Reset MCIO Right success.
```



clock Command

Enable/Disable clock output.

clock srise5 -- spread clock 0.5%

clock srise2 -- spread clock 0.25%

-Usage: clock

```
Cmd>clock  
MCIO Left clock disable.  
MCIO Right clock enable.  
Straddle clock enable.
```

-Usage: clock l d

```
Cmd>clock l d  
Set MCIO Left clock disable success.
```

-Usage: clock srise5

```
Cmd>clock srise5  
Set SRIS Clock mode enable 0.5% success.
```