

Headers/Slide switch Overview

S1



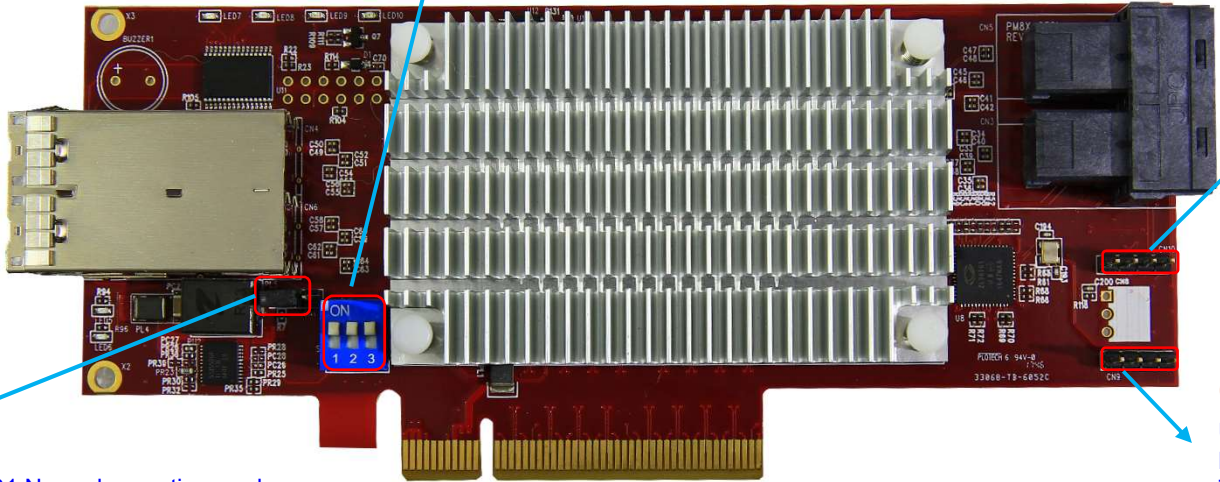
One x8 configuration



Two x4 configuration



Four x2 configuration



CN10

UART for Micro-controller
Baud rate:115200
TTL 3.3V level

NC	uP_TX	uP_RX	GND
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CN9

UART for Microsemi Switchtec
Baud rate:230400
TTL 3.3V level

NC	MS_TX	MS_RX	GND
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CN1

- PM8531 Normal operation mode
- PM8531 code recover mode

[PCI-AD-x8HE-M]

LEDs Overview

LED1:4: Link width LED (Red)

OFF: link width match with corresponding config

LED6: System Power LED (Blue)

ON: indicate server is ON with power provided to host cards

LED7: Downstream mode LED (Blue)

ON: config as x2 mode

LED8: Downstream mode LED (Green)

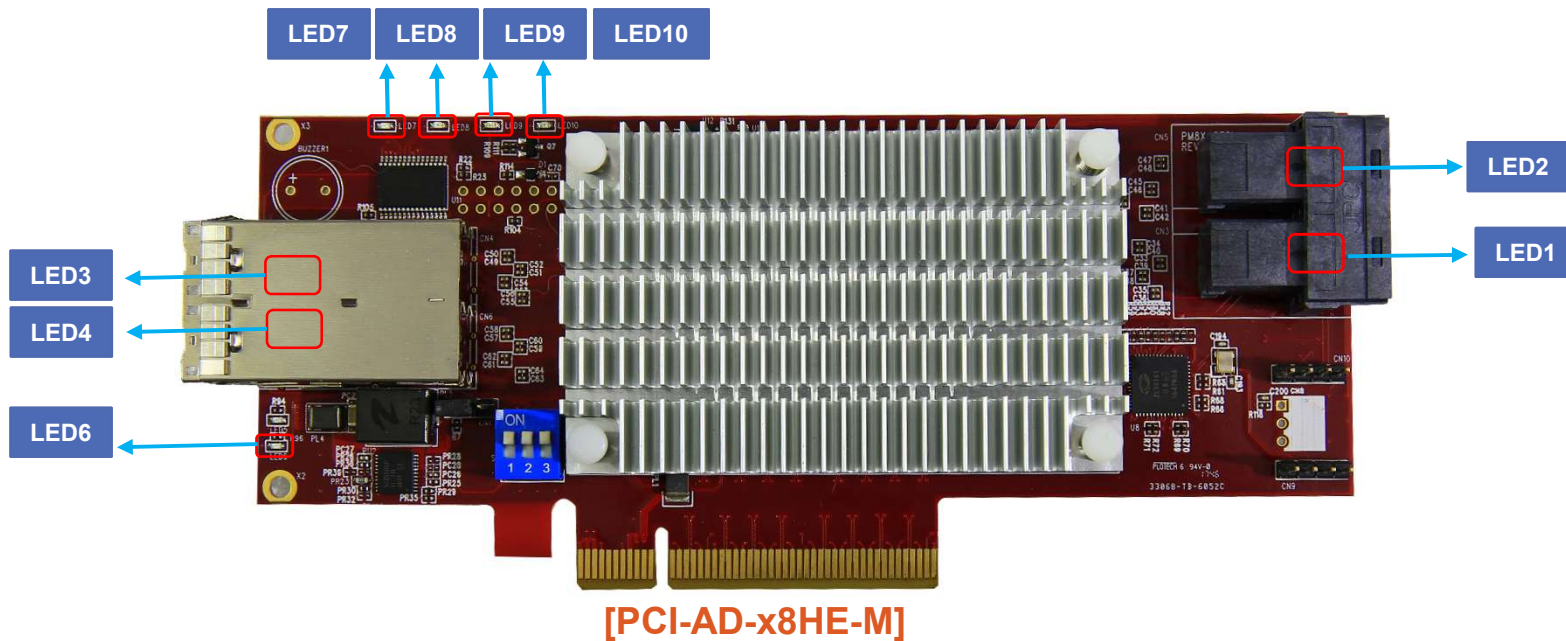
ON: config as x8 mode or x2 mode

LED9: Downstream mode LED (Orange)

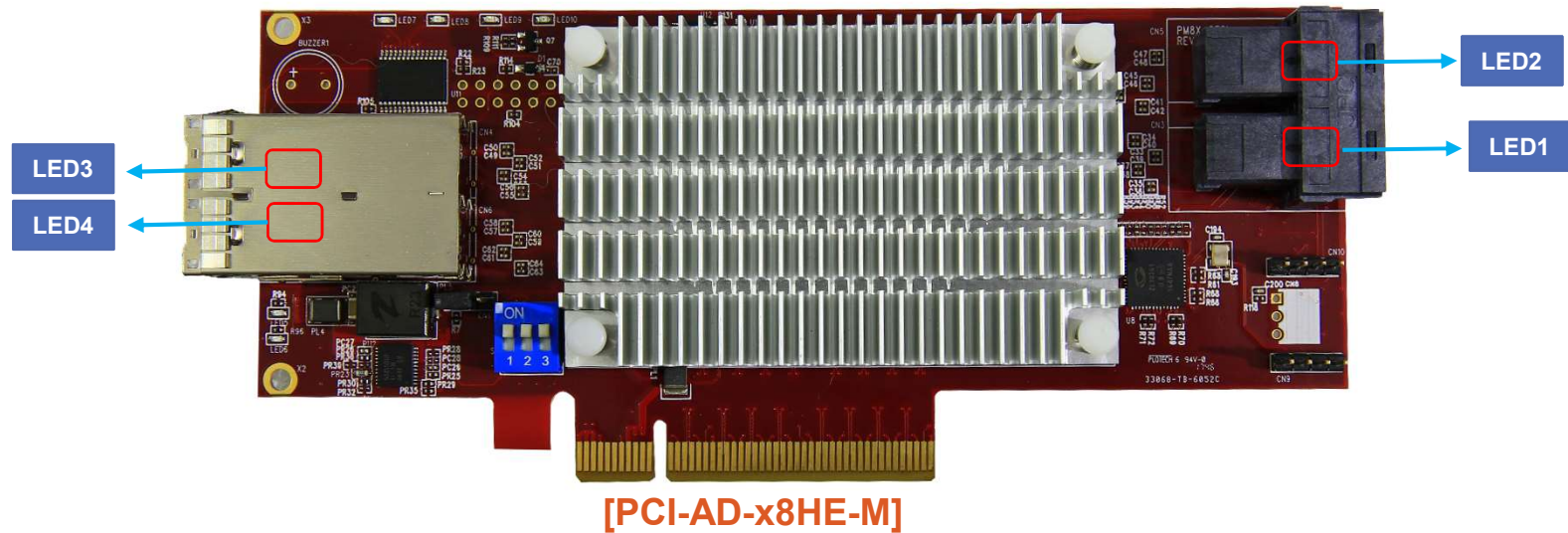
ON: config as x4 mode or x2 mode

LED10: System Failure (Red)

ON: for any failure events(over temperature, voltage.)



Link Width Match LEDs



Downstream in Two x8 mode:

LED 1/3 ON → no link or link width in SFF8644/SFF8643 ports isn't x8

LED 1/3 OFF → link is in x8 width

Downstream in Four x4 mode:

LED 1/2/3/4 ON → no link or link width in SFF8644/SFF8643 ports isn't x8

LED 1/2/3/4 OFF → link is in x4 width

Downstream in Eight x2 mode:

LED 1/2/3/4 Always OFF

Commands for Microsemi Switchtec

COM3 - Tera Term VT

File Edit Setup Control Window KanjiCode Help

```
0x00000000:0003>help
multi_config Show mult-config info
twi_rd       TWI Device Read
twi_wr       TWI Device Write
twi_scan     Scan for TWI devices
menu        Help containing menu of commands
help        Help containing menu of commands
prompt      Prompt on/off
version      Display firmware versions and device revision and device ID
reset       Reset device
rd_32       32-bit memory read
wr_32       32-bit memory write
rd_16       16-bit memory read
wr_16       16-bit memory write
rd_8        8-bit memory read
wr_8        8-bit memory write
rst_id_set  set ID rte to RST
rst_rte     rte control for RST
rst_im_set  set IM rte to RST
rst_ar_set  set AR rte to RST
pcie        pcie port status query
rd_log      Retrieve FW log from log buffer
log_sev     Log severity
fw_update   Update an firmware image with xmodem
fw_dump     Dump an firmware image with xmodem
switch_event Config the event attributes
switch_event_reset Reset all the switch events
fl_update   Update raw flash with xmodem
fl_dump     Dump raw flash with xmodem
dwd         Download image
xip         Set SPI flash to XIP mode
stkdump     Dump the stack information: bifurcation, port & rule usage
stkcfg      Configure the stack: bifurcation, port & rule usage
portcfg     Configure the port: bifurcation
portdump   Dump the port information
lnkstat     Dump the link status
topo        Display switch topology configuration
pscaer      pscaer <phys_port_id> <ue_ce> <err_msk> <hdr_log...>
prtbind     prtbind <prtId> <dstLogPrtId> <dstPartId>
prtunbind   prtunbind <option> <dstLogPrtId> <dstPartId>
cache_fl    Cache flush one or all NVMe drives
ier_rep_emul Report an AER with "Uncorrectable Internal Error" and report to Event Manager
pcifnstat   Show the information of pci function.
pcifndbg    Debug PFF.
pcifnwrcfg pcifnwrcfg <inst idx> <addr> <data> <mask (optional)>: Write the cfg space of pcifn instance.
gpiowr     Write to the specified GPIO pin
gpiord     Read the value of the specified GPIO pin
gasrd      Read data from Global Address Space
gaswr      Write data to Global Address Space
gas_perm_check check the gas_permission control matrix
tlpgenchk  PPU TLP Gen Checker
```

Commands for Micro-controller

VT COM3 - Tera Term VT

File Edit Setup Control Window KanjiCode Help

CMD>help

Command	Description
update	- Update PM853X
lsd	- List Devices Status - Usage: lsd [temp volt fan link]
ver	- FW Version
Reset	- Reset MCU

Update Micro-controller FW

1. Plug USB to UART board to CN10 for micro-controller FW upgrading.
2. Set the baud rate to 115200.
3. Select [1] for FW updating, then send updated file via Xmodem.

```
*****  
* Bootloader V1.0 *  
*****  
  
Choose actions:(1)Update FW (2)Run Application  
  
Run Application.  
  
CMD>|
```

4. After updating complete, it will re-start automatically.

Update Configuration for Microsemi Switchtec

1. Plug USB to UART board to CN10 for micro-controller FW upgrading.
2. Set the baud rate to 115200.
3. Select [2] to run application.

```
*****
* Bootloader V1.0 *
*****

Choose actions:(1)Update FW (2)Run Application

Run Application.

CHD>
```

4. Type “update” to update the configuration for Microsemi switch, then send updated file via Xmodem.

```
CHD>help
  Command      Description
  =====
  update - Update PM853X
  lsd - List Devices Status
        - Usage: lsd [ temp | volt | fan | link ]

  ver - FW Version
CHD>update
=====
Xmodem upgrade FW loop starting
=====

Use Q Or q to quit Download
Send data using the -1K Xmodem- or -Xmodem- protocol from terminal emulator now!
C
Download status : 0x00020209
Xmodem successfully received 00142720 bytes
Complete update process !!!
Please reboot system now !!!
```

5. After updating complete, Please reboot the system to apply the setting.