MiniPCI Express Test Backplane

July 15, 2022
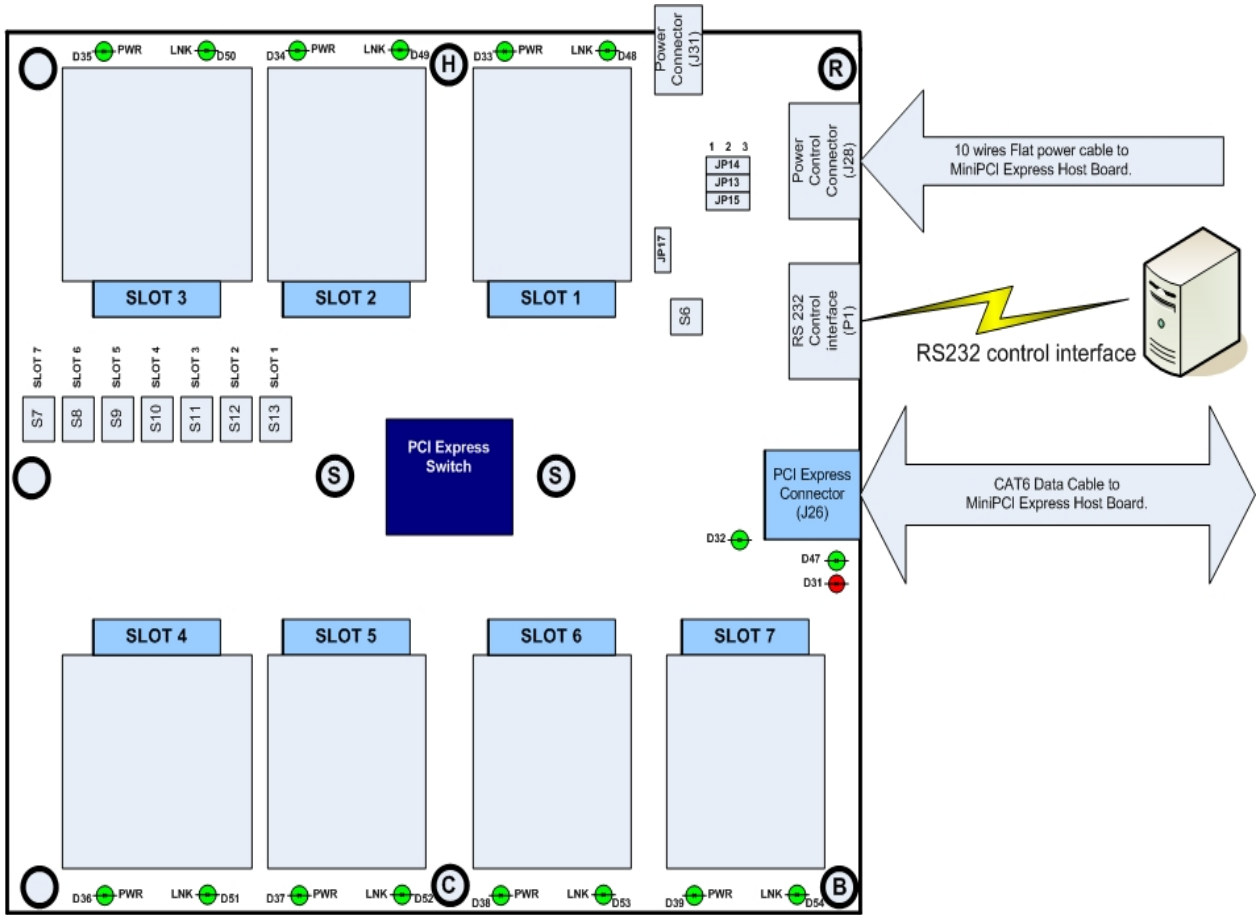**Revision 1.1**

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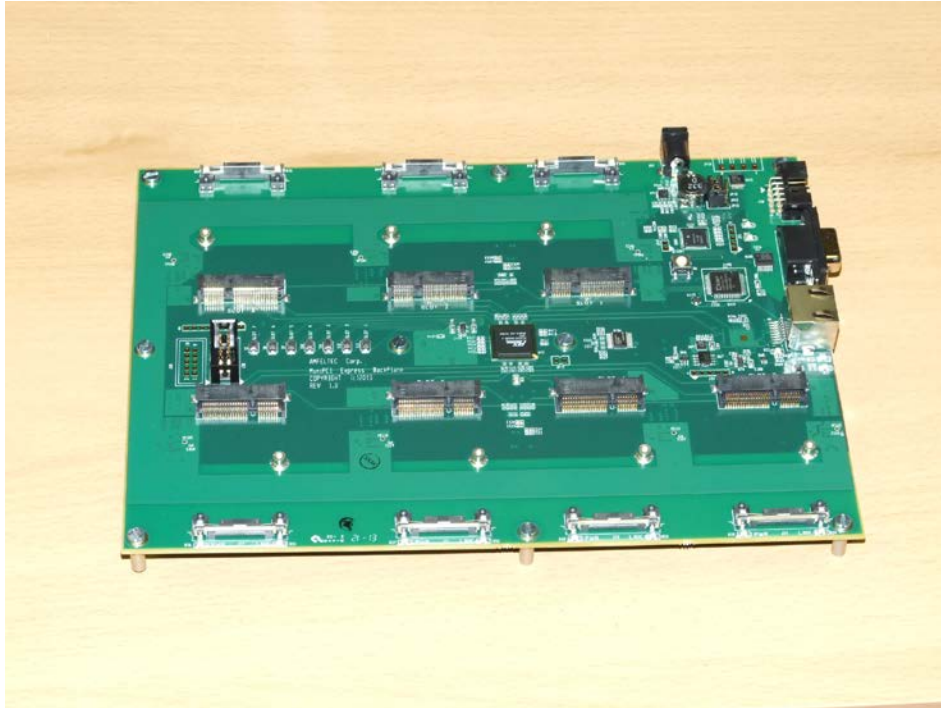
MiniPCI Express Backplane.

Power supply for MiniPCI Express Backplane.

D35 PWR LNK D50   D34 PWR LNK D49 H   D33 PWR LNK D48

Power Connector (J31)

R

Power Control Connector (J28)

10 wires Flat power cable to MiniPCI Express Host Board.

1 2 3
JP14
JP13
JP15

JP17

SLOT 3   SLOT 2   SLOT 1

RS 232 Control interface (P1)

RS232 control interface

S6

SLOT 7 SLOT 6 SLOT 5 SLOT 4 SLOT 3 SLOT 2 SLOT 1

S7 S8 S9 S10 S11 S12 S13

S   PCI Express Switch   S

PCI Express Connector (J26)

CAT6 Data Cable to MiniPCI Express Host Board.

D32

D47
D31

SLOT 4   SLOT 5   SLOT 6   SLOT 7

D36 PWR LNK D51   D37 PWR LNK D52 C   D38 PWR LNK D53   D39 PWR LNK D54 B

MiniPCI Express Backplane layout.

MiniPCI Express Test Backplane Revision 1.1

1   Installation

1.1

Following steps provide the exact sequence that needs to be followed in order to properly install the MiniPCI Express Expansion Backplane product from AMFELTEC Corp.:

- Turn OFF Host computer before installation.

- Connect CAT6 Data cable and Power Flat cable between Backplane and MiniPCI Express Host board.

- Install MiniPCI Express Host board into free MiniPCI Express slot in Host computer.

- Connect Backplane power supply to MiniPCI Express Backplane.

- Connect via standard RS232 cable Backplane and PC for controlling power via Terminal program.

- Run Terminal program on the PC (19200 speed, 8 bit, 1 stop, no control)

- Turn on Backplane power supply. LEDs D41 and D43 has to be ON. (power on status)

- Enable power on the slot that has to be checked via RS232.

- Turn on Host computer. LED D47 has to be ON (link status between Host computer and PCI Express Switch on the backplane).

1.2   LEDs

Name	Ref. Des.	Color	Usage
RST	D31	RED	RESET from Host computer
	D32	GREEN	Status
+3.3V	D41	GREEN	+ 3.3V power indicator
+12V	D43	GREEN	+ 12V power indicator
PWR	D33	GREEN	Power enable on SLOT 1.
PWR	D34	GREEN	Power enable on SLOT 2.
PWR	D35	GREEN	Power enable on SLOT 3.
PWR	D36	GREEN	Power enable on SLOT 4.
PWR	D37	GREEN	Power enable on SLOT 5.
PWR	D38	GREEN	Power enable on SLOT 6.
PWR	D39	GREEN	Power enable on SLOT 7.
LINK	D47	GREEN	Upstream PCI express link status indicator (solid – 5Gbit/s , blink – 2.5Gbit/s)
LINK	D48	GREEN	PCI express link status for the SLOT 1 (solid – 5Gbit/s , blink – 2.5Gbit/s)
LINK	D49	GREEN	PCI express link status for the SLOT 1 (solid – 5Gbit/s , blink – 2.5Gbit/s)
LINK	D50	GREEN	PCI express link status for the SLOT 1 (solid – 5Gbit/s , blink – 2.5Gbit/s)
LINK	D51	GREEN	PCI express link status for the SLOT 1 (solid – 5Gbit/s , blink – 2.5Gbit/s)
LINK	D52	GREEN	PCI express link status for the SLOT 1 (solid – 5Gbit/s , blink – 2.5Gbit/s)
LINK	D53	GREEN	PCI express link status for the SLOT 1 (solid – 5Gbit/s , blink – 2.5Gbit/s)
LINK	D54	GREEN	PCI express link status for the SLOT 1 (solid – 5Gbit/s , blink – 2.5Gbit/s)

Table 1: LEDs

1.3 Switches/Pushbuttons

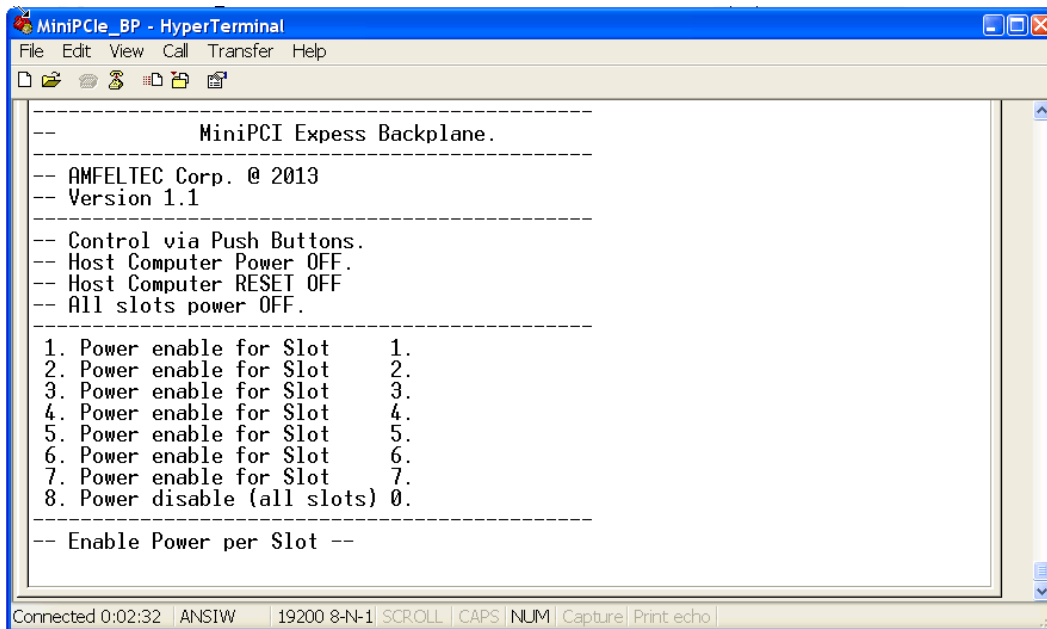| Name	Ref. Des.	Type	Usage
PWR_SRC	JP14,JP13, JP15	3-pin jumper block	If 1-2 pins closed, power for 7 MiniPCI Express slots will come from the Backplane power supply. If 2-3 pins closed, power for 7 MiniPCI Express slots will come from the Host board via 10 wire Flat power cable. (This mode is not recommended).
PWR_CNTRL	JP17	Jumper	Jumper has to be OFF for enable control via RS232 interface. (normal operation) Jumper ON enable control via power switches S7-S13.
PWR_ON	S13	Push Button	Enable / Disable power on the MiniPCI Express slot 1.
PWR_ON	S12	Push Button	Enable / Disable power on the MiniPCI Express slot 2.
PWR_ON	S11	Push Button	Enable / Disable power on the MiniPCI Express slot 3.
PWR_ON	S10	Push Button	Enable / Disable power on the MiniPCI Express slot 4.
PWR_ON	S9	Push Button	Enable / Disable power on the MiniPCI Express slot 5.
PWR_ON	S8	Push Button	Enable / Disable power on the MiniPCI Express slot 6.
PWR_ON	S7	Push Button	Enable / Disable power on the MiniPCI Express slot 7.

Table 2: Switches

1.4　Connectors

Ref. Des.	Type	Usage
U57	MiniPCI Express connector	MiniPCI Express connector for SLOT 1.
U61	MiniPCI Express connector	MiniPCI Express connector for SLOT 1.
U58	MiniPCI Express connector	MiniPCI Express connector for SLOT 1.
U62	MiniPCI Express connector	MiniPCI Express connector for SLOT 1.
U59	MiniPCI Express connector	MiniPCI Express connector for SLOT 1.
U63	MiniPCI Express connector	MiniPCI Express connector for SLOT 1.
U60	MiniPCI Express connector	MiniPCI Express connector for SLOT 1.
J31	Backplane power connector	Connection to Backplane power supply.
J28	Power connector	Connection via 10 wire Flat cable between MiniPCI Express Expansion Backplane and MiniPCI Express Host board.
P1	Female DB9 connector	RS232 port for backplane power control.
J26	RJ45 connector for the PCI express cable connection	Connector for CAT6 cable between MiniPCI Express Expansion Backplane and MiniPCI Express Host board.

Table 3: Connectors

1.5   Control MiniPCI Express slot power.
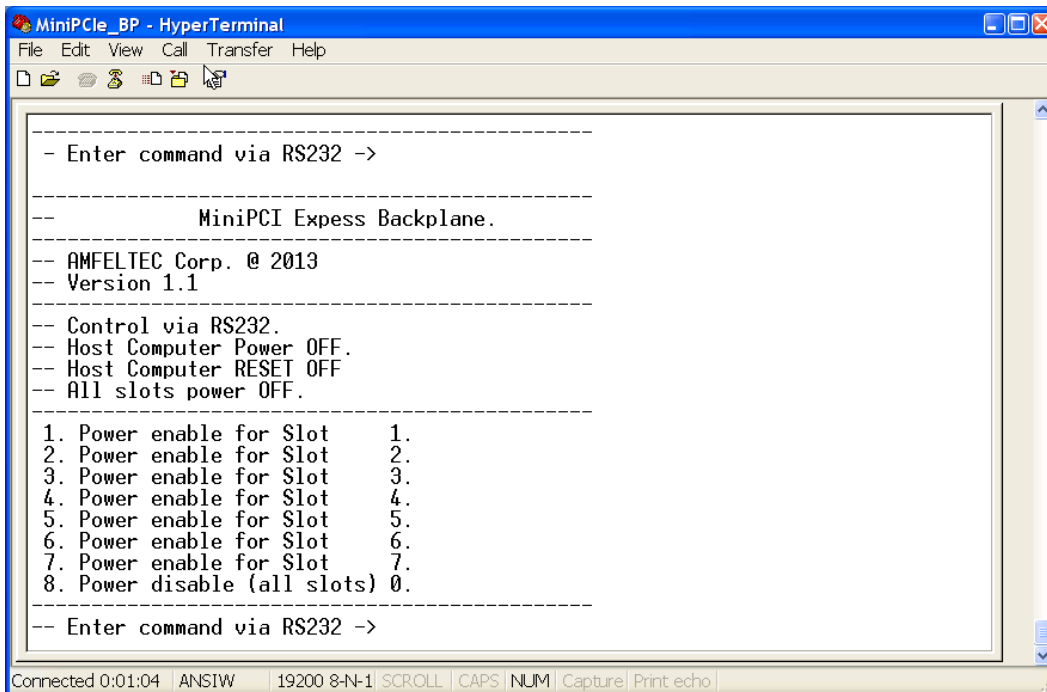
Menu for control power by push buttons. (Jumper JP17 closed)

Menu for control power by RS232 interface. (Jumper JP17 open)

2   Appendix A: Limited warranty

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