CP6010

6U cPCI® Dual Processor
System / Peripheral 64-bit board

kontron

Board Rev. 2

QUICK REFERENCE

Document version 2.5

CONNECTORS

J1-J5	CompactPCI
J6	COM1 (faceplate)
J7	USB (faceplate)
J8	VGA Video (faceplate)
J9, J10	Ethernet LAN2,1 (faceplate)
J13, J14	CPU Sockets
J15-J18	Memory DIMM0-DIMM3
J20	Hot Swap Switch
J22	Power Connector
J23	IDE Mezzanine
JN1-JN4	64-bit PCIX Mezzanine
SW1	Reset Button (faceplate)
BT1	Battery
DS4	LEDs (HDD activity and Ready to Swap)

JUMPER SETTINGS (● Default Setting)

W1 Primary IDE Configuration

CompactFlash Disk	out
2.5" Hard Disk	in

W2 Clear CMOS

● Normal	out
Clear CMOS	in

W3 Reserved

●	out

W4 VT-100 Access

Enabled	in
● Disabled	out

W5 Onboard IPMI

Disable	in
● Enable	out

W6, W7 COM2 Terminations

	W6	W7
RS-422/485 modes only		
With termination	in	in
● Without termination	out	out

W8 Onboard Video

Disabled	in
● Enabled	out

W9 Reserved

●	out

W13, 14, 15 PMC PCI Maximum Speed

	W13	W14	W15
PCI 66MHz	out	in	out
PCIX 66MHz	out	out	in
PCIX 100MHz	in	out	out
PCIX 133MHz	out	out	out

W16, 17, 18 Backplane PCI Maximum Speed

	W16	W17	W18
PCI 33MHz	in	in	in
PCI 66MHz	out	in	in
Bridge Disabled	in	out	out
Master Only	in	in	out

W19B attery

Connected	in
● Disconnected	out

First Level Debugging

Blue LED always ON

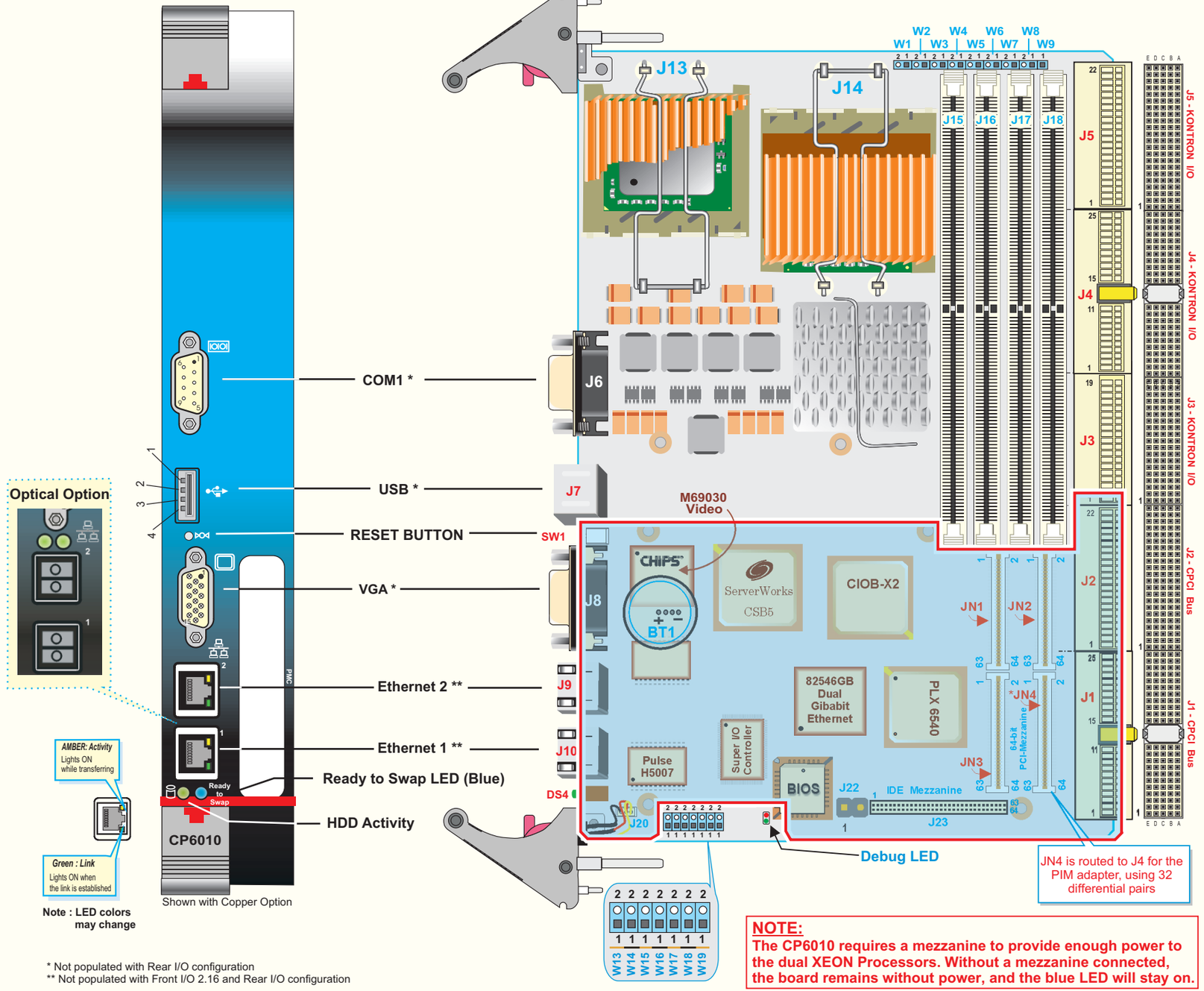
1. Remove all peripheral and external connections.
2. Verify if the board is in the correct CPCI slot
3. Verify if the mezzanine is connected to the backplane
4. Verify the power supply.

WARNING

Blue LED will lit during CPLD programming (on BIOS upgrade). This is normal, never shut down the board during this step.

Blue LED OFF

1. Check the jumper settings
2. Check the memory
3. Check post code on debug led.



* Not populated with Rear I/O configuration
** Not populated with Front I/O 2.16 and Rear I/O configuration

NOTE:
The CP6010 requires a mezzanine to provide enough power to the dual XEON Processors. Without a mezzanine connected, the board remains without power, and the blue LED will stay on.

Connector Pinouts

CP6010

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J1 - CompactPCI Bus

	ROW A	ROW B	ROW C	ROW D	ROW E
1	VCCE	-12VE	RSV	+12VE	VCCE
2	RSV	VCCE	RSV	RSV	RSV
3	INTA#	INTB#	INTC#	VCCE	INTD#
4	IPMB_PWR	HEALTHY#	VI/O	INTP	INTS
5	RSV	RSV	RST#	GND	GNT0#
6	REQ0#	PCI_PRESENT#	VCC3E	CLK0	AD31
7	AD30	AD29	AD28	GND	AD27
8	AD26	GND	VI/O	AD25	AD24
9	CBE3#	IDSEL	AD23	GND	AD22
10	AD21	GND	VCC3E	AD20	AD19
11	AD18	AD17	AD16	GND	CBE2#
12 13 14	Key Area				
15	VCC3E	FRAME#	IRDY#	BD_SEL#_	TRDY#
16	DEVSEL#	PCIXCAP	VI/O	STOP#	LOCK#
17	VCC3E	IPMB_SCL	IPMB_SDA	GND	PERR#
18	SERR#	GND	VCC3E	PAR	CBE1#
19	VCC3E	AD15	AD14	GND	AD13
20	AD12	GND	VI/O	AD11	AD10
21	VCC3E	AD9	AD8	M66EN	CBE0#
22	AD7	GND	VCC3E	AD6	AD5
23	VCC3E	AD4	AD3	VCCE	AD2
24	AD1	VCCE	VI/O	AD0	ACK64#
25	VCCE	REQ64#	ENUM#	VCC3E	VCCE

Long Pins Short Pins

J2 - CompactPCI Bus

	ROW A	ROW B	ROW C	ROW D	ROW E
1	CLK1	GND	REQ1#	GNT1#	REQ2#
2	CLK2	CLK3	SYSEN#	GNT2#	REQ3#
3	CLK4	GND	GNT3#	REQ4#	GNT4#
4	VI/O	RSV	CBE7#	GND	CBE6#
5	CBE5#	64_EN#	VI/O	CBE4#	PAR64
6	AD63	AD62	AD61	GND	AD60
7	AD59	GND	VI/O	AD58	AD57
8	AD56	AD55	AD54	GND	AD53
9	AD52	GND	VI/O	AD51	AD50
10	AD49	AD48	AD47	GND	AD46
11	AD45	GND	VI/O	AD44	AD43
12	AD42	AD41	AD40	GND	AD39
13	AD38	GND	VI/O	AD37	AD36
14	AD35	AD34	AD33	GND	AD32
15	RSV	GND	*FAL#	REQ5#	GNT5#
16	RSV	RSV	*DEG#	GND	RSV
17	RSV	GND	PRST#	REQ6#	GNT6#
18	RSV	RSV	RSV	GND	RSV
19	GND	GND	SMB_SDA	SMB_SCL	SMB_ALERT#
20	CLK5	GND	RSV	GND	RSV
21	CLK6	GND	RSV	RSV	RSV
22	GA4	GA3	GA2	GA1	GA0

*Not Used

J3 - CompactPCI I/O

	ROW A	ROW B	ROW C	ROW D	ROW E
1	COM1:RTS	COM1:RXD	COM1:DSR	COM1:DCD	ID1
2	COM1:RI	COM1:DTR	COM1:CTS	COM1:TXD	MOUSE:CLK
3	COM2:RTS	COM2:RXD	COM2:DSR	COM2:DCD	MOUSE:DATA
4	COM2:RI	COM2:DTR	COM2:CTS	COM2:TXD	KB:DATA
5	VGA:BLUE	VGA:HSYNC	VGA:VSYNC	VGA:SCL	KB:CLK
6	VGA:RED	VGA:GREEN	VGA:SDA	POST:CLK	POST:DATA
7	ID0	ID2	ID3	ID4	SPEAKER
8	USB0:DATA-	USB0:DATA+	RSV	RSV	RSV
9	USB1:DATA-	USB1:DATA+	RSV	RSV	RSV
10	USB1:VCC	USB0:VCC	RSV	RSV	RSV
11	RSV	RSV	RSV	RSV	RSV
12	RSV	RSV	RSV	RSV	RSV
13	LAN0:ACT	LAN1:ACT	RSV	RSV	RSV
14	LAN0:LINK	LAN1:LINK	LAN:CT	RSV	RSV
15	LAN1:DB+	LAN1:DB-	GND	LAN1:DD+	LAN1:DD-
16	LAN1:DA+	LAN1:DA-	GND	LAN1:DC+	LAN1:DC-
17	LAN0:DB+	LAN0:DB-	GND	LAN0:DD+	LAN0:DD-
18	LAN0:DA+	LAN0:DA-	GND	LAN0:DC+	LAN0:DC-
19	VCC	VCC	VCC3	+12V	-12V

J4 - CompactPCI I/O (PIM)

	ROW A	ROW B	ROW C	ROW D	ROW E
1	PIM:61	PIM:63	GND	PIM:62	PIM:64
2	PIM:57	PIM:59	GND	PIM:58	PIM:60
3	GND	GND	GND	GND	GND
4	PIM:53	PIM:55	GND	PIM:54	PIM:56
5	PIM:49	PIM:51	GND	PIM:50	PIM:52
6	GND	GND	GND	GND	GND
7	PIM:45	PIM:47	GND	PIM:46	PIM:48
8	PIM:41	PIM:43	GND	PIM:42	PIM:44
9	GND	GND	GND	GND	GND
10	PIM:37	PIM:39	GND	PIM:38	PIM:40
11	PIM:33	PIM:35	GND	PIM:34	PIM:36
12 13 14	Key Area				
15	PIM:29	PIM:31	GND	PIM:30	PIM:32
16	PIM:25	PIM:27	GND	PIM:26	PIM:28
17	GND	GND	GND	GND	GND
18	PIM:21	PIM:23	GND	PIM:22	PIM:24
19	PIM:17	PIM:19	GND	PIM:18	PIM:20
20	GND	GND	GND	GND	GND
21	PIM:13	PIM:15	GND	PIM:14	PIM:16
22	PIM:9	PIM:11	GND	PIM:10	PIM:12
23	NC	VCC	GND	N.C.	VCC3
24	PIM:5	PIM:7	GND	PIM:6	PIM:8
25	PIM:1	PIM:3	GND	PIM:2	PIM:4

* JN4 - PIM

1	P1+	2	P2+
3	P1-	4	P2-
5	P3+	6	P4+
7	P3-	8	P4-
9	P5+	10	P6+
11	P5-	12	P6-
13	P7+	14	P8+
15	P7-	16	P8-
17	P9+	18	P10+
19	P9-	20	P10-
21	P11+	22	P12+
23	P11-	24	P12-
25	P13+	26	P14+
27	P13-	28	P14-
29	P15+	30	P16+
31	P15-	32	P16-
33	P17+	34	P18+
35	P17-	36	P18-
37	P19+	38	P20+
39	P19-	40	P20-
41	P21+	42	P22+
43	P21-	44	P22-
45	P23+	46	P24+
47	P23-	48	P24-
49	P25+	50	P26+
51	P25-	52	P26-
53	P27+	54	P28+
55	P27-	56	P28-
57	P29+	58	P30+
59	P29-	60	P30-
61	P31+	62	P32+
63	P31-	64	P32-

J23 - IDE Mezzanine

1	P2_GNT_MPMC#	2	IPMB0_SDA
3	GND	4	IPMB0_SCL
5	PCLK_MBRG	6	GND
7	VCC	8	PCLK_MPMC
9	P2_REQ_MBRG#	10	GND
11	P2_GNT_MBRG#	12	P2_MEZ_INTB#
13	P2_MBRG_INTA#	14	P2_MEZ_INTA#
15	P2_MEZ_INTD#	16	MEZZ_ENUM#
17	P2_MEZ_INTC#	18	HD_MS#/SLV
19	P2_REQ_MPMC#	20	IDE0_ACT#
21	IDE0_CS#1	22	GND
23	IDE0_DA2	24	IDE0_CS#0
25	GND	26	IDE0_DA0
27	IDE0_DIAG#	28	GND
29	IDE0_DA1	30	P_IDEIRQ
31	GND	32	IDE0_ACK#
33	IDE0_IOCHRDY	34	GND
35	IDE0_IOR#	36	IDE0_IOW#
37	BDSEL_MEZ#	38	IDE0_REQ
39	IDE0_D0	40	HEALTHY#_BP
41	IDE0_D1	42	IDE0_D15
43	VCC	44	IDE0_D14
45	IDE0_D2	46	VCC
47	IDE0_D3	48	IDE0_D13
49	VCC	50	IDE0_D12
51	IDE0_D4	52	VCC
53	IDE0_D5	54	IDE0_D11
55	VCC	56	IDE0_D10
57	IDE0_D6	58	VCC
59	IDE0_D7	60	IDE0_D9
61	VCC	62	IDE0_D8
63	IDE_RESET#	64	VCC

J8 - Video (SVGA)

Row 1 (1-5)		9	N/C
1	RED	10	GND
2	GREEN	Row 3 (11-15)	
3	BLUE	11	N/C
4	N/C	12	SDATA
5	Gnd	13	HSYNC
Row 2 (6-10)		14	VSYNC
6-8	A_GND	15	SCLK

J6 - Serial 1 - RS-232

1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

ETHERNET

J9, J10 - LAN 2, LAN 1

1	TX+	5	RJ1
2	TX-	6	RX-
3	RX+	7	RJ2
4	RJ1	8	RJ2

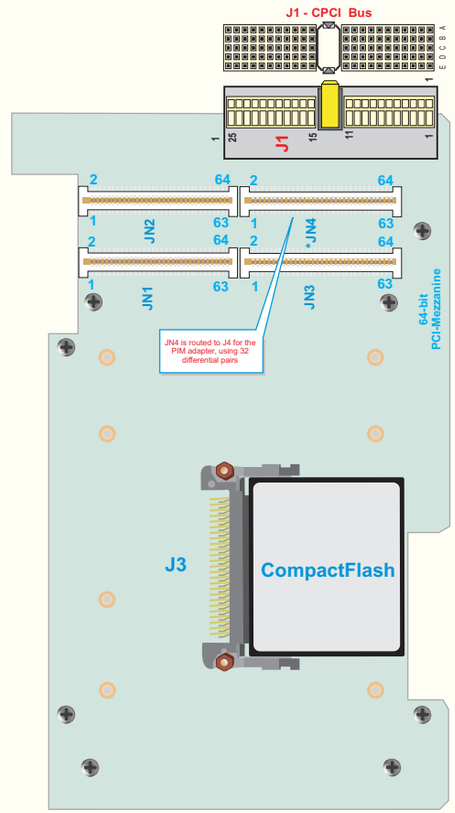
ETHERNET Gigabit

J9, J10 - LAN 2, LAN 1

1	DA+	5	DC-
2	DA-	6	DB-
3	DB+	7	DD+
4	DC+	8	DD-

J3- COMPACT FLASH (MEZZ)

1	GND	2	DD3
3	DD4	4	DD5
5	DD6	6	DD7
7	CS0#	8	GND
9	ATA_SEL#	10	GND
11	GND	12	GND
13	VCC	14	GND
15	GND	16	GND
17	GND	18	DA2
19	DA1	20	DA0
21	DD0	22	DD1
23	DD2	24	IOCS16#
25	CD2#	26	CD1#
27	DD11	28	DD12
29	DD13	30	DD14
31	DD15	32	CS1#
33	VS1#	34	DIOR#
35	DIOW#	36	WE#
37	INTRQ	38	VCC
39	CSEL#	40	VS2#
41	RESET#	42	IORDY
43	DMARQ	44	DMACK#
45	DASP#	46	PDIAG#
47	DD8	48	DD9
49	DD10	50	GND



* Note

Drawing above is shown with the CompactFlash / PMC option

2.5" Hard Disk option is also available

J5 - CompactPCI I/O

	ROW A	ROW B	ROW C	ROW D	ROW E
1	RSV	RSV	GND	RSV	RSV
2	RSV	RSV	GND	RSV	RSV
3	RSV	RSV	GND	RSV	RSV
4	RSV	RSV	GND	RSV	RSV
5	RSV	RSV	GND	RSV	RSV
6	RSV	RSV	GND	RSV	RSV
7	RSV	RSV	GND	RSV	RSV
8	RSV	RSV	GND	RSV	RSV
9	RSV	RSV	GND	RSV	RSV
10	FD:MSEN0	FD:MSEN1	GND	RSV	RSV
11	FD: MTR0#	FD: INDEX#	GND	FD: FDEDIN#	FD: DENSEL#
12	FD: DIR#	FD: MTR1#	GND	FD: DSEL0#	FD: DSEL1#
13	FD: TRK0#	FD: WGATE#	GND	FD: WDATA#	FD: STEP#
14	FD: DSKCHG#	FD: HDSEL#	GND	FD: RDATA#	FD: WRPROT#
15	IDE1:D6	IDE1:D8	GND	IDE1:D7	IDE:RESET#
16	IDE1:D4	IDE1:D10	GND	IDE1:D5	IDE1:D9
17	IDE1:D2	IDE1:D12	GND	IDE1:D3	IDE1:D11
18	IDE1:D0	IDE1:D14	GND	IDE1:D1	IDE1:D13
19	IDE1:IOR#	IDE1:IOW#	GND	IDE1:REQ	IDE1:D15
20	IDE1:IOCS16#	IDE1:IRQ	GND	IDE1:ACK#	IDE1:IORDY
21	IDE1:A2	IDE1:A0	GND	IDE1:A1	IDE1:PDIAG#
22	IDE1:ACT#	IDE1:CS3#	GND	IDE1:CS0#	RSV

: Active low

J4 - CompactPCI I/O (SCSI)

	ROW A	ROW B	ROW C	ROW D	ROW E
1	D12+	D12-	GND	D13+	D13-
2	D14+	D14-	GND	D15+	D15-
3	GND	GND	GND	GND	GND
4	DPH+	DPH-	GND	D0+	D0-
5	D1+	D1-	GND	D2+	D2-
6	GND	GND	GND	GND	GND
7	D3+	D3-	GND	D4+	D4-
8	D5+	D5-	GND	D6+	D6-
9	GND	GND	GND	GND	GND
10	D7+	D7-	GND	DPL+	DPL-
11	DIFFSENS	TERMPWR9	GND	TERMPWR7	TERMPWR8
12 13 14	Key Area				
15	TERMPWR5	TERMPWR6	GND	TERMPWR3	TERMPWR4
16	TERMPWR1	TERMPWR2	GND	ATN+	ATN-
17	GND	GND	GND	GND	GND
18	BSY+	BSY-	GND	ACK+	ACK-
19	RST+	RST-	GND	MSG+	MSG-
20	GND	GND	GND	GND	GND
21	SEL+	SEL-	GND	CD+	CD-
22	REQ+	REQ-	GND	IO+	IO-
23	N.C.	VCC	GND	N.C.	VCC3
24	D8+	D8-	GND	SD9+	D9-
25	D10+	D10-	GND	D11+	D11-

J20 - Hot Swap Switch

1	VCC3E
2	SW_OPEN#
3	SW_CLOSE#

J7 - USB PORT

1	VCC
2	DATA -
3	DATA+
4	GND

J22 - POWER

1	VCC3E
2	GND

Sw1 - RESET Button

1	GND
2	RESET#

The Quick Reference can be downloaded from Kontron
Web site at: http://www.kontron.com
Or from Kontron FTP site at: ftp://ftp.kontron.ca/Support/

For Technical Suppor please contact:

1. *Internet : www.kontron.com*
2. *E-Mail : support@ca.kontron.com*
3. *Fax : (450) 437-8053*
4. *Tel : (800) 354-4223*

* Note

1 • JN1-JN3 as per PMC standard pinout. See manual for pinout description.

2 • JN4 is routed to J4 for the PIM adapter, using 32 differential pairs (100V differential, 50V single ended)

Voltages

VCC = +5V
VCCE = +5V Early
VCC3 = +3.3V
VCC3E =+3.3V Early
+12VE = +12V Early
-12VE = -12V Early

M6010_QR_2

J1 - Mezzanine CompactPCI Power connector

	ROW A	ROW B	ROW C	ROW D	ROW E
1	VCCE	RSV	RSV	RSV	VCCE
2	RSV	VCCE	RSV	RSV	RSV
3	RSV	RSV	RSV	VCCE	RSV
4	RSV	HEALTHY#	RSV	RSV	RSV
5	RSV	RSV	RSV	GND	RSV
6	RSV	RSV	VCC3E	RSV	RSV
7	RSV	RSV	RSV	GND	RSV
8	RSV	GND	RSV	RSV	RSV
9	RSV	RSV	RSV	GND	RSV
10	RSV	GND	VCC3E	RSV	RSV
11	RSV	RSV	RSV	GND	RSV
12 13 14	Key Area				
15	VCC3E	RSV	RSV	BD_SEL#_	RSV
16	RSV	GND	RSV	RSV	RSV
17	VCC3E	IPMB_SCL	IPMB_SDA	GND	RSV
18	RSV	GND	VCC3E	RSV	RSV
19	VCC3E	RSV	RSV	GND	RSV
20	RSV	GND	RSV	RSV	RSV
21	VCC3E	RSV	RSV	RSV	RSV
22	RSV	GND	VCC3E	RSV	RSV
23	VCC3E	RSV	RSV	VCCE	RSV
24	RSV	VCCE	RSV	RSV	RSV
25	VCCE	RSV	ENUM#	VCC3E	VCCE

Long Pins Short Pins