AT8050

ATCA with AMC support

kontron

Board Rev. 1

QUICK REFERENCE

Document version 1.4

CONNECTORS

J2	PostCode	J13-J18	DDR3 Memory Sockets
J5	AMC B1	J20	Telco Clock, Update Channel & Fabric Interface
J8	Ethernet Port 1	J22	USB Flash Drive
J9	Ethernet Port 0	J23	Base Interface & Fabric Interface
J10	USB Ports (2x stacked)	J30	RTM I/O
J12	RS-232 (COM1)	P10	Power

JUMPER SETTINGS (● Default Setting)

JP1 (1-2) FW Write Protect	
Protected	in
● Non Protected	out

JP1 (3-4) FPGA PROM Selection	
Factory Prom	in
● Normal	out

JP1 (5-6) Clear CMOS Setup	
Clear CMOS	in
● Normal Operation	out

JP1 (7-8) Reserved	
Reserved	in
● Reserved	out

JP1 (9-10) Reserved	
Reserved	in
● Reserved	out

JP1 (11-12) Reserved	
Reserved	in
● Reserved	out

JP1 (13-14) Reserved	
Reserved	in
● Reserved	out

JP2 (1-2) Watchdogs	
Disabled	in
● Enabled	out

JP2 (3-4) Shelf Manager Activation	
Override	in
● Normal Operation	out

JP2 (5-6) IPMI	
Override	in
● Normal	out

JP2 (7-8) AMC & RTM Activation	
Override	in
● Normal Operation	out

JP2 (9-10) Reserved	
Reserved	in
● Reserved	out

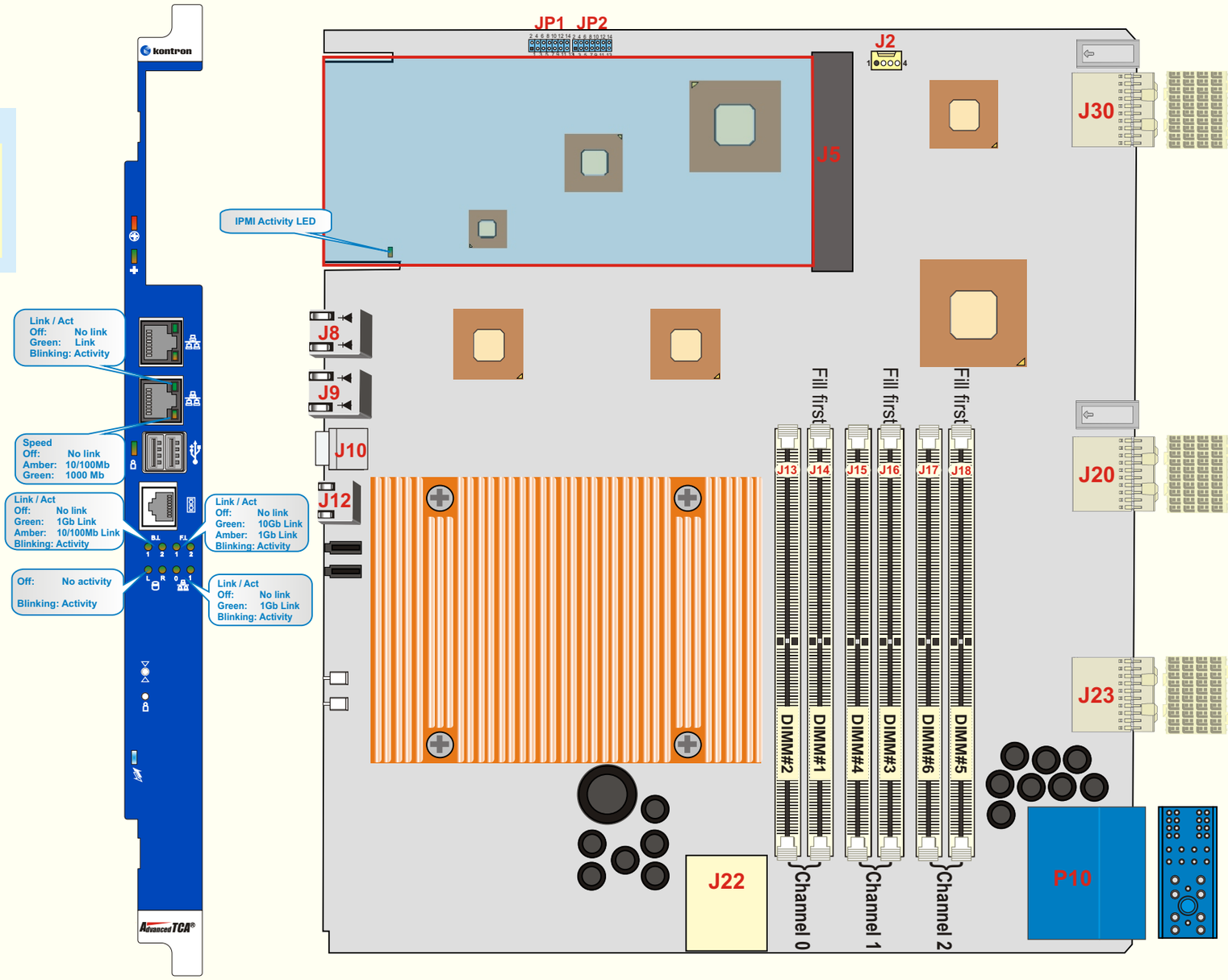
JP2 (11-12) Reserved	
Reserved	in
● Reserved	out

JP2 (13-14) Reserved	
Reserved	in
● Reserved	out

Symbols Chart

- Out Of Service
- Hot Swap
- Serial Port
- B.I. Base Interface
- User Defined
- Hard Drive (L = Local, R = Remote)
- Healthy
- Reset
- USB
- Ethernet
- F.I. Fabric Interface

LEDs Signification available on the back



Connector Pinouts

AT8050

Board Rev. 1

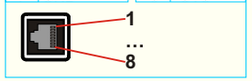
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J10 - USB PORTS

1	VCC
2	DATA -
3	DATA+
4	GND

J12 - RS-232

1	RTS	5	GND
2	DTR	6	RX#
3	TX#	7	DSR
4	GND	8	CTS



J8 & J9 - Ethernet

1	BI_DA+	5	BI_DC-
2	BI_DA-	6	BI_DB-
3	BI_DB+	7	BI_DD+
4	BI_DC+	8	BI_DD-

J22 - USB Flash Drive

1	VCC	6	N.C.
2	N.C.	7	GND
3	USB_DATA-	8	N.C.
4	N.C.	9	
5	USB_DATA+	10	LED#

J2 - POST CODE

1	VCC3
2	POST:DATA
3	POST:CLOCK
4	GND

P10 - Power

1	N.P.	2	N.P.
3	N.P.	4	N.P.
5	HA0	6	HA1
7	HA2	8	HA3
9	HA4	10	HA5
11	HA6	12	HA7/P
13	SCL_A	14	SDA_A
15	SCL_B	16	SDA_B
17	MT1_TIP(N.C.)	18	MT2_TIP(N.C.)
19	RING_A(N.C.)	20	RING_B(N.C.)
21	MT1_RING(N.C.)	22	MT2_RING(N.C.)
23	RRTN_A(N.C.)	24	RRTN_B(N.C.)
25	**SHELF_GND**	26	**LOGIC_GND**
27	ENABLE_B	28	VRTN_A
29	VRTN_B	30	EARLY_A
31	EARLY_B	32	ENABLE_A
33	-48V_A	34	-48V_B

J30 - RTM I/O

	ROW A	AB	ROW B	ROW C	CD	ROW D	ROW E	EF	ROW F	ROW G	GH	ROW H
1	V_12V_1	GND	V_12V_5	V_12V_2	GND	V_3V3_SUS	FPGA_IO_3	GND	RTM_PRSNT#	FPGA_IO_1	GND	RTM_EN#
2	V_12V_3	GND	V_12V_6	V_12V_4	GND	NC_D2	IPMC_SCL	GND	IPMC_SDA	USB0_D+	GND	USB0_D-
3	SP_TX	GND	SP_RX	JTAG_TD1	GND	JTAG_TD0	JTAG_TMS	GND	JTAG_TCK	JTAG_TRST	GND	FPGA_IO_2
4	USB1_D+	GND	USB1_D-	INT_0	GND	INT_1	RTML_TX	GND	RTML_RX	RTML_CLK	GND	PROG
5	SP_RTS#	GND	SP_CTS#	MD2#	GND	RSVD_D5	CLK_PE+	GND	CLK_PE-	RSVD_G5	GND	JTAG_SEL
6	SATA_TX+	GND	SATA_TX-	SATA_RX+	GND	SATA_RX-	SFP1_SCL	GND	SFP1_SDA	SFP0_SCL	GND	SFP0_SDA
7	SAS_0_TX+	GND	SAS_0_TX-	SAS_0_RX+	GND	SAS_0_RX-	SAS_1_TX-	GND	SAS_1_TX+	SAS_1_RX+	GND	SAS_1_RX-
8	GBE_TX1+	GND	GBE_TX1-	GBE_RX1+	GND	GBE_RX1-	GBE_TX2+	GND	GBE_TX2-	GBE_RX2+	GND	GBE_RX2-
9	PE6_TX-	GND	PE6_TX+	PE7_RX-	GND	PE7_RX+	PE5_TX+	GND	PE5_TX-	PE6_RX+	GND	PE6_RX-
10	PE4_TX-	GND	PE4_TX+	PE5_RX+	GND	PE5_RX-	PE7_TX+	GND	PE7_TX-	PE4_RX-	GND	PE4_RX+

J20 - Telco Clock, Update Channel & Fabric Interface

	ROW A	AB	ROW B	ROW C	CD	ROW D	ROW E	EF	ROW F	ROW G	GH	ROW H
1	CLK1A+	GND	CLK1A-	CLK1B+	GND	CLK1B-	CLK2A+	GND	CLK2A-	CLK2B+	GND	CLK2B-
2	Tx4(UP)+	GND	Tx4(UP)-	Rx4(UP)+	GND	Rx4(UP)-	CLK3A+	GND	CLK3A-	CLK3B+	GND	CLK3B-
3	Tx2(UP)+	GND	Tx2(UP)-	Rx2(UP)+	GND	Rx2(UP)-	Tx3(UP)+	GND	Tx3(UP)-	Rx3(UP)+	GND	Rx3(UP)-
4	Tx0(UP)+	GND	Tx0(UP)-	Rx0(UP)+	GND	Rx0(UP)-	Tx1(UP)+	GND	Tx1(UP)-	Rx1(UP)+	GND	Rx1(UP)-
5	Tx2[15]+(N.C.)	GND	Tx2[15]-(N.C.)	Rx2[15]+(N.C.)	GND	Rx2[15]-(N.C.)	Tx3[15]+(N.C.)	GND	Tx3[15]-(N.C.)	Rx3[15]+(N.C.)	GND	Rx3[15]-(N.C.)
6	Tx0[15]+(N.C.)	GND	Tx0[15]-(N.C.)	Rx0[15]+(N.C.)	GND	Rx0[15]-(N.C.)	Tx1[15]+(N.C.)	GND	Tx1[15]-(N.C.)	Rx1[15]+(N.C.)	GND	Rx1[15]-(N.C.)
7	Tx2[14]+(N.C.)	GND	Tx2[14]-(N.C.)	Rx2[14]+(N.C.)	GND	Rx2[14]-(N.C.)	Tx3[14]+(N.C.)	GND	Tx3[14]-(N.C.)	Rx3[14]+(N.C.)	GND	Rx3[14]-(N.C.)
8	Tx0[14]+(N.C.)	GND	Tx0[14]-(N.C.)	Rx0[14]+(N.C.)	GND	Rx0[14]-(N.C.)	Tx1[14]+(N.C.)	GND	Tx1[14]-(N.C.)	Rx1[14]+(N.C.)	GND	Rx1[14]-(N.C.)
9	Tx2[13]+(N.C.)	GND	Tx2[13]-(N.C.)	Rx2[13]+(N.C.)	GND	Rx2[13]-(N.C.)	Tx3[13]+(N.C.)	GND	Tx3[13]-(N.C.)	Rx3[13]+(N.C.)	GND	Rx3[13]-(N.C.)
10	Tx0[13]+(N.C.)	GND	Tx0[13]-(N.C.)	Rx0[13]+(N.C.)	GND	Rx0[13]-(N.C.)	Tx1[13]+(N.C.)	GND	Tx1[13]-(N.C.)	Rx1[13]+(N.C.)	GND	Rx1[13]-(N.C.)

J23 - Base Interface & Fabric Interface

	ROW A	AB	ROW B	ROW C	CD	ROW D	ROW E	EF	ROW F	ROW G	GH	ROW H
1	Tx2[2]+	GND	Tx2[2]-	Rx2[2]+	GND	Rx2[2]-	Tx3[2]+	GND	Tx3[2]-	Rx3[2]+	GND	Rx3[2]-
2	Tx0[2]+	GND	Tx0[2]-	Rx0[2]+	GND	Rx0[2]-	Tx1[2]+	GND	Tx1[2]-	Rx1[2]+	GND	Rx1[2]-
3	Tx2[1]+	GND	Tx2[1]-	Rx2[1]+	GND	Rx2[1]-	Tx3[1]+	GND	Tx3[1]-	Rx3[1]+	GND	Rx3[1]-
4	Tx0[1]+	GND	Tx0[1]-	Rx0[1]+	GND	Rx0[1]-	Tx1[1]+	GND	Tx1[1]-	Rx1[1]+	GND	Rx1[1]-
5	BI_DA1+	GND	BI_DA1-	BI_DB1+	GND	BI_DB1-	BI_DC1+	GND	BI_DC1-	BI_DD1+	GND	BI_DD1-
6	BI_DA2+	GND	BI_DA2-	BI_DB2+	GND	BI_DB2-	BI_DC2+	GND	BI_DC2-	BI_DD2+	GND	BI_DD2-
7	N.C.	GND	N.C.	N.C.	GND	N.C.	N.C.	GND	N.C.	N.C.	GND	N.C.
8	N.C.	GND	N.C.	N.C.	GND	N.C.	N.C.	GND	N.C.	N.C.	GND	N.C.
9	N.C.	GND	N.C.	N.C.	GND	N.C.	N.C.	GND	N.C.	N.C.	GND	N.C.
10	N.C.	GND	N.C.	N.C.	GND	N.C.	N.C.	GND	N.C.	N.C.	GND	N.C.

J5 - AMC B1

B1	GND	B43	GND	B86	GND	B129	TxD15-
B2	12V	B44	RxD4+	B87	TxD8-	B130	TxD15+
B3	PS1#	B45	RxD4-	B88	TxD8+	B131	GND
B4	MP_3V3	B46	GND	B89	GND	B132	RxD15-
B5	GA0	B47	TxD4+	B90	RxD8-	B133	RxD15+
B6	RSV	B48	TxD4-	B91	RxD8+	B134	GND
B7	GND	B49	GND	B92	GND	B135	TCLKC-
B8	RSV	B50	RxD5+	B93	TxD9-	B136	TCLKC+
B9	12V	B51	RxD5-	B94	TxD9+	B137	GND
B10	GND	B52	GND	B95	GND	B138	TCLKD-
B11	RxD0+	B53	TxD5+	B96	RxD9-	B139	TCLKD+
B12	RxD0-	B54	TxD5-	B97	RxD9+	B140	GND
B13	GND	B55	GND	B98	GND	B141	TxD17-
B14	TxD0+	B56	IPMB-L_SCL	B99	TxD10-	B142	TxD17+
B15	TxD0-	B57	12V	B100	TxD10+	B143	GND
B16	GND	B58	GND	B101	GND	B144	RxD17-
B17	GA1	B59	RxD6+	B102	RxD10-	B145	RxD17+
B18	12V	B60	RxD6-	B103	RxD10+	B146	GND
B19	GND	B61	GND	B104	GND	B147	TxD18-
B20	RxD1+	B62	TxD6+	B105	TxD11-	B148	TxD18+
B21	RxD1-	B63	TxD6-	B106	TxD11+	B149	GND
B22	GND	B64	GND	B107	GND	B150	RxD18-
B23	TxD1+	B65	RxD7+	B108	RxD11-	B151	RxD18+
B24	TxD1-	B66	RxD7-	B109	RxD11+	B152	GND
B25	GND	B67	GND	B110	GND	B153	TxD19-
B26	GA2	B68	TxD7+	B111	TxD12-	B154	TxD19+
B27	12V	B69	TxD7-	B112	TxD12+	B155	GND
B28	GND	B70	GND	B113	GND	B156	RxD19-
B29	RxD2+	B71	IPMB-L_SDA	B114	RxD12-	B157	RxD19+
B30	RxD2-	B72	12V	B115	RxD12+	B158	GND
B31	GND	B73	GND	B116	GND	B159	TxD20-
B32	TxD2+	B74	TCLKA+	B117	TxD13-	B160	TxD20+
B33	TxD2-	B75	TCLKA-	B118	TxD13+	B161	GND
B34	GND	B76	GND	B119	GND	B162	RxD20-
B35	RxD3+	B77	TCLKB+	B120	RxD13-	B163	RxD20+
B36	RxD3-	B78	TCLKB-	B121	RxD13+	B164	GND
B37	GND	B79	GND	B122	GND	B165	TCK (N.C.)
B38	TxD3+	B80	FCLKA+	B123	TxD14-	B166	TMS (N.C.)
B39	TxD3-	B81	FCLKA-	B124	TxD14+	B167	TRST#(N.C.)
B40	GND	B82	GND	B125	GND	B168	TDO (N.C.)
B41	ENABLE#	B83	PS0#(GND)	B126	RxD14-	B169	TDI (N.C.)
B42	12V	B84	12V	B127	RxD14+	B170	GND
		B85	GND	B128	GND		

LEDs Signification

Hot Swap (Blue)

Solid On (100 % on): FRU Inactive
Long Blink (90 % on): FRU Activation Request
Solid Off (0 % on): FRU Activation In Progress / FRU Active
Short Blink (10 % on): FRU Deactivation Request / FRU Deactivation In Progress

Out of service (Red/Amber) [default : red]

Solid On : IPMC in reset
Fast Blink (~50 % on): IPMC upgrade/rollback in progress Short Blink(10 % on): FRU Power Denied
Application Defined : May be controlled by application using PICMG API

Health Led (Amber/Green) [default : green]

Green : Health Ok
Amber : Health Error (Critical) / Payload power down or in reset
Application Defined : May be controlled by application using PICMG API

IPMI activity [green/amber]

Green Pulse : IPMI Heartbeat
Green Fast Blink : IPMI KCS Activity
Amber Pulse : IPMI Attention Flag (event pending)
Amber Fast Blink : IPMI IPMB Activity

N.C. = Not Connected
N.P. = Not Populated
N.U. = Not Used
RSV = Reserved
# = Active Low

The Technical Reference Manual and 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/

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