AT8020

ATCA Dual Intel Dual-Core Xeon, Dual AMC

kontron

Board Rev. 1

QUICK REFERENCE

Document version 1.2

CONNECTORS

J5	CPU 1	J18, J19	Daughter Card Connectors
J6	CPU 0 (always present)	J20	Telco Clock / Fabric Interface Connector
J8-J11	DDR-2 Memory Connectors	J23	Base Interface & Fabric Interface Connector
J12	XDP Connector	J30	RTM Connector
J13	USB 2.0 Connector	B1	AMC B1
J14	Serial Port Connector	B2	AMC B2
J15	Management LAN	P10	Power Connector

JUMPER SETTINGS (● Default Setting)

JP1 (1-2) Watchdog	
Disabled	in
● Enabled	out

JP1 (3-4) Shelf Manager Activation	
Override	in
● Normal Operation	out

JP1 (5-6) IPMI	
Override (Board always ON)	in
● Normal Operation	out

JP1 (7-8) AMC Activation	
Override	in
● Normal Operation	out

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

JP1 (11-12) FWH Top-block Protect	
Unprotect	in
● Normal	out

JP1 (13-14) FPGA PROM Selection	
Factory Default	in
● Normal Operation	out

JP2 (1-2) Reserved	
Reserved	in
● Reserved	out

JP2 (3-4) Postcodes Display	
Reserved	in
● Normal BIOS postcodes	out

JP2 (5-6) BIOS Recovery	
Recovery Mode	in
● Normal Operation	out

JP2 (7-8) Reserved	
Reserved	in
● Reserved	out

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

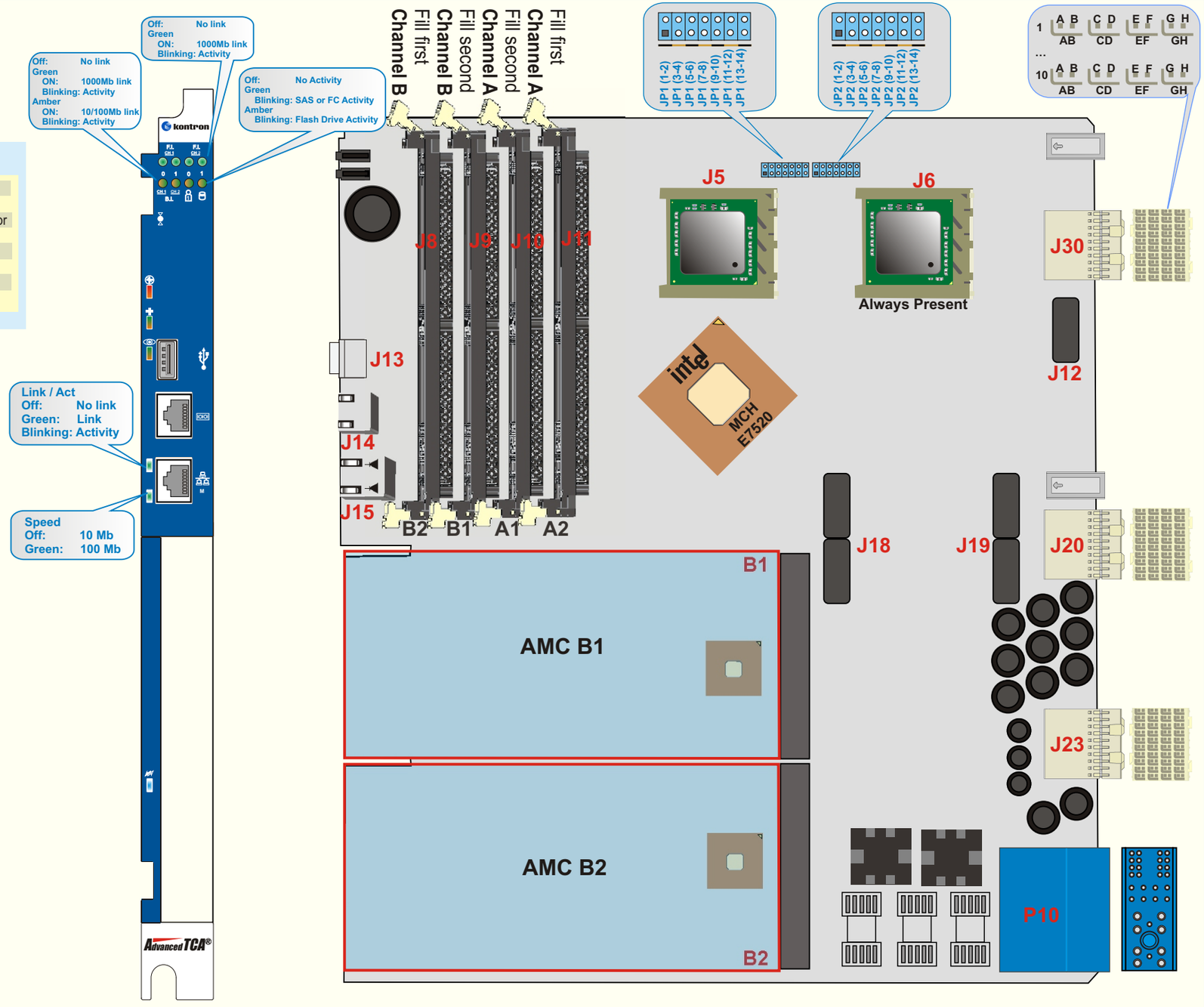
JP2 (11-12) Clear CMOS Setup	
Restore on Boot	in
● Normal Operation	out

JP2 (13-14) Flash drive write protect	
Protection controlled by BIOS	in
● Write Enabled	out

Symbols Chart

- Out Of Service
- Hot Swap
- Management (IPMI)
- Serial Port
- BI Base Interface
- User Defined
- Healthy
- Reset
- USB
- Ethernet
- FI Fabric Interface
- Flash Drive

LEDs Signification available on the back



Connector Pinouts

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J15 - Ethernet

10/100 Management LAN M

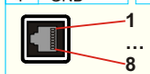
1	TX+	5	N.C.
2	TX-	6	RX-
3	RX+	7	N.C.
4	N.C.	8	N.C.

J13 - USB PORT

1	VCC
2	DATA -
3	DATA+
4	GND

J14 - RS-232

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



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

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	RTM_EJECT	GND	RTM_PRSNT#	RTM_HS_LED	GND	RTM_ENABLE#
2	V_12V_3	GND	V_12V_6	V_12V_4	GND	IPMC_INT#	IPMC_SCL	GND	IPMC_SDA	USB1_D+	GND	USB1_D-
3	SP_TX	GND	SP_RX	SP_DTR	GND	SP_RTS	SP_CTS	GND	SP_DSR	SP_DCD	GND	RTM_RESET
4	Reserved	GND	Reserved	Reserved	GND	Reserved	RTML_TX	GND	RTML_RX	RTML_CLK	GND	N.C.
5	N.C.	GND	N.C.	N.C.	GND	N.C.	N.C.	GND	N.C.	N.C.	GND	N.C.
6	N.C.	GND	N.C.	N.C.	GND	N.C.	N.C.	GND	N.C.	N.C.	GND	N.C.
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	P0_TX+	GND	P0_TX-	P0_RX+	GND	P0_RX-	P1_TX+	GND	P1_TX-	P1_RX+	GND	P1_RX-
10	P2_TX+	GND	P2_TX-	P2_RX+	GND	P2_RX-	P3_TX+	GND	P3_TX-	P3_RX+	GND	P3_RX-

J20 - Telco Clock I/O

	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)-	Rx3(UP)+	GND	Rx3(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 - ATCA I/O PICMG 3.1

	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.

B1, B2 - AMC B1 & AMC B2

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	TxD16-
B8	RSV	B50	RxD5+	B93	TxD9-	B136	TxD16+
B9	12V	B51	RxD5-	B94	TxD9+	B137	GND
B10	GND	B52	GND	B95	GND	B138	RxD16-
B11	RxD0+	B53	TxD5+	B96	RxD9-	B139	RxD16+
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_SDA	B114	RxD12-	B157	RxD19+
B30	RxD2-	B72	12V	B115	RxD12+	B158	GND
B31	GND	B73	GND	B116	GND	B159	TxD20-
B32	TxD2+	B74	CLK1+	B117	TxD13-	B160	TxD20+
B33	TxD2-	B75	CLK1-	B118	TxD13+	B161	GND
B34	GND	B76	GND	B119	GND	B162	RxD20-
B35	RxD3+	B77	CLK2+	B120	RxD13-	B163	RxD20+
B36	RxD3-	B78	CLK2-	B121	RxD13+	B164	GND
B37	GND	B79	GND	B122	GND	B165	TCLK
B38	TxD3+	B80	CLK3+	B123	TxD14-	B166	TMS
B39	TxD3-	B81	CLK3-	B124	TxD14+	B167	TRST#
B40	GND	B82	GND	B125	GND	B168	TDO
B41	ENABLE#	B83	PS0#(GND)	B126	RxD14-	B169	TDI
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
Solif 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

Management (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

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/

For Technical Support please contact:

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

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