AT8030

AdvancedTCA Triple Core 2 Duo with AMC support

kontron

Board Rev. 1

QUICK REFERENCE

Document version 1.2

CONNECTORS

J2	CPU 0 XDP	J11 - J12	CPU 0 Memory
J3	CPU 1 XDP	J13	CPU 1 Memory
J4	CPU 2 XDP	J14	CPU 2 Memory
J5	Serial Port	J18	PQ3 Memory
J6	Gigabit Ethernet CPU0/A	J20	Telco Clock, Update & Fabric
J7	Gigabit Ethernet CPU0/B	J23	Base Interface & Fabric Interface
J10	USB CPU0/A	J30	RTM
J16	USB CPU0/B	B1	AMC B1
J17	USB CPU1	P10	Power
J15	USB CPU2		

JUMPER SETTINGS (● Default Setting)

JP1 (1-2) Watchdogs Disable	
Disabled	in
● Enabled	out

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

JP1 (5-6) IPMI Override	
Override	in
● Normal	out

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

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

JP1 (11-12) Postcodes Display	
Reserved	in
● BIOS postcodes	out

JP1 (13-14) Flash Drive write protect	
Enabled	in
● Disabled	out

JP2 (1-2) FWHs top-block protect	
Unprotected	in
● Normal (protected)	out

JP2 (3-4) FPGA PROM Selection	
Factory Prom	in
● Normal	out

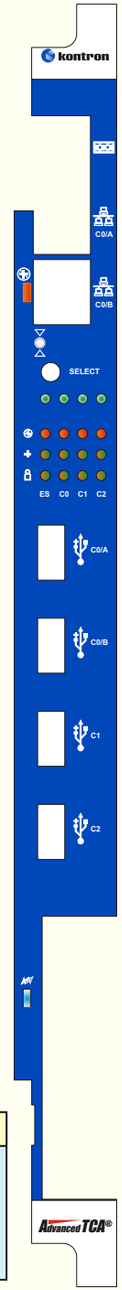
JP2 (5-6) Clear CMOS Setup	
Reserved	in
● Normal Operation	out

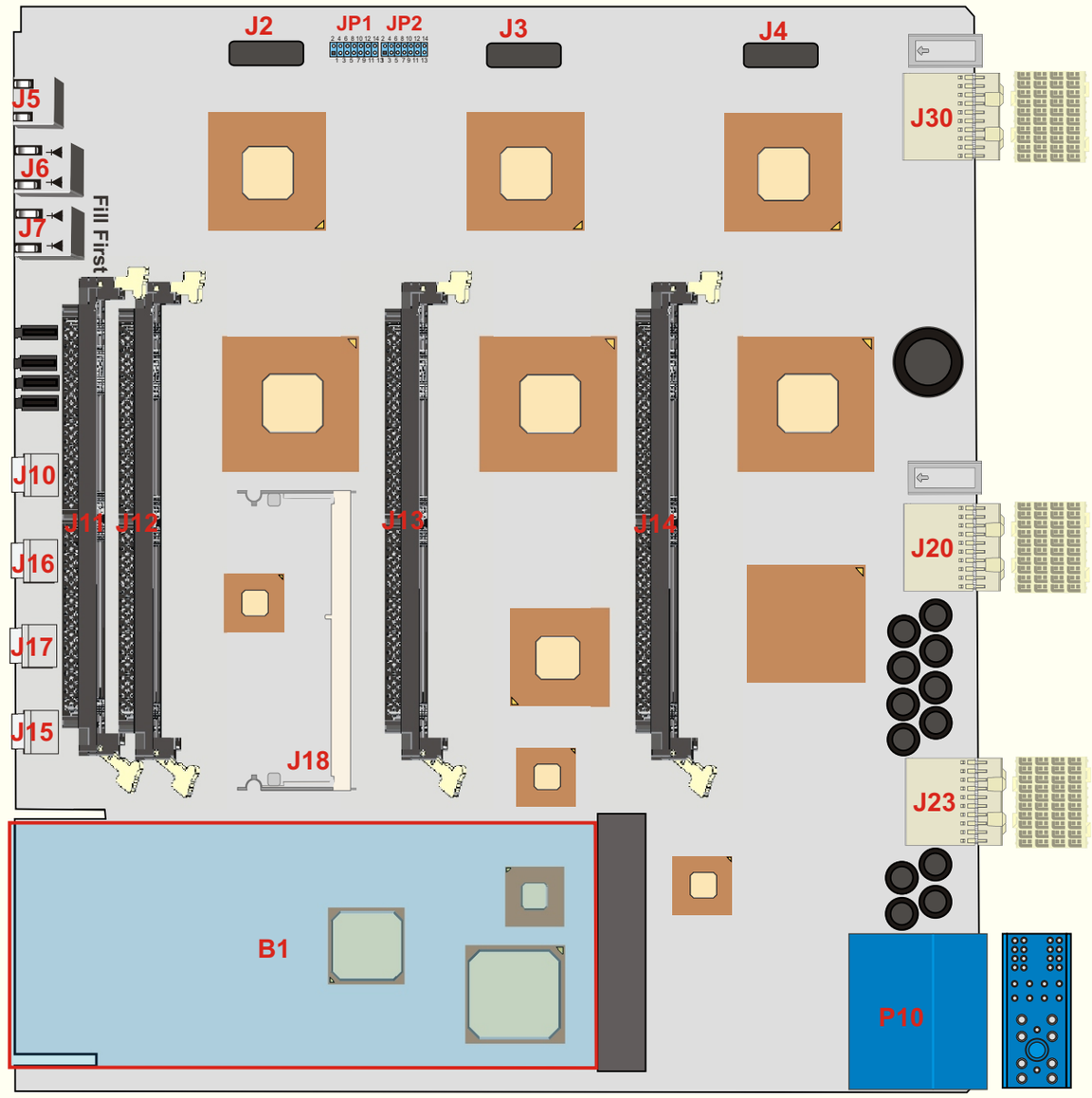
JP2 (7-8) BIOS Recovery	
Recovery Mode	in
● Normal Operation	out

JP2 (9-10) Reserved #1	
Reserved	in
● Normal Operation	out

JP2 (11-12) Reserved #2	
Reserved	in
● Normal Operation	out

JP2 (13-14) Reserved #3	
Reserved	in
● Normal Operation	out





Symbols Chart

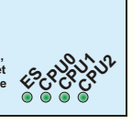
- Out Of Service
- Hot Swap
- Healthy
- Serial Port
- Reset
- USB
- Ethernet
- User LEDs

LEDs Signification available on the back

Select Button Usage

Push this button to switch between ES, CPU0, CPU1 and CPU2

When the green LED is ON, the serial port and the reset button are connected to the corresponding processor.



Connector Pinouts

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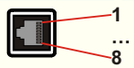
J10, J15, J16 & J17 - USB PORT

1	VCC
2	DATA -
3	DATA+
4	GND

J5 - RS-232

1	RTS (asserted)	5	GND
2	DTR (asserted)	6	RX#
3	TX#	7	N.C.
4	GND	8	N.C.



J6 & J7 - 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-

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	Reserved	GND	RTM_PRSNT#	N.C.	GND	RTM_ENABLE#
2	V_12V_3	GND	V_12V_6	V_12V_4	GND	N.C.	IPMC_SCL	GND	IPMC_SDA	USB_D+	GND	USB_D-
3	SP0_TX	GND	SP0_RX	JTAG_TD1	GND	JTAG_TD0	JTAG_TMS	GND	JTAG_TCK	JTAG_TRST	GND	N.C.
4	Reserved	GND	Reserved	INT_0#	GND	INT_1#	RTML_TX	GND	RTML_RX	RTML_CLK	GND	RESET/PROG
5	SP1_TX	GND	SP1_RX	SP2_TX	GND	SP2_RX	SP3_TX	GND	SP3_RX	SP4_TX	GND	SP4_RX
6	SP5_TX	GND	SP5_RX	SP6_TX	GND	SP6_RX	SP7_TX	GND	SP7_RX	SFP_SCL	GND	SFP_SDA
7	Reserved	GND	Reserved	Reserved	GND	N.C.	RESET_CPU0#	GND	RESET_CPU1#	RESET_CPU2#	GND	RESET_PQ3#
8	PQ3_FE_TX+	GND	PQ3_FE_TX-	PQ3_FE_RX+	GND	PQ3_FE_RX-	PQ3_FE_CTR	GND	N.C.	N.C.	GND	N.C.
9	SAS0_TX+	GND	SAS0_TX-	SAS0_RX+	GND	SAS0_RX-	SAS1_TX+	GND	SAS1_TX-	SAS1_RX+	GND	SAS1_RX-
10	GE18_TXC+	GND	GE18_TXC-	GE18_RXC+	GND	GE18_RXC-	GE15_TXC+	GND	GE15_TXC-	GE15_RXC+	GND	GE15_RXC-

J20 - Telco Clock, Update & Fabric

	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)+(N.C.)	GND	Tx2(UP)-(N.C.)	Rx2(UP)+(N.C.)	GND	Rx2(UP)-(N.C.)	Tx3(UP)+	GND	Tx3(UP)-	Rx3(UP)+	GND	Rx3(UP)-
4	Tx0(UP)+	GND	Tx0(UP)-	Rx0(UP)+	GND	Rx0(UP)-	Tx1(UP)+(N.C.)	GND	Tx1(UP)-(N.C.)	Rx1(UP)+(N.C.)	GND	Rx1(UP)-(N.C.)
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]+	GND	Tx0[15]-	Rx0[15]+	GND	Rx0[15]-	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]+	GND	Tx0[14]-	Rx0[14]+	GND	Rx0[14]-	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]+	GND	Tx0[13]-	Rx0[13]+	GND	Rx0[13]-	Tx1[13]+(N.C.)	GND	Tx1[13]-(N.C.)	Rx1[13]+(N.C.)	GND	Rx1[13]-(N.C.)

J23 - Base & 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.

B1 - 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
B38	TxD3+	B80	FCLKA+	B123	TxD14-	B166	TMS
B39	TxD3-	B81	FCLKA-	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		

GbE Switch Port Assignment

CLI ID	Speed	VLAN	Connection
0/1	1 GbE	1	Base Ch 1
0/2	1 GbE	4001	Base Ch 2
0/3	1 GbE	1	CPU0 Base Port 0
0/4	1 GbE	4002	AMC Fabric Port 8
0/5	1 GbE	4002	CPU0 Fabric Port 1
0/6	1 GbE	1	AMC Fabric Port 9
0/7	1 GbE	1	CPU1 Base Port 0
0/8	1 GbE	4002	AMC Fabric Port 10
0/9	1 GbE	4002	UC Fabric ETH1
0/10	1 GbE	4002	CPU1 Fabric Port 1
0/11	1 GbE	4002	AMC Fabric Port 11
0/12	1 GbE	4002	AMC Fabric Port 1
0/13	1 GbE	1	UC Base ETH0
0/14	1 GbE	4002	CPU2 Fabric Port 1
0/15	1 GbE	4002	RTM Fabric Port 1
0/16	1 GbE	1	AMC Base Port 0
0/17	1 GbE	1	CPU2 Base Port 0
0/18	1 GbE	1	RTM Base Port 0
0/19	1 GbE	4002	Fabric 1GE Ch 1
0/20	1 GbE	4003	Fabric 1GE Ch 2
0/21	1 GbE	1	Fabric 1GE Ch 13
0/22	1 GbE	1	Fabric 1GE Ch 14
0/23	1 GbE	1	Fabric 1GE Ch 15
0/24	1 GbE	1	Update Channel
0/25	10 GbE	4002	Fabric Ch 1
0/26	10 GbE	4003	Fabric Ch 2

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

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

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

For Technical Support
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2 . E-Mail : support@ca.kontron.com
3. Fax : (450) 437-8053
4. Tel : (800) 354-4223

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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