

5 Additional Information

For more information on the TI Emulation and Trace JTAG headers, including PC board layout considerations for these high-speed signals, please refer to the TI document, SPRU655.

You can find the latest version online at:

<http://www-s.ti.com/sc/techlit/spru655.pdf>

SIGNAL	TI 14-PIN PIN	cTI 20-PIN PIN	MIPI 60-PIN PIN	SIGNAL
TMS	1	1	2	TMS
nTRST	2	2	8	nTRST
TDI	3	3	5	TDI
TDIS	4	4	15	GND
TVD	5	5	1	IO VREF
KEY	6	6		
TDO	7	7	4	TDO
GND	8	8	*	GND
RTCK	9	9	7	RTCK
GND	10	10	*	GND
TCLK	11	11	3	TCK
GND	12	12	*	GND
EMU0	13	13	19	EMU0
EMU1	14	14	21	EMU1
nSRST		15	6	nRESET
GND		16	*	GND
EMU2		17	13	EMU2
EMU3		18	17	EMU3
EMU4		19	23	EMU4
GND		20	*	GND

TDIS TDIS is a connection to ground to check cable connection to target
 KEY KEY is not connected and used for proper emulator cable connection/alignment
 * GND is common on all MIPI 60 ground pins

Table 4 - Connector Signal to Pin Correlations

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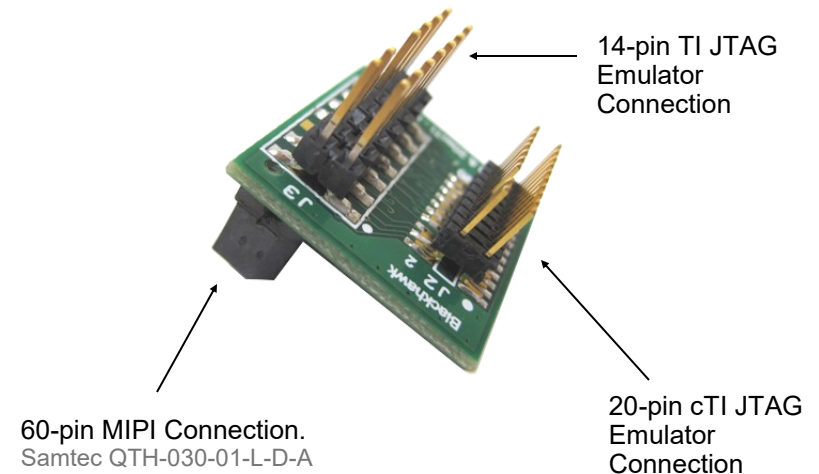
Blackhawk™ JTAG Pin Converters (60t_MIPI)

Installation Requirements

- Emulator with TI 14-pin or cTI 20-pin JTAG connection.
- TI development Board with a 60-pin System Trace header

14e_TI+20e_cTI-60t_MIPI Pin Converter

This document covers the pin and signal definitions for each connection on the pin converter. There are two emulator connections and one target connection.



Important Environmental Considerations

Caution is necessary to minimize ESD (Electro-static Discharge) which can damage electronic components. Use in a controlled environment where ESD materials and practices are employed is highly recommended.

1 20e_cTI Pin Definitions

Pin	Name	Pin	Name
1	TMS	2	nTRST [†]
3	TDI	4	TDIS
5	TVD	6	KEY
7	TDO	8	GND
9	RTCK	10	GND
11	TCK	12	GND
13	EMU0	14	EMU1
15	nSRST [†]	16	GND
17	EMU2	18	EMU3
19	EMU4	20	GND

Table 1 - 20-pin Compact TI Signals

[†] Signals are active low

60t_MIPI Pin Definitions 3

Pin	Name	Pin	Name	Pin	Name	Pin	Name
1	IO V _{ref}	16	GND	31	EMU8	46	NC
2	TMS	17	EMU3	32	NC	47	EMU16
3	TCK	18	NC	33	EMU9	48	NC
4	TDO	19	EMU0	34	NC	49	EMU17
5	TDI	20	NC	35	EMU10	50	NC
6	nRESET	21	EMU1	36	NC	51	EMU18
7	RTCK	22	NC	37	EMU11	52	NC
8	nTRST	23	EMU4	38	NC	53	EMU19
9	nTRST	24	NC	39	EMU12	54	NC
10	NC	25	EMU5	40	NC	55	NC
11	NC	26	NC	41	EMU13	56	NC
12	EMU IO V _{ref}	27	EMU6	42	NC	57	GND
13	EMU2	28	NC	43	EMU14	58	GND
14	NC	29	EMU7	44	NC	59	NC
15	GND	30	NC	45	EMU15	60	NC

Table 3 - 60-pin MIPI Signals

2 14e_TI Pin Definitions

Pin	Name	Pin	Name
1	TMS	2	nTRST [†]
3	TDI	4	GND
5	TVD	6	KEY
7	TDO	8	GND
9	RTCK	10	GND
11	TCLK	12	GND
13	EMU0	14	EMU1

Table 2 - Standard TI 14-pin Signals

[†] Signals are active low

Adapter Bottom View 4



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