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#### **FEATURES**

- MityDSP-L138 Family Debug Adapter
- DSP/ARM and FPGA debug interfaces
- Compatible Critical Link System on Modules
  - o MityDSP-L138
  - o MityDSP-L138F
  - o MityARM-1808
  - o MityARM-1808F
  - o MityARM-1810
  - o MityARM-1810F
  - o MityDSP-6748F





Top

Bottom

# **DESCRIPTION**

The L138/1808/1810/6748 Debug Adapter board for the MityDSP-L138 Family of System on Modules from Critical Link allows for access to the DSP, ARM and FPGA (module dependent) debug interfaces. Each compatible System on Module includes a 31-pin Hirose connector which this adapter board connects to.



#### ABSOLUTE MAXIMUM RATINGS

#### **OPERATING CONDITIONS**

If Military/Aerospace specified cards are required, please contact the Critical Link Sales Office or unit Distributors for availability and specifications.

Ambient Temperature Range Commercial  $0^{\circ}$ C to  $70^{\circ}$ C

0 to 95%

Storage Temperature Range -40°C to 80°C

Humidity

Non-condensing

#### **DEBUG INTERFACE**

A Hirose 31 pin connector (DF9-31P-1V(32)) is provided on each compatible module to allow for the connection of this adapter board for both FPGA and OMAP-L138 processor debug. Below is the pin-out for the Hirose connector and the debug connectors on the adapter board. This adapter is available through your Critical Link representative; please see the ordering information, Table 4, below.

### **Debug Interface Connector Description (J1)**

Table 1 OMAP-L138 Hirose Connector

Pin	I/O	Signal	Pin	I/O	Signal
1	-	GND	2	О	OMAP EMU1
3	-	GND	4	О	OMAP EMU0
5	-	GND	6	I	OMAP TCK
7	-	GND	8	О	OMAP RTCK
9	-	GND	10	О	OMAP TDO
11	-	GND	12	-	OMAP VCC / 3.3V
13	-	GND	14	I	OMAP TDI
15	-	GND	16	I	OMAP TRST
17	-	GND	18	I	OMAP TMS
19	-	GND	20	-	GND
21	-	GND	22	О	NC / FPGA VREF / VCCAUX
23	-	GND	24	I	NC / FPGA TMS
25	-	GND	26	I	NC / FPGA TCK
27	=	GND	28	О	NC / FPGA TDO
29	-	GND	30	I	NC / FPGA TDI
31	-	GND			



## **Processor JTAG Interface Description (J2)**

Connection for the processor, L138/1808/1810/6748, JTAG and emulator interfaces of a compatible System on Module from Critical Link.

Table 2 OMAP-L138 JTAG Connector Pad

Pin	I/O	Signal	Pin	I/O	Signal
1	I	OMAP TMS	2	I	OMAP TRST
3	I	OMAP TDI	4	-	GND
5	-	OMAP VCC / 3.3V	6	-	KEY
7	О	OMAP TDO	8	-	GND
9	О	OMAP RTCK	10	-	GND
11	I	OMAP TCK	12	-	GND
13	О	OMAP EMU0	14	О	OMAP EMU1

## FPGA JTAG Interface Description (J3)

Connection for Xilinx FPGA JTAG interface of a compatible System on Module from Critical Link.

Table 3 FPGA JTAG Connector Pad

		=			
Pin	I/O	Signal	Pin	I/O	Signal
1	-	GND	2	О	FPGA VREF / VCCAUX
3	-	GND	4	I	FPGA TMS
5	-	GND	6	I	FPGA TCK
7	-	GND	8	О	FPGA TDO
9	-	GND	10	I	FPGA TDI
11	-	GND	12	-	No Connect
13	-	GND	14	-	No Connect

#### ORDERING INFORMATION

The following table lists the standard debug adapter ordering information. For shipping status, availability, and lead time please contact your Critical Link representative.

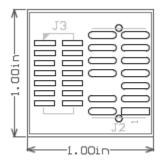
**Table 4: Standard Debug Adapter Part Number** 

Part Number		Description		
	80-000286	L138/1808/1810/6748 JTAG Debug Adapter		



# **MECHANICAL INTERFACE**

The mechanical outline of the Debug Adapter is illustrated in Figure 1, as shown below.



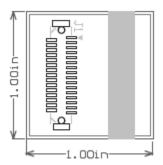


Figure 1 L138/1808/1810/6748 Debug Adapter Mechanical Outline

# **REVISION HISTORY**

Date	Change Description		
27-NOV-2012	Initial revision		

