

HW Getting Started Guide



PQ-MDS-T1 Module

April 2006: Rev. 0.3

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About This Document

This document shows how to connect the PQ-MDS-T1 and verify its basic operation, in a step by step format. The PQ-MDS-T1 works only with the Platform I/O Board (PQ-MDS-PIB), which in turn, has an MPC83xx MDS inserted as a host device.

Required Reading

It is assumed that the reader is familiar with the Platform I/O Board, and an MPC83xx MDS system.

Definitions, Acronyms, and Abbreviations

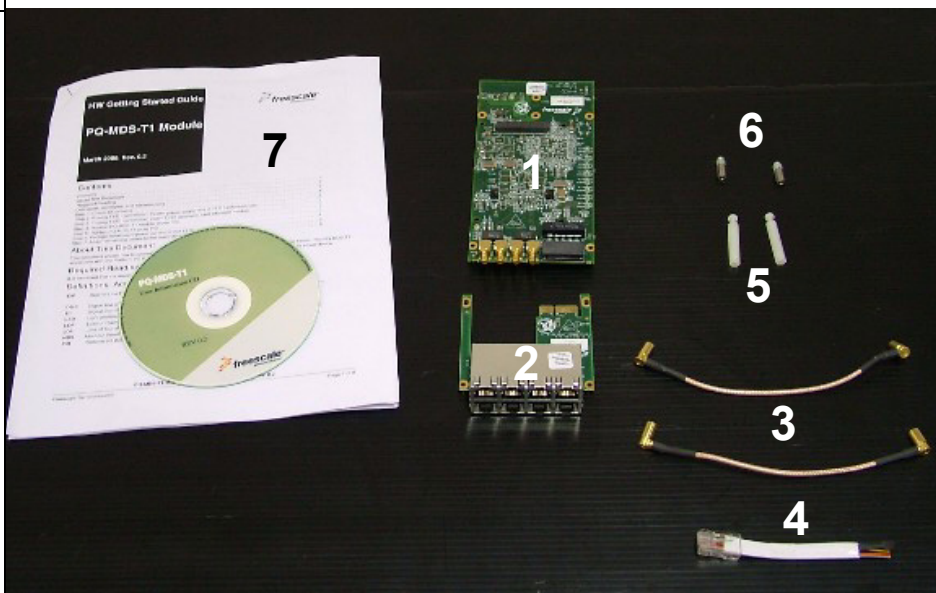
DIP	Dual In-Line Package	PSTN	Public Switched Telephone Network (aka <i>POTS</i> - Plain-Old Telephone System)
DS-3	Digital line rate (45 Mbps)	T1	Digital line rate (1.5 Mbps)
E1	Digital line rate (2 Mbps)		
LED	Light emitting diode		
LOF	Loss of Frame		
LOS	Loss of Signal		
MDS	Modular Development System		
PIB	Platform I/O Board		

PQ-MDS-T1 Module

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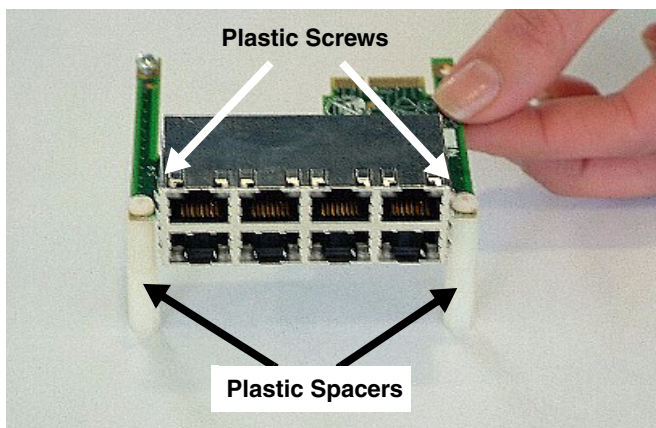
Step 1: Check kit contents

1. PQ-MDS-T1 Module (main module)
2. T1/E1 extension card
3. DS-3 connection loopback cables (x2)
4. T1/E1 connection loopback cable
5. One set of plastic spacers (male/female) for supporting/fastening the board to the PIB
6. Two screws/nuts to attach the main module to the T1/E1 extension adaptor
7. PQ-MDS-T1 Module documentation



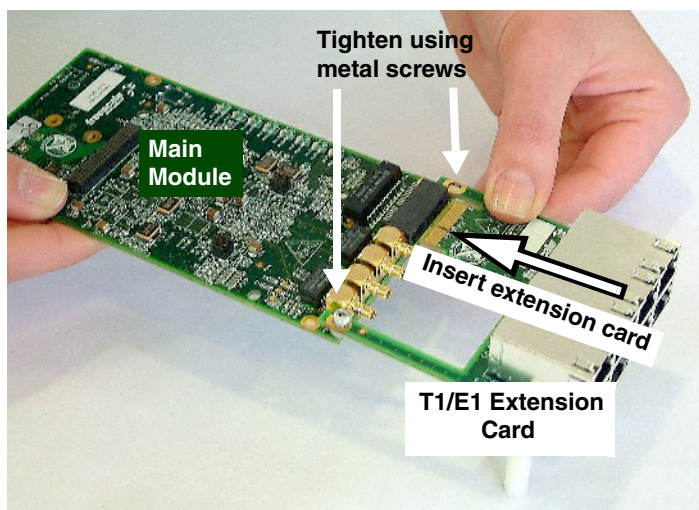
Step 2: If using T1/E1 connection: Fasten plastic supporters to T1/E1 extension card

1. Fasten two plastic supporters, as shown, to the T1/E1 extension card. These supporters hold up the module when it is attached to the PIB.



Step 3: If using T1/E1 connection: Insert T1/E1 extension card into main module.

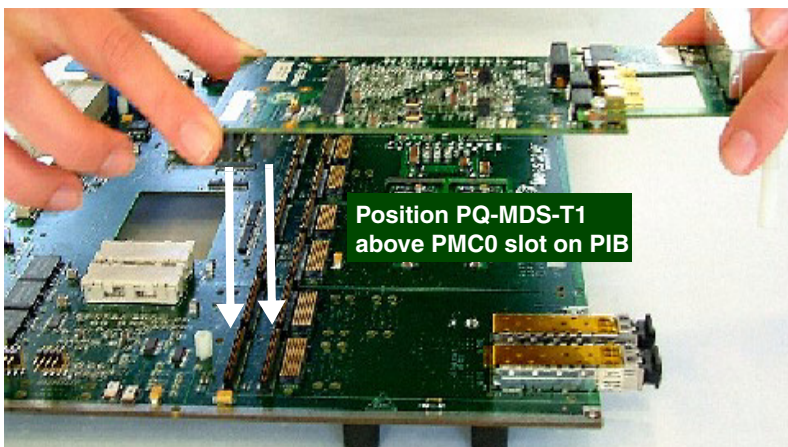
1. Insert the T1/E1 extension card into the main module as shown.
2. Use the metal screws and nuts to tighten the two together.



Step 4: Position PQ-MDS-T1 module above PIB

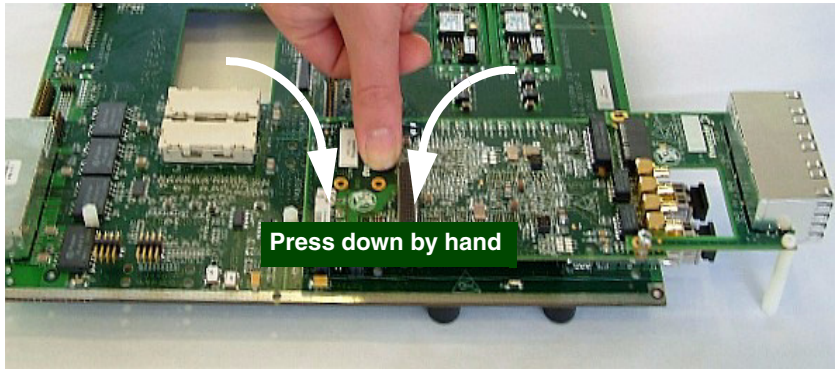
The PQ-MDS-T1 can only be connected to the PMC0 slot of the PIB.

1. As shown, position the PQ-MDS-T1 module above the PMC0 slot, and match the attachments with those on the PIB.



Step 5: Tighten PQ-MDS-T1 on to PIB

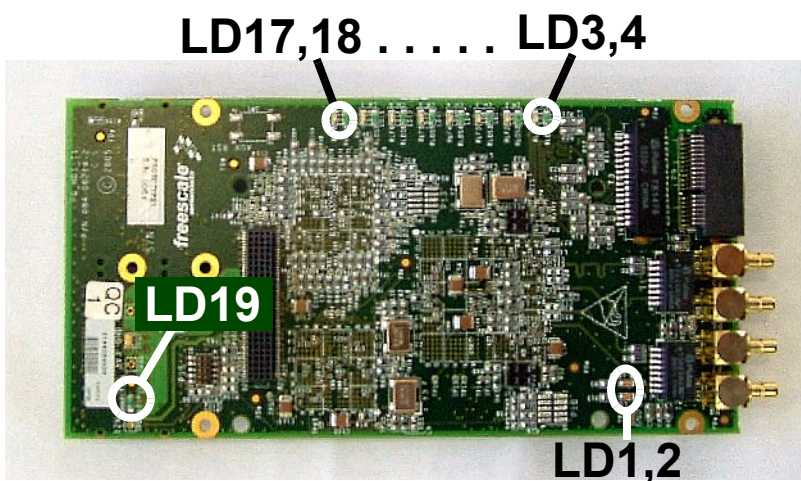
1. Press down on the PQ-MDS-T1 by hand, until it clicks into place.



Step 6: Perform initial board power up, and check LEDs.

LED locations are indicated at right.

1. After the PQ-MDS-T1 is firmly attached to the PIB, apply power to the PIB.
2. LED 19 (green) displays a constant green light to indicate that the PQ-MDS-T1 is receiving power from the PIB.
3. LEDs 4,6,8,10,12,14,16, and 18 briefly display light (amber), indicating that the module is in Reset.
4. Check for completion of the reset sequence-indicated by: LEDs 4-18 (even No's only) becoming dark
5. Shut off the power to the PIB.



LED indicators meanings:

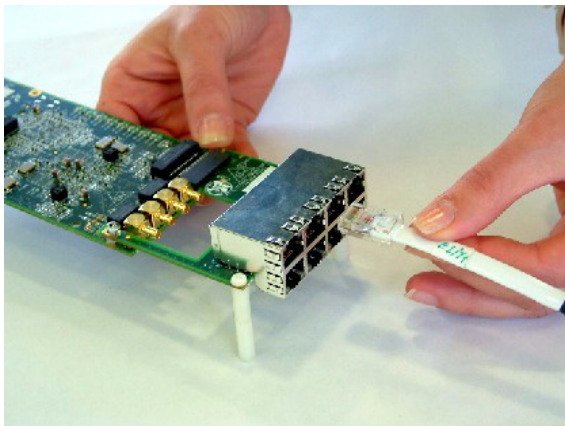
No.	Name	Color	Lit	Dark
LD1	LOS, DS-3, Ch.0	Red	Loss of Signal in DS-3, Ch.0	No LOS detected in this channel
LD2	LOS, DS-3, Ch.1	Red	Loss of Signa in DS-3, Ch.1	No LOS detected in this channel
LD3	LOS, Ch.1 RLOS1	Green	Loss of Signal in T1, Ch.1	No LOS detected in this channel
LD4	LOF, Ch.1 RLF1	Yellow	Loss of Frame in T1, Ch.1 (also lit during Reset)	No LOF detected in this channel, and system not in Reset
LD5,6	Same as LD3/4, with Ch.2			
LD7,8	Same as LD3/4, with Ch.3			
LD9,10	Same as LD3/4, with Ch.4			
LD11,12	Same as LD3/4, with Ch.5			
LD13,14	Same as LD3/4, with Ch.6			
LD15,16	Same as LD3/4, with Ch.7			
LD17,18	Same as LD3/4, with Ch.8			
LD19	Power	Green	Power supplied to PQ-MDS-T1	Power not supplied to PQ-MDS-T1 (*)

(*) Indicates abnormal functioning of the module. The problem must be rectified before work can continue.

Step 7: Attach remaining cables to the board according to your development needs.

Step 7.a: If using T1/E1 connection: Insert T1 or E1 cables

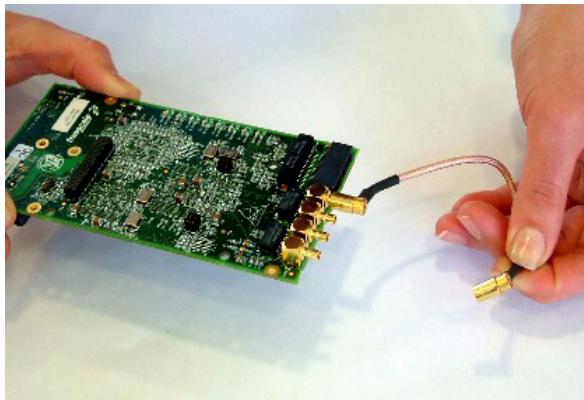
In the figure at right, the T1/E1 connection loopback cable is shown being inserted.



Step 7.b: If using DS-3 connection: Insert DS-3 cables

The extension card should be removed (or not attached in the first place) if using only DS-3 connections (see figure at right).

Also not that in the figure at right, the DS-3 connection loopback cable is shown being inserted.



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