CONNECTING THE Si321X AND Si322X PROSLIC® TO THE W&G PCM-4

Overview

The ProSLIC evaluation board can easily be connected to many PCM bus sources. One industry standard for PCM testing is the Wandel and Goltermann model PCM-4. The PCM-4 tests telephone linecard voice parametrics in the two-wire and PCM domains. This document describes the connections from a typical PCM-4 to the ProSLIC evaluation board. The PCM-4 should be an option “E” which generates a 2.048 MHz PCM clock.

Typical Configuration

The PCM-4’s typical configuration has the PCM clock and transmit and receive connections on the front panel. The PCM frame sync (8 kHz) is accessible from the rear of the PCM-4. The BNC cable connections to the ProSLIC evaluation board should be made as follows:

- Connect the PCM-4 Frame Trigger (61) to the PCM-4 Ext. Frame (63) with a BNC”T”. See Figure 1.
- Connect the PCM-4 Ext. Frame (63) BNC”T” to the ProSLIC evaluation board FSYNC. See Figure 1.
- Connect the PCM-4 RX Signal (20) to the ProSLIC evaluation board DTX. See Figures 2 and 3.
- Connect the PCM-4 TX Signal (21) to the ProSLIC evaluation board DRX. See Figures 2 and 3.
- Connect the PCM-4 TX Clock (22) to the ProSLIC evaluation board PCLK. See Figures 2 and 3.
- Connect the PCM-4 2 wire TX or RX to W & G GH-1.
- Connect W & G GH-1 to ProSLIC TIP and RING.

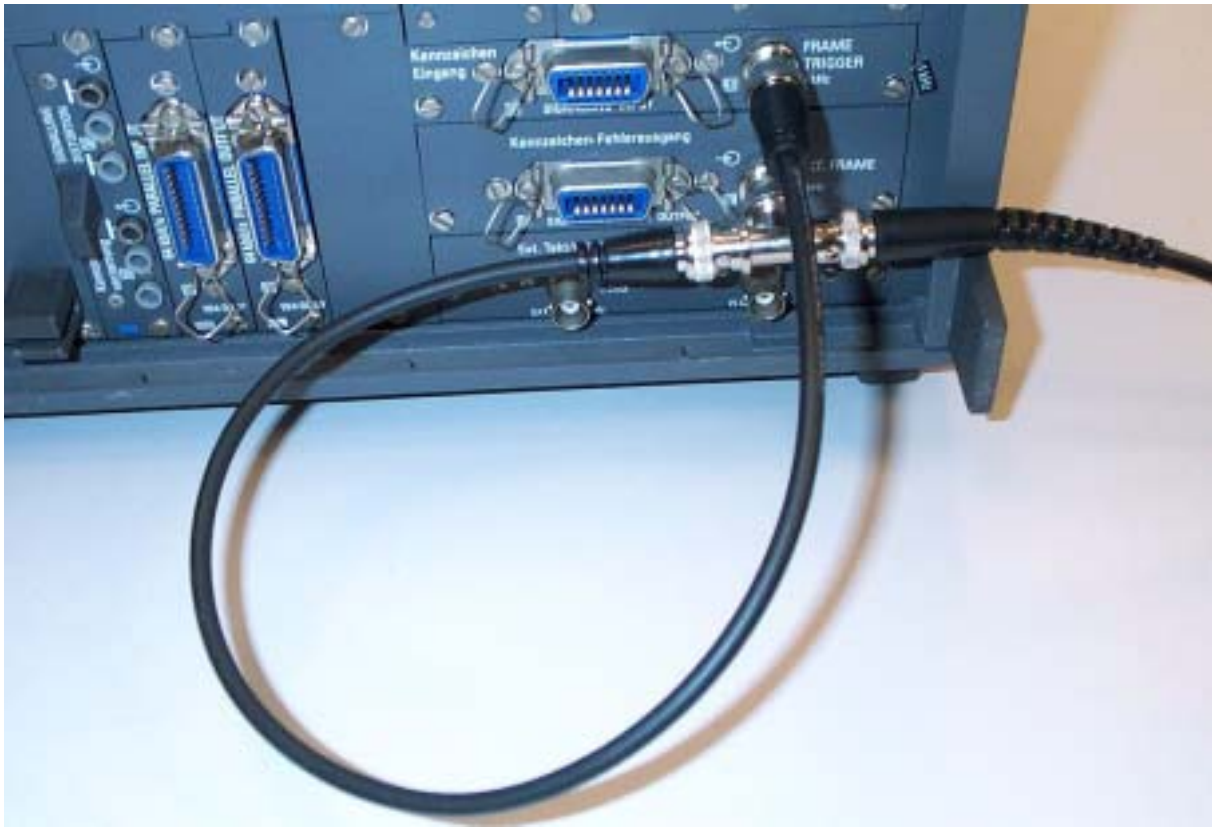

Figure 1. W&G PCM-4 Rear Panel

Figure 2. W&G PCM-4 Signal and Clock Connections

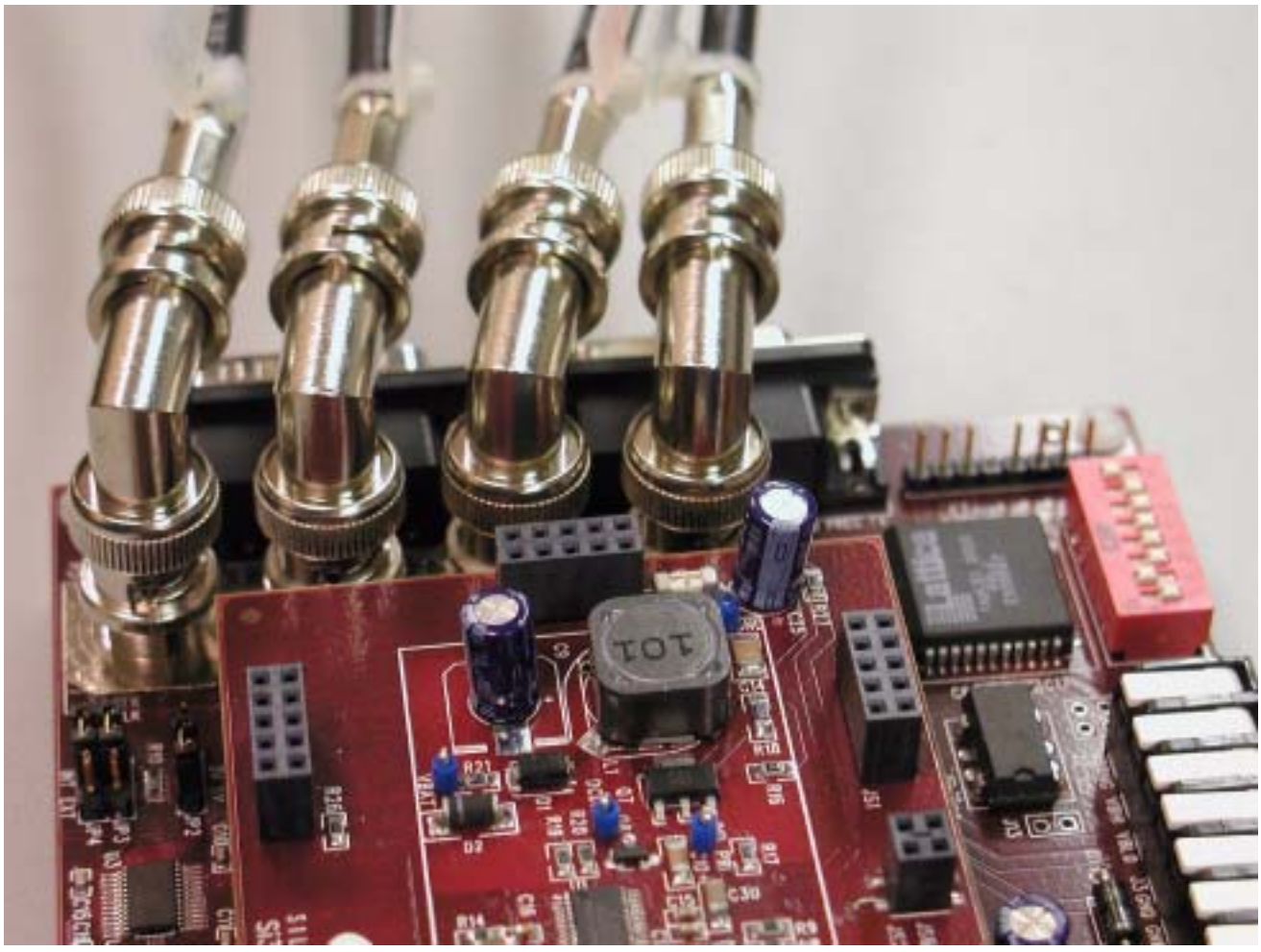

Figure 3. ProSLIC Evaluation Board Signal and Clock Connections

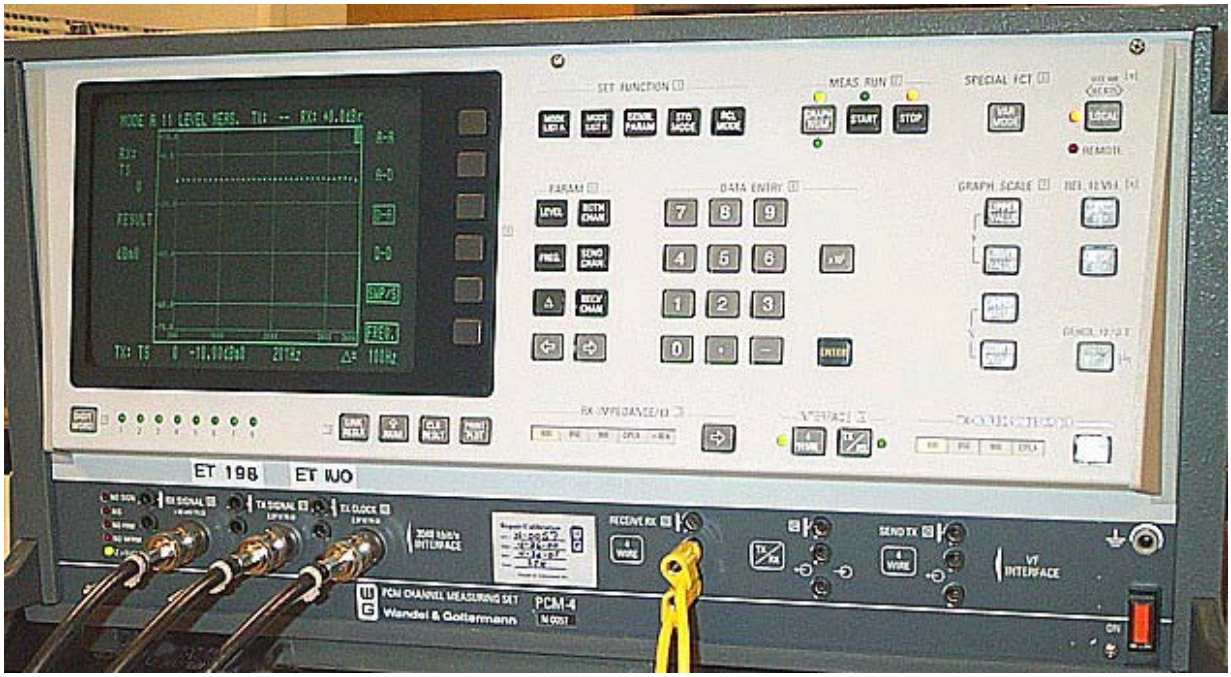

Figure 4. PCM-4 Front Panel

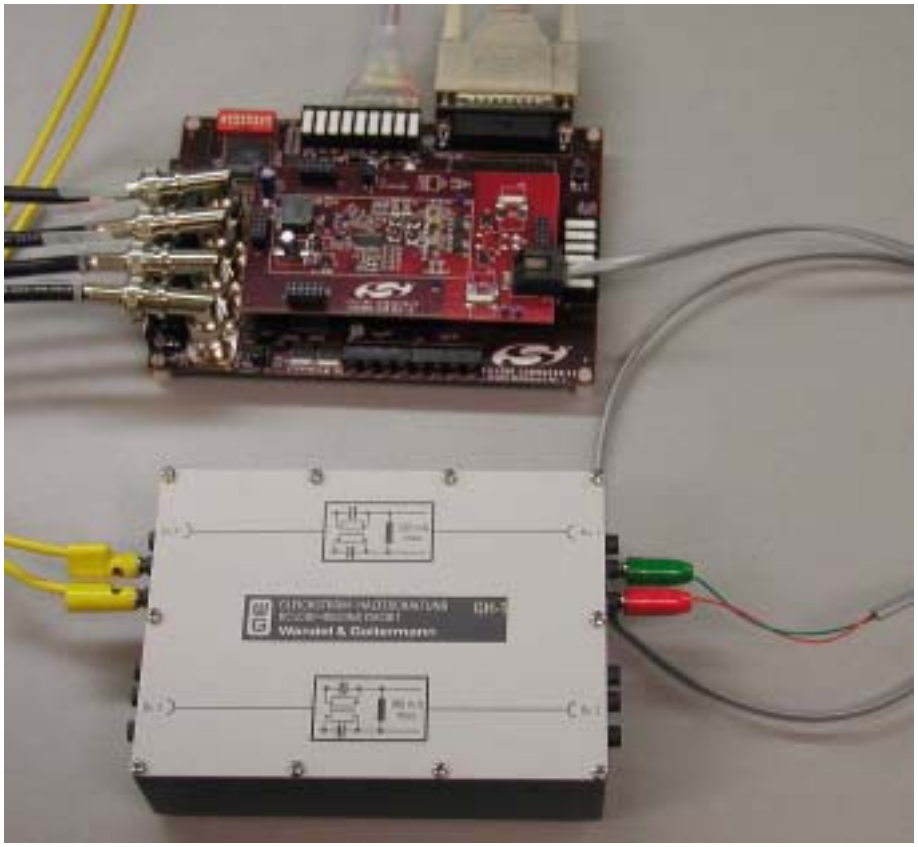

Figure 5. ProSLIC and GH-1 Connections

Alternative Configuration Settings

The PCM-4 also has configuration settings that allow PCM connection to a variety of PCM environments. The ProSLIC evaluation board requires three modifications to the default configuration settings:

- General Parameters—2.14
- General Parameters—3.13
- General Parameters—4.13

For μ-law add the following:

- General Parameters—7.12
- General Parameters—7.22

PCM Transfers

The PCM-4 is now ready for A-D, D-A and D-D PCM transfers at time slot 0 (default time slot for the ProSLIC). Proceed by performing the following steps:

1. Set ProSLIC PCLK and FS jumpers to the “External” setting.
2. Set ProSLIC PCM voltage jumper to 5 V.
3. Apply power to ProSLIC board.
4. Click the “Reset” button in the ProSLIC LINC software.
5. Click the “Initialize” button in the ProSLIC LINC software.
6. Click the “Register Set” button in the ProSLIC LINC software.

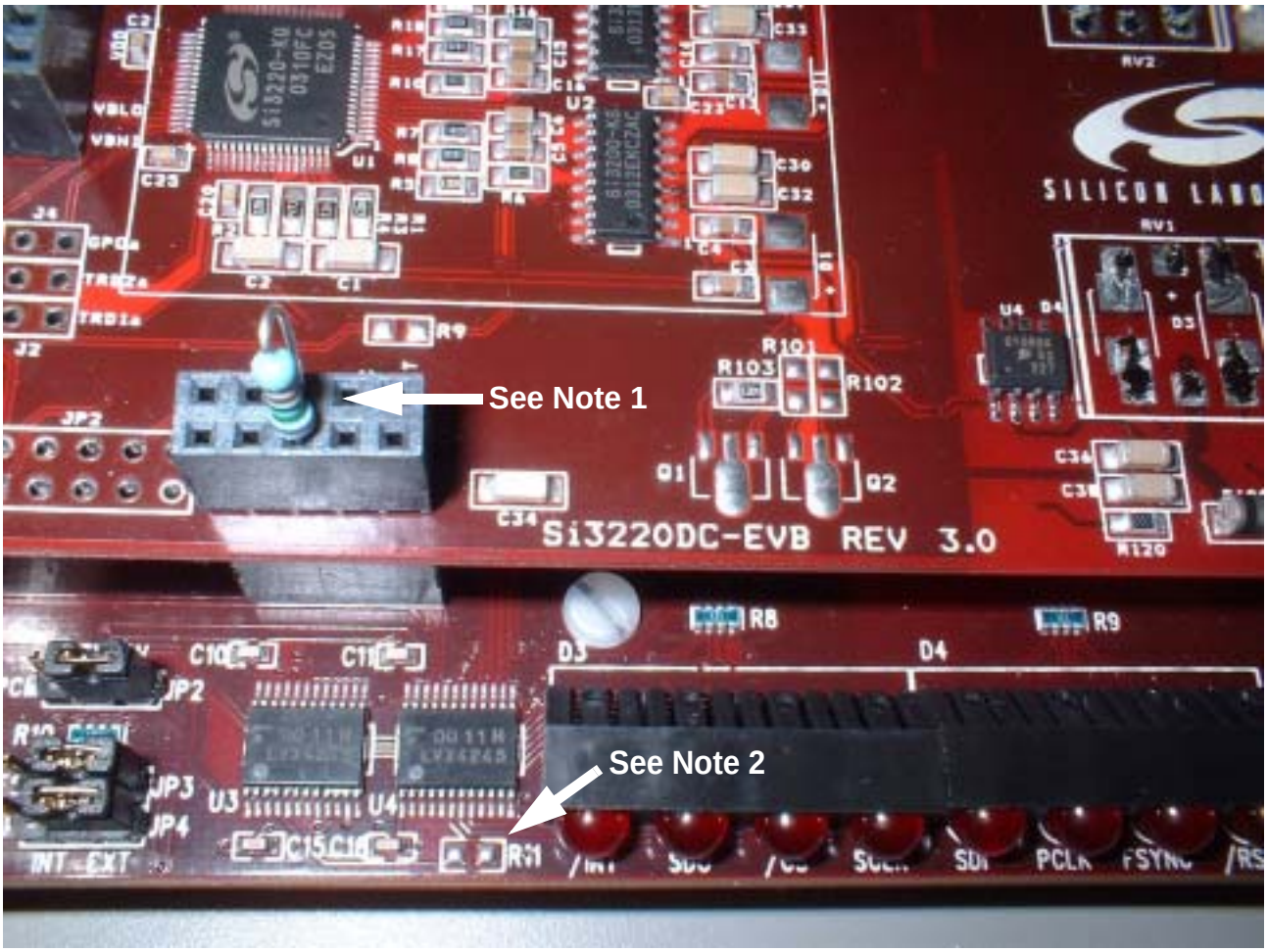

Figure 6. ProSLIC Motherboard Configuration

Notes:

1. It is recommended that one 4.7 kΩ pull-down resistor be added between the DTX signal and ground.
2. Check R11 of the motherboard next to the LEDs. If this 0 Ω resistor is populated, PCM-4 may not function. Remove this resistor if PCM loopback is not desired.
3. Verify the time slots and PCM mode of the Si322x and Si3210. These should be set to match the timeslots of the PCM-4 and the PCM bus should be enabled.

Document Change List

Rev 2.0 to Rev 2.1

- Added Figure 6.
- Added Notes.

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