MM5130/MM5230 EVK

Evaluation Kit Instructions

APN-0011

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Introduction to the MM5130/MM5230 EVK

This document describes how to set up and use the MM5130 and MM5230 Switch Evaluation Kits (EVKs). The EVK is intended for evaluation of MM5130/MM5230 RF performance such as insertion loss, return loss and isolation over frequency.

The EVK is shipped with the following material:

- RF board and USB Driver Board, packaged in protective ESD bag.
- Mini-USB cable for controlling the board from a Windows based GUI program.
- Ribbon cables for extended connectivity between the RF board and USB Control Board.
- Printed Documentation including Device Datasheet and Evaluation Kit Instructions (this document).
- Business card with QR code linked to Menlo Support Portal.
  - Request access/login to Menlo Support portal to download other resources and latest documentation.

EVK Setup Procedure

1. Download and execute the Windows installer for the EVK Control Software from *menlomicro.com/download/evk-control-software-download* (or scan QR code). Application is also available for download on the Menlo Support Portal.

2. In an ESD protected environment, open the ESD bag and take out the RF and driver boards.

3. On the USB Driver board, ensure jumper J16 is installed as shown below:
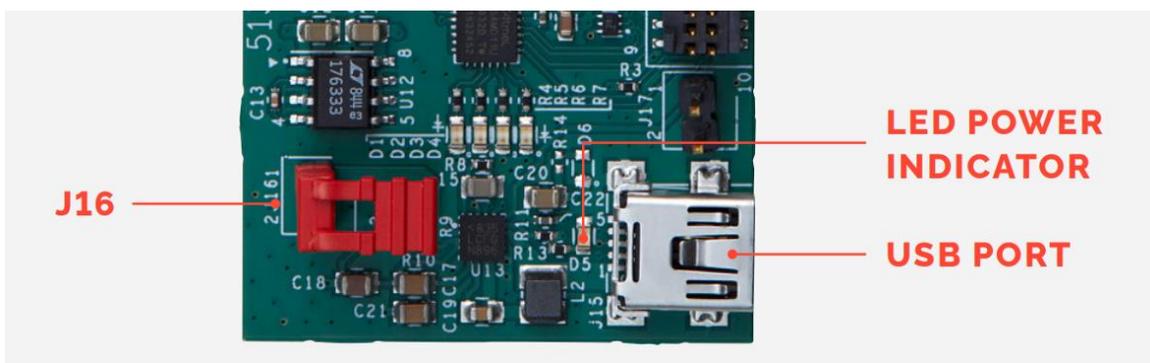
4. Connect the RF board to the driver board as shown below. Do not connect the boards when the driver board is powered.
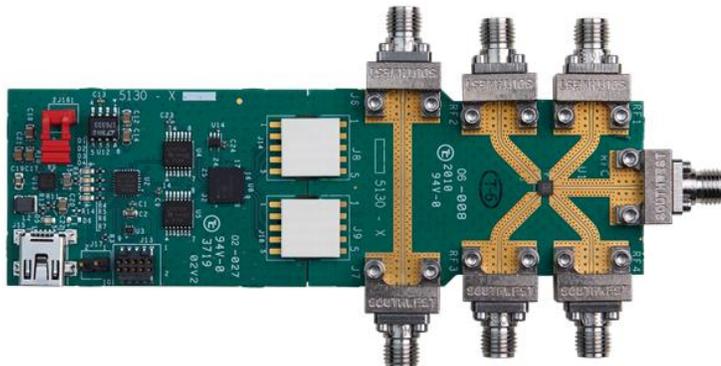
5. Connect a computer to the driver board using a Mini-USB cable.

6. Open the "Menlo Micro EVK Control" application, select "Scan USB Ports", and open "5130-5230". Observe the control panel displaying switch status and controls.
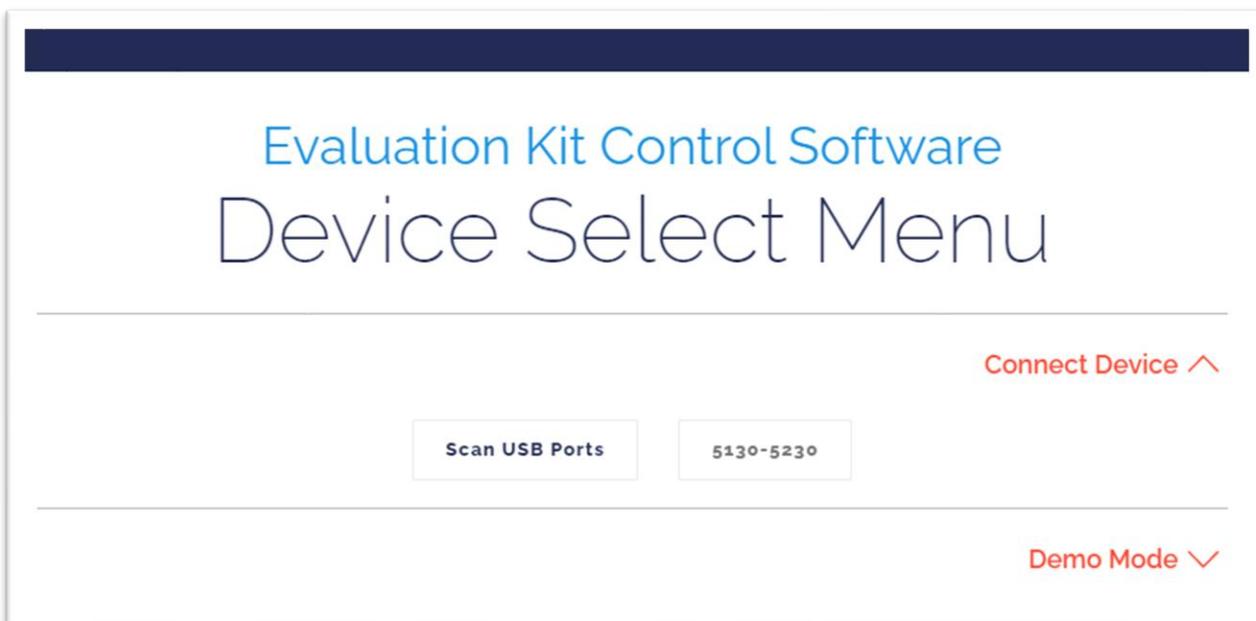
7. To close (enable) a switch, left click the channel in the block diagram or control panel. Left click again to open (disable) it.

8. To power down the EVK, disconnect the USB mini cable. Do not decouple the boards when the driver board is powered.

Notes on Measurement Instrumentation

It is recommended to measure the evaluation board using a VNA.

During evaluation it is best practice to open or close the device with zero voltage across the terminals. It is possible to open or close switches with up to 0.5 V across the terminals without lifetime degradation. See datasheet for full hot switching specification details. Opening or closing the switch with a VNA sweep active is generally a safe practice.

Note: Even using a common digital multimeter to check the resistance can lead to device damage if the measurement is active during the actual state transition. Voltages between 3.0 V and 7.0 V from Multi-Meters (DMM) have been observed.

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