71M6511/71M6511H 2-Layer Demo Board



QUICK START GUIDE

Getting Started

The TERIDIAN Semiconductor Corporation (TSC) 71M6511/71M6511H Demo Board is a demonstration board for evaluating the 71M6511/71M6511H device for single-phase electronic power metering applications on a two-layer PCB. It incorporates a 71M6511 or 71M6511H integrated circuit, peripheral circuitry such as a serial EEPROM, emulator port, and on-board power supply as well as a companion Debug Board that allows a connection to a PC through a RS232 port. The Demo Board allows the evaluation of the 71M6511 or 71M6511H power meter controller chip for measurement accuracy and overall system use.
The Demo Board is pre-loaded with MPU Demo Code in the FLASH memory of the 71M6511/71M6511H IC. This embedded application is developed to exercise all peripherals, flash programming, and CPU management (clock, timing, power savings, etc.), and to provide easy access to all metering information.
Downloading of any other TSC or custom application can be done through the in-circuit emulator port or through the Flash Download Board Module (FDBM).

Safety and ESD Notes

Connecting live voltages to the demo board system will result in potentially hazardous voltages on the demo board.



EXTREME CAUTION SHOULD BE TAKEN WHEN HANDLING THE DEMO BOARD ONCE IT IS CONNECTED TO LIVE VOLTAGES!

THIS DEMO SYSTEM IS ESD SENSITIVE! ESD PRECAUTIONS SHOULD BE TAKEN WHEN HANDLING THE DEMO BOARD!

Demo Board Kit Contents

- 71M6511/71M6511H Demo board in **current transformer (CT) configuration** containing one 71M6511 or 71M6511H IC with pre-loaded Demo Program
- Debug Board
- 2 x 5VDC/1,000mA universal voltage wall transformer w/ 2.5mm plug (Switchcraft 712A compatible)
- Serial cable, DB9, Male/Female, 2m (Digi-Key order number AE1020-ND)
- CD-ROM containing 71M6511/71M6511H documentation (data sheet, board schematics, BOM, layout), Demo Code and Documentation (PDF files), Utilities

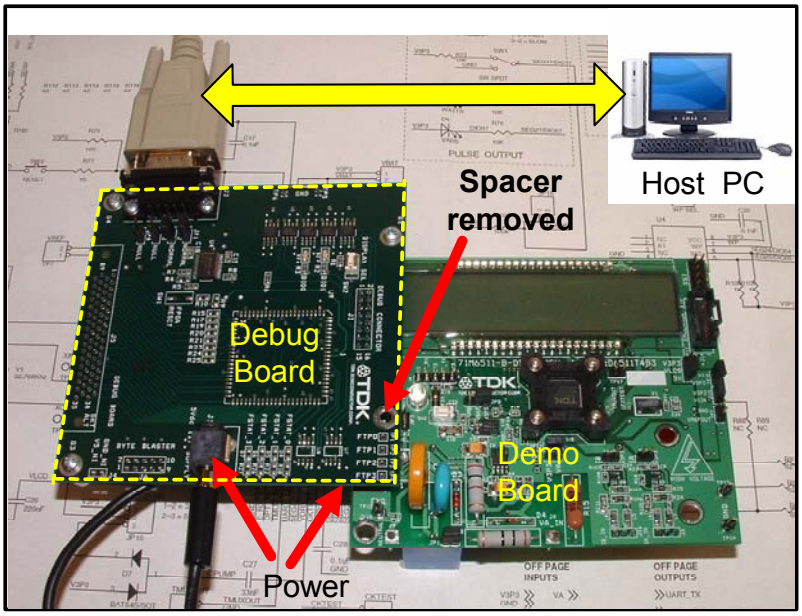
Note: The CD-ROM contains a file named readme.txt specifying all files found on the CD-ROM and their purpose.

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Demo Board Test Setup

The file DBUM6511.pdf is a document containing detailed instructions on how to set up and use the Demo Board. **This document should be carefully read** and understood before attempting to use the Demo Board.

The figure below shows the basic connections of the Demo Board plus Debug Board with the external equipment.



Using the Demo Board

The Demo Board is a ready-to-run meter with a Kh of 1.0 Wh/pulse (if used with a CT with a 2,000:1 winding ratio). The Demo Board has been tested on a meter calibration system, but it has not been calibrated. Please refer to the Demo Board User's Manual for further details and on how to **configure the Demo Board for shunt configuration**.

Documentation

All data sheets, user's manuals and user's guides are in electronic form, i.e. on the CD-ROM supplied with this kit. The TERIDIAN Semiconductor web site should be checked frequently for updates.

Software/Utilities

Demo code, source files, and libraries can be found in electronic form on the supplied CD-ROM. The CD-ROM also contains all tools and utilities described in the documentation.

Support

Support is available from:

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