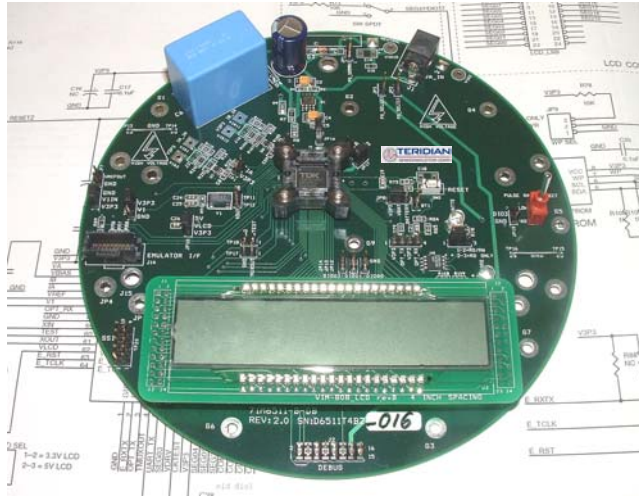# 71M6511/71M6511H Demo Board

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 energy metering applications. 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 demo code in the FLASH memory of the 71M6511/71M6511H IC. This embedded application is developed to exercise all low-level functions to directly manage the IC and the peripherals on the PCB.

Downloading of any other TSC or custom application can be done through the emulator (ICE) port or using the Flash Programmer Module (TFP-1).

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!
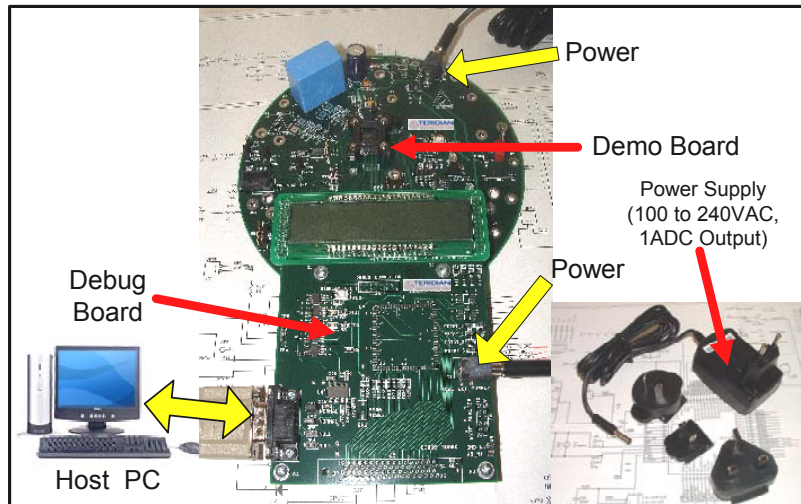
Demo Board Kit Contents

- 71M6511/71M6511H Demo board containing one 71M6511 or 71M6511H IC with pre-loaded demo program (circular PCB)
- Debug Board (rectangular PCB)
- 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 the 71M6511/71M6511H Data Sheet, the Demo Board User's Guide, the Software User's Guide, the Demo Code object and source files, and other documentation and utilities

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

Demo Board Test Setup

The file Demo Board User's Manual (DBUM6511.pdf) contains 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 on how to use the Demo Board.

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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Irvine, CA 92618-5201
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