

6. Digital Controller GUI Usage

Before initiating communication, ensure that the software program is the most current version. Check the revision of your software (found in the About tab) and compare it with the most current revision listed on the HMC-DK008 information page on the Hittite Microwave website (www.hittite.com). If there is a more recent version available, contact the Hittite Applications group to receive the latest SPUI software.

If your evaluation board has DIP switches, they will be disabled once the ribbon cable has been connected to the board. These switches cannot be used to control the HMC part while the HMC-DK008 is in use.

Consult the User Manual (located on the CD) for further instructions on SPUI usage.

7. Technical Support

Further instructions on operation can be found in the User's Manual on the kit's CD-ROM.

For any additional questions or concerns, contact HMC Applications via email at apps-support@hittite.com or phone at 978-250-3343.

Serial/Parallel USB Interface Kit for Digital Attenuators & VGAs

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1. Introduction

This document describes the usage and functionality of the HMC-DK008 Serial/Parallel USB Interface (SPUI). The HMC-DK008 Serial / Parallel USB Interface Designer's Kit enables users to interface with Hittite's family of digital attenuators, interface driver and variable gain amplifiers. This kit includes PC compatible software that generates a Graphical User Interface (GUI) allowing the user to:

- Set the attenuation/gain state of the HMC attenuator/amplifier
- Observe the serial data, clock, latch & reset signals sent to the HMC device
- Switch between serial and parallel control modes
- Monitor and control active bits in parallel mode
- Construct custom serial signals to send to the HMC device

The HMC product to be communicated with must be mounted on its evaluation board. Only one HMC product can connect to the SPUI at a time.

2. Package Contents

Verify that all the items listed in Table 1 are included in the shipment.

Item	Quantity
HMC-DK008 Serial/Parallel USB Interface Board	1
12" 18 Pin Flat Ribbon Cable	1
6' USB A Male to USB B Male Cable	1
CD ROM (Contains User Manual and software)	1

Table 1: Packing List

3. Compatible HMC Products

Visit www.hittite.com and check the HMC-DK008's information page for the most current list of HMC products that are compatible with the SPUI.

4. Operating Environment

The SPUI is designed for use in a laboratory setting at ambient room temperature (25°C) and is not protected against moisture. The SPUI has an electrostatic discharge (ESD) rating of +/-3000V, however the HMC product interfacing with the device may have a lower rating (check the product's datasheet for its specific ESD rating). Use appropriate ESD procedures and precautionary measures when handling all electronic hardware.

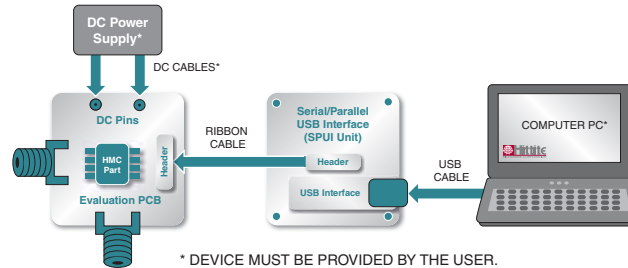


Figure 1: HMC-DK008 Block Diagram

5. Setup and Installation

5.1 User Provided Equipment

In addition to the items provided in the HMC-DK008, the user must provide the following equipment to communicate with HMC products.

- DC Power Supply
- DC cables
- Computer (PC) with
 - Internet connection
 - Standard USB port
 - Operating system of Windows 2000, XP or Vista

5.2 Driver Installation

Before running the SPUI software for the first time, install all necessary hardware drivers.

Go to the following website:

<http://www.ftdichip.com/Drivers/D2XX.htm>

Choose the latest driver version for Windows. See User Manual (located on the CD) for complete driver installation instructions.

5.3 Hardware Setup

Connect all hardware according to Figure 1.

1. Connect the desired HMC product's evaluation board to the SPUI board through the ribbon cable provided in the kit. Ensure that pin1 of the evaluation board connects to pin1 of the SPUI board through pin1 of the ribbon cable.
 - i. Pin1 of the evaluation board is the Latch pin
 - ii. Pin1 of the SPUI board is marked with a white dot (also the Latch pin)
 - iii. Pin1 of the ribbon cable is marked with a red line
2. Connect the SPUI to the USB port of the desired PC's CPU through the USB cable provided in the kit. The PC should then detect new hardware called DLP2232M. See User Manual for additional instructions.

5.4 Software Installation

Install the SPUI software by following the on screen instructions. Insert the CD included in the kit into the CD-ROM drive of the PC. Locate the HMC-DK008 icon on the CD and double click on it. The CD should then begin to load automatically.

See User Manual (located on the CD) for complete software installation instructions.

5.5 Software Usage

Click the Windows "Start" button. Locate the SPUI Control Software (in the Programs menu) and click the HMC SPUI Control icon. The software GUI should appear on the screen (see Figure 17 in the User Manual).