

APPLICATION NOTE 614

Diagnostic Port for the TINIs400

Abstract: The TINIs400 socket board has a diagnostic port option for diagnostic messages. This debug port (connected to port pin P5.2) is a write-only pseudoserial port and does not use any of the serial ports of the TINI400 system. This application note describes how to connect the debug port to a PC and how to use the port to display debug messages from TINI®.

Introduction

The TINIs400 socket board has a debug port option for diagnostic messages. This debug port (connected to port pin P5.2) is a write-only pseudoserial port and does not use any of the serial ports of the TINI400 system. The debug port is shared with the status LED on the TINI400, so the LED flickers when the debug port is used.

Introduction

Verify that the TINIs400 is configured with Q1 (BSS84), R3 (10k), and J6 (3-pin connector). This is the standard configuration on most TINIs400 socket boards.

Then, connect the diagnostic port J6 to the PC:

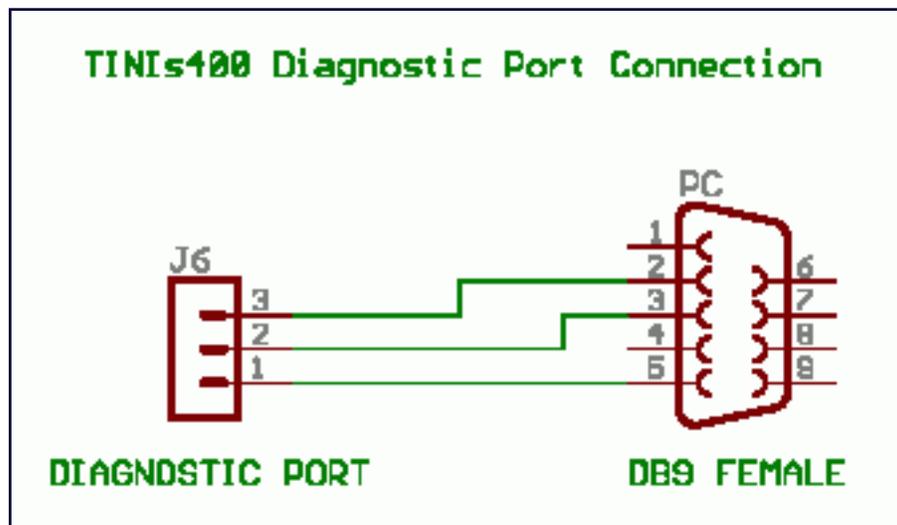


Figure 1.

On the PC, the signal names are: RX = 2, TX = 3, GND = 5.

To display the debug messages on the PC, you can use JavaKit or any other terminal program set to 115200, 8N1.

Debug Class

Add calls to the methods `com.dalsemi.system.Debug.dump*` to your application. Avoid dynamically allocating strings, as this will consume memory every time you print a debug message. Since writing to the debug port

slows down the application, dumping single (hex) bytes is preferred, especially when the dump code is part of a loop.

The following example prints a string to the debug port:

```
com.dalsemi.system.Debug.dump("This should not happen (my fault)");
```

TINI 400 Runtime

As a final step, load `tini_debug_400.tbin` instead of `tini_400.tbin`. You can switch between these two firmware versions without clearing the heap/file system.

Version Notice

This application note describes version 1.11 of the TINI400 runtime environment.

More Information

Details of the TINI Platform are on our website, www.maxim-ic.com/TINI. The *TINI Specification and Developer's Guide* is an invaluable resource when developing with the TINI platform, and can be downloaded from the Maxim website. Application Notes 612 and 708 are guides to getting started with the DS80C400-based TINI modules.

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Application Note 614: <http://www.maxim-ic.com/an614>

More Information

For technical questions and support: <http://www.maxim-ic.com/support>

For samples: <http://www.maxim-ic.com/samples>

Other questions and comments: <http://www.maxim-ic.com/contact>

Related Parts

DS80C400: [QuickView](#) -- [Full \(PDF\) Data Sheet](#) -- [Free Samples](#)

DSTINIs400: [QuickView](#) -- [Full \(PDF\) Data Sheet](#)

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