

DS28E01-100 Plug-In Module

Evaluates: Xilinx FPGA IFF Copy Protection Scheme

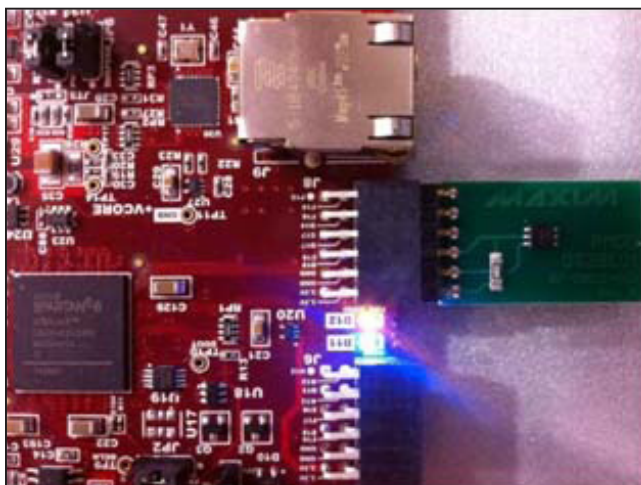
General Description

The DS28E01PMOD provides the necessary hardware to interface a DS28E01-100 1Kb protected 1-Wire® EEPROM with a SHA-1 engine to a Xilinx Spartan®-6 LX16 Evaluation Kit made by Avnet. By using the DS28E01PMOD and the PicoBlaze™ SHA-1 Authentication Design for the Xilinx Spartan-6 LX16 Evaluation Kit, a secure SHA-1 challenge-and-response authentication can be implemented. The PicoBlaze SHA-1 Authentication Design is based upon the Xilinx XAPP780 application note, *FPGA IFF Copy Protection Using Dallas Semiconductor/Maxim DS2432 Secure EEPROMs*.

DS28E01PMOD



Interface to Evaluation Kit



Note: The DS28E01PMOD is designed to plug in component-side up of the upper row pins on the J8 connector, when using the Xilinx Spartan-6 LX16 Evaluation Kit.

1-Wire is a registered trademark of Maxim Integrated Products, Inc.

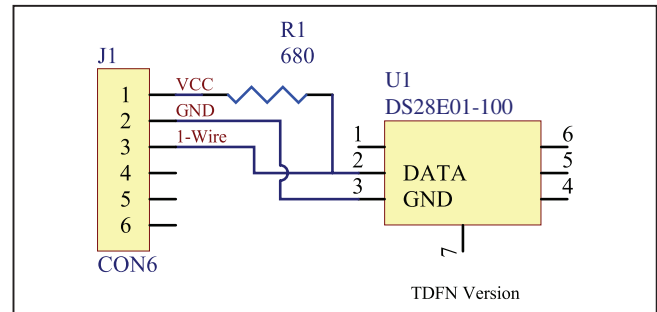
Spartan is a registered trademark and PicoBlaze is a trademark of Xilinx, Inc.



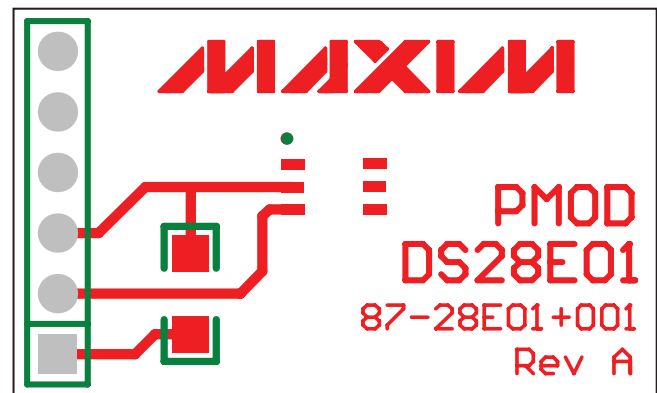
Features

- ◆ Interfaces to Avnet-Made Xilinx Spartan-6 LX16 Evaluation Kit (Part No.: AES-S6EV-LX16-G)
- ◆ Designed for Use with PicoBlaze SHA-1 Authentication Design
- ◆ On-Board Rpup for 1-Wire Communication to a FPGA I/O at 3.3V
- ◆ 0.1in-Spaced Pin Breakout of DS28E01-100 TDFN
- ◆ Board Size: 1.06in x 0.64in

Schematic



Layout



Ordering Information

PART	TYPE
DS28E01PMOD+	Module
AES-S6EV-LX16-G*	Evaluation Kit

+Denotes lead(Pb)-free and RoHS compliant.

*Order the Xilinx Spartan-6 LX16 Evaluation Kit directly from Avnet at www.avnet.com.

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Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	5/11	Initial release	—

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