DS28E01-100 Plug-In Module
Evaluates: Xilinx FPGA IFF Copy Protection Scheme

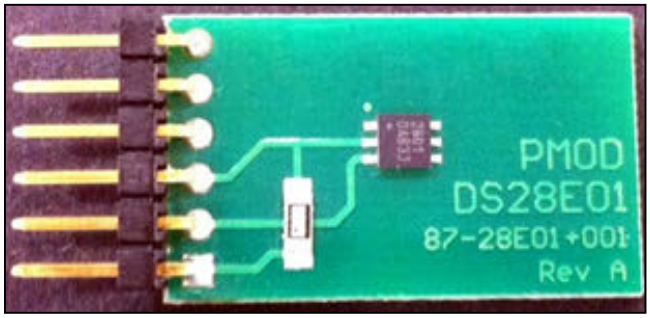
General Description

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*.

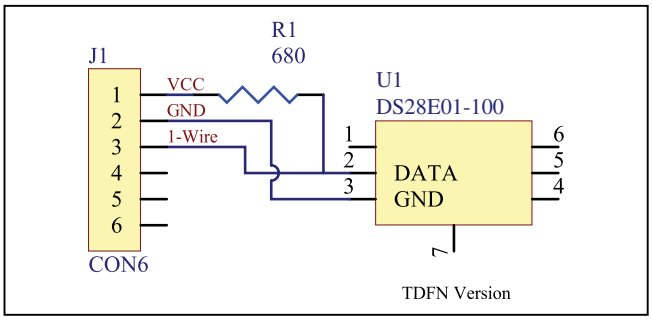
Features

- **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 R_{PUP} 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**

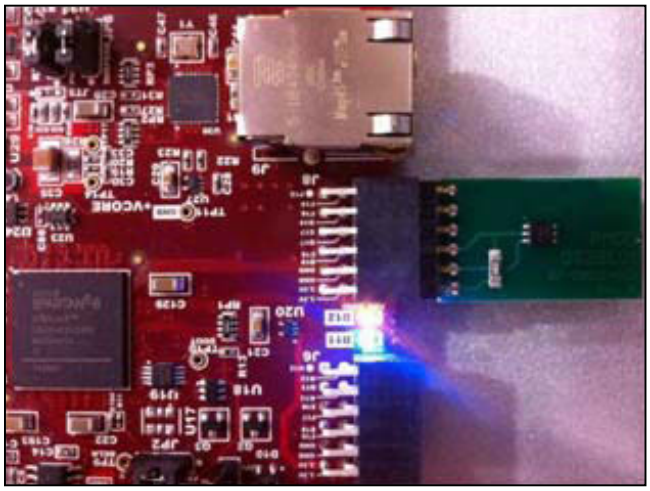
DS28E01PMOD



Schematic



Interface to Evaluation Kit

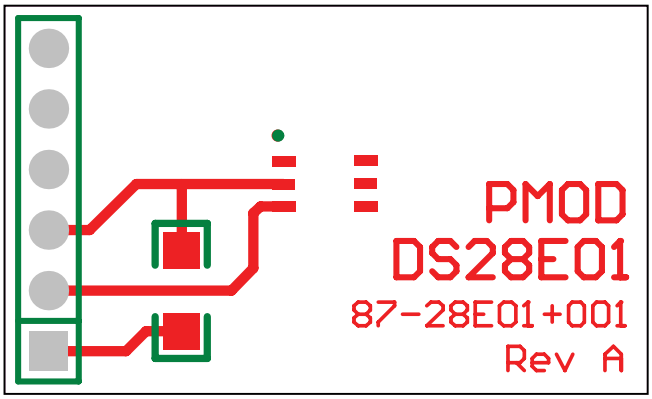


Note: *The DS28E01PMOD is designed to plug in component-side up of the upper row pins on the J8 connector, when using the Xilinx Spartan-6 LX16 Evaluation Kit.*

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

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

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.*

For pricing, delivery, and ordering information, please contact Maxim Direct at 1-888-629-4642, or visit Maxim Integrated's website at www.maximintegrated.com.

19-5866; Rev 0; 5/11

Revision History

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

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