iWave
Embedding Intelligence

The M.2 module is based on Artix-7 FPGA that provides bridging features between PCIe and SD3.0 units to validate different memory densities of micro SD card. For host processor communication, the module is designed with 2-lane PCIe Gen 2.0 interfaces. The module presents compact design, flexibility, and consumes low power. Since it is PCIe backward compatible with the earlier version the user can integrate into existing systems with ease. The interface towards the SD card is realized by the SD protocol implemented in the FPGA.

HIGHLIGHTS

- 2280 M.2 M Keyed module form factor

- Complaint with SD3.0 standard specification

- Supports 2-Lane PCIe Gen2 link

- Supports both standard and high-capacity SD operations
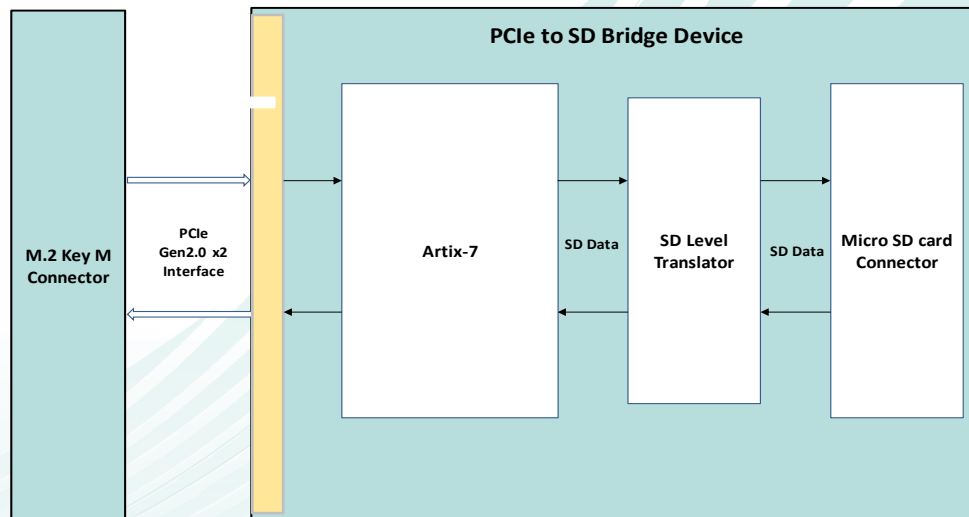
- Supports data rate up to SDR 104/UHS-1

SPECIFICATIONS

Features
Supports legacy version of SD specification
ARTIX-7 FPGA to implement PCIe to SD3.0 bridge functionality
Micro SD slot to support the different memory density SD card
1x 10 pin GPIO Header to define functionality as per user requirement
Input Power: 3.3V@2.5A
Keying: M.2 Key M
Temperature Supported
-40C to +85C Industrial
Form Factor: 22mm x 80mm
Cooling: Conduction cooling using heat sink on the FPGA device

SD Operations

iW PCIe to SD 3.0 M.2 Module Block Diagram

PCIe to SD Bridge Device

| M.2 Key M Connector | PCIe Gen2.0 x2 Interface | Artix-7 | SD Data | SD Level Translator | SD Data | Micro SD card Connector |

OS SUPPORT

Linux

DELIVERABLES

PCIe to SD 3.0 M.2 module

Heat sink

User Manual

ORDERING PART NUMBER

iW-M2SD-8GB-AR7-R1.0

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iWave Systems Technologies is an ISO 9001:2015 certified company, head quartered in Bangalore India established in the year 1999. The company focuses on providing embedded solution and services for Industrial, Medical, Automotive and various other Embedded Computing applications. iWave Systems offers wide range of System On Modules and Single Board Computers built using wide range of CPU and FPGA SoC platforms with different form factors such as Qseven, SMARC, SODIMM and HPC by closely working with Tier-1 silicon companies such as NXP,Xilinx, Intel etc.

iWave Systems offers various state of art ready ODM solutions such as Connected Telematic Control Unit / OBD II devices for the automotive edge analytics, Comprehensive ARINC818 solutions for the low latency Aerospace applications and Rugged IP rated performance scalable HMI solutions for Industrial applications.

iWave Systems also provides comprehensive Engineering design services involving Embedded Hardware, FPGA and Software development. iWave offers carrier board and custom hardware development with manufacturing and certification services. iWave's Hardware expertise spans complex board design up to 30 layers; Analog, Digital & RF Designs; FPGA Development up to 3+ million gates and VHDL / Verilog RTL Development & Verification. Our Software expertise ranges from OS Porting, Firmware & Device Drivers Development and Wireless & Protocol stacks.

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iW-PCIe to SD 3.0 M.2 Module
The device can be ordered online from the iWave Website
https://www.iwavesystems.com/product/pcie-to-sd-3.0-m.2-module/
Or from our Local Partners in your region
http://www.iwavesystems.com/about-us/business-partner.html

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