



DA342 25G Holoscan MIPI Adapter

For Robotics, Defense, and Edge AI Applications

Key Features

- ▶ Altera Agilex™ 5 FPGA
- ▶ 4x 30-pin I-PEX MIPI interfaces
- ▶ 3.5Gbps/lane MIPI CSI-2 D-PHY
- ▶ 25GbE SFP28 uplink
- ▶ PTP per IEEE 1588v2
- ▶ Per-port control and GPIO

Applications

- ▶ Robotics
- ▶ Autonomous Systems
- ▶ Industrial Inspection
- ▶ Defense and Security
- ▶ Medical Imaging
- ▶ Radar/Lidar Integration

Overview

The DA342 25G Holoscan High-Speed MIPI Adapter is an Edge AI sensor-ingress solution designed to connect high-bandwidth multi-sensor arrays directly to NVIDIA® Holoscan compute platforms over a single 25GbE link. It is designed for robotics, defense, and industrial imaging systems requiring synchronized multi-sensor data.

Built around the Altera Agilex™ 5 E-Series FPGA, the DA342 combines 4x MIPI CSI-2 sensor interfaces with x4 D-PHY lanes per interface, supporting up to 3.5Gbps per lane. Each 30-Pin I-PEX MIPI interface carries MIPI, I2C control, trigger and GPIO lines. The FPGA receives the four sensor streams and aggregates them onto an SFP28 uplink operating at 25GbE and 10GbE.

The DA342 supports the NVIDIA Holoscan Sensor Bridge (Hololink) SDK. Hardware IEEE 1588v2 timestamping and an on-board precision clock keep multi-sensor data aligned for synchronized sensor fusion.

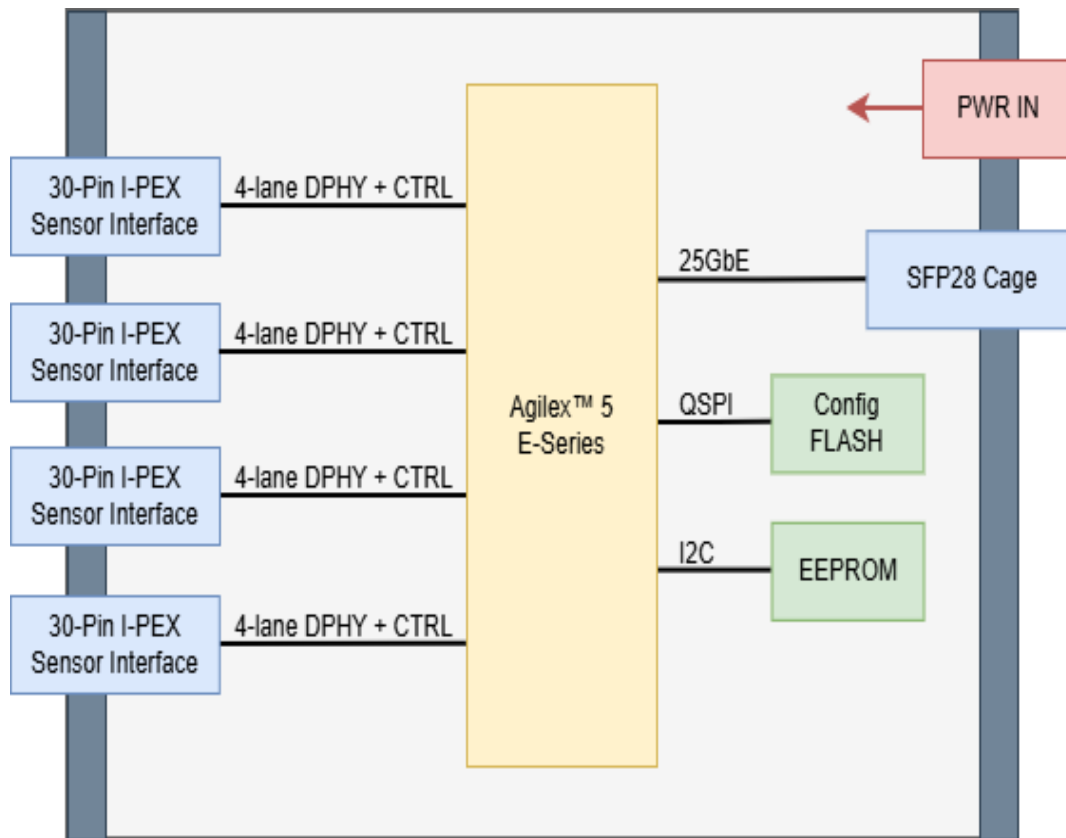
With its four high-bandwidth MIPI CSI-2 sensor interfaces and single 25GbE uplink, the DA342 25G Holoscan MIPI Adapter is well suited for robotics, defense, and industrial imaging applications.

Key Advantages

- ▶ Production-ready - easy to integrate into a wide range of applications
- ▶ 4x MIPI CSI-2 (D-PHY x4), 3.5Gbps/lane
- ▶ 30-pin I-PEX per sensor: pixel data, I2C, trigger, GPIO
- ▶ 25GbE SFP28 uplink, 10GbE compatible
- ▶ Agilex™ 5 FPGA: line-rate pre-processing, custom aggregation
- ▶ IEEE 1588v2 timestamping + precision clocking: synchronized sensor fusion

PRODUCT IMAGE COMING SOON

Block Diagram



Specifications

FPGA	Altera Agilex™ 5 FPGA
SENSOR INTERFACE	4x MIPI CSI-2 interfaces with x4 D-PHY, 3.5Gbps per lane
	30-pin I-PEX connectors
CONTROL INTERFACE	Per-port I2C sensor control
	Per-port trigger, reset and GPIO lines
ETHERNET INTERFACE	SFP28 transceiver supporting 25GbE and 10GbE
POWER	+12V DC input, 2-pin industrial connector
	TBD consumption
DIMENSIONS	TBD



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Ordering Options

DA342-A00-000-000		
A = PACKAGING		
0 = RESERVED		
1 = TBD		

The system can be customized for specific customer requirements, contact Tauro Technologies sales for details.



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