



DA328 Holoscan 3G-SDI Adapter

For Robotics, Defense, and Edge AI Applications

Key Features

- ▶ 3× 3G-SDI interfaces
- ▶ 10GbE SFP transceiver
- ▶ PTP per IEEE 1588-2019
- ▶ Low power consumption

Applications

- ▶ Signal Processing
- ▶ Autonomous Systems
- ▶ Industrial Inspection
- ▶ Healthcare Imaging
- ▶ Robotics

Overview

The Holoscan 3-GSDI Adapter is an Edge AI solution that enables developers to rapidly design bridging applications from sensor to compute for healthcare, robotics, signal processing, and autonomous systems. Optimized for high-performance sensor integration, edge AI workloads, and low power consumption, it allows developers and integrators to both evaluate Holoscan-based solutions and integrate them directly into final products without additional debugging.

Engineered for maximum flexibility, the DA328 SDI Adapter integrates 3× 3G-SDI interfaces using Semtec GS2971A SDI Receivers and a 10G SFP transceiver, enabling high-bandwidth interface to SDI video sources - over a single Ethernet link. At the functional level, video stream data is acquired by the adapter's FPGA and transmitted via 10G Ethernet to the host system, supporting low-latency, real-time sensor streaming with GPU-direct capability.

Holoscan provides key functions such as an end-to-end safety concept targeting IEC 61508 SIL 2 and Precision Time Protocol (PTP) per IEEE 1588-2019. The safety framework is based on a combination of an end-to-end safety protocol (leveraging MACsec), watermarking, and support for camera testing. PTP provides precise timestamping of sensor data for host-side processing and enables synchronization across multiple boards within a network.

With its rugged, compact, and energy-efficient design, the DA328 Holoscan SDI Adapter is ideally suited for defense, industrial, and medical applications.

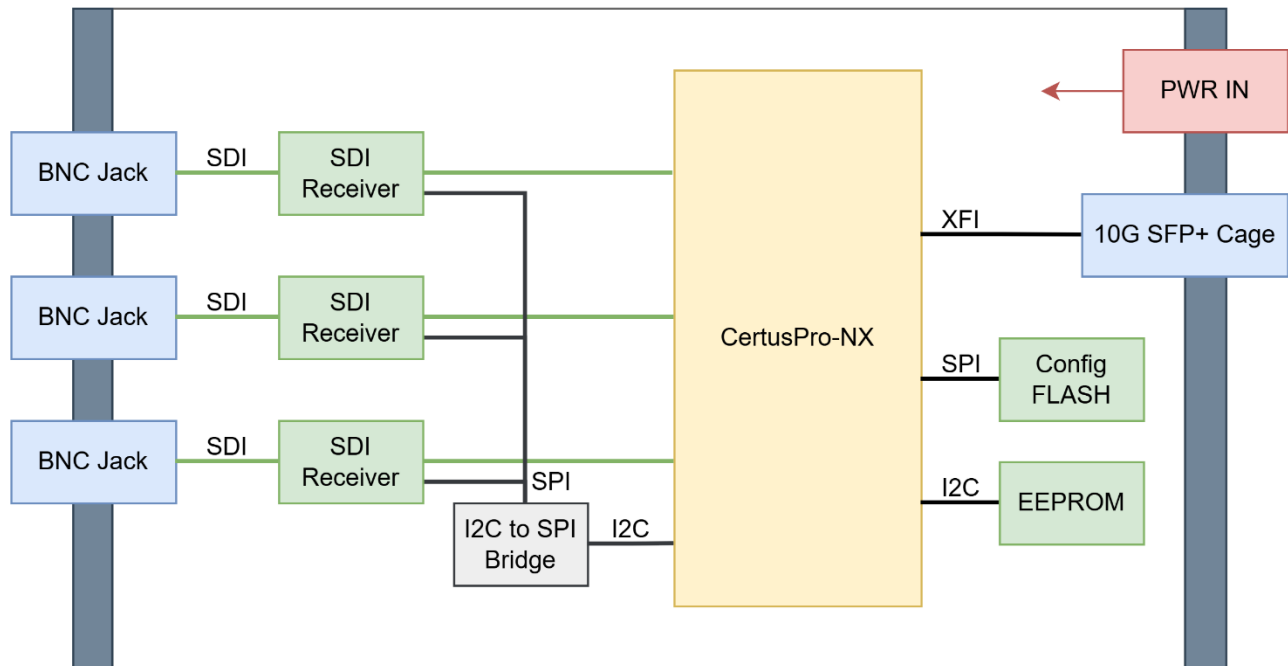
Key Advantages

- ▶ Production-ready - easy to integrate into a wide range of applications
- ▶ Low power consumption
- ▶ 3× 3G-SDI for multi-sensor input
- ▶ SFP transceiver with XFI (10 Gbps) connectivity
- ▶ Precision Time Protocol (PTP) per IEEE 1588-2019
- ▶ CertusPro-NX FPGA



DA328 Holoscan SDI Adapter

Block Diagram



Specifications

FPGA	Lattice CertusPro-NX FPGA
SENSOR INTERFACE	3 × 3G-SDI interfaces using Semtec GS2971A
ETHERNET INTERFACE	10G Ethernet SFP transceiver
POWER	4.5V to 17V DC input ~2W consumption
DIMENSION	114mm (W) x 86mm (D) x 22 mm (H)

Ordering Options

Part Number	Description
DA328-100-000-000	Holoscan SDI Adapter Board with the enclosure
DA328-200-000-000	Holoscan SDI Adapter Board

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



9205 W. Russell Rd., Ste 240
Las Vegas, NV 89148
taurotech.com

Phone: +1 (725) 220-6100
Email: sales@taurotech.com



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