



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.

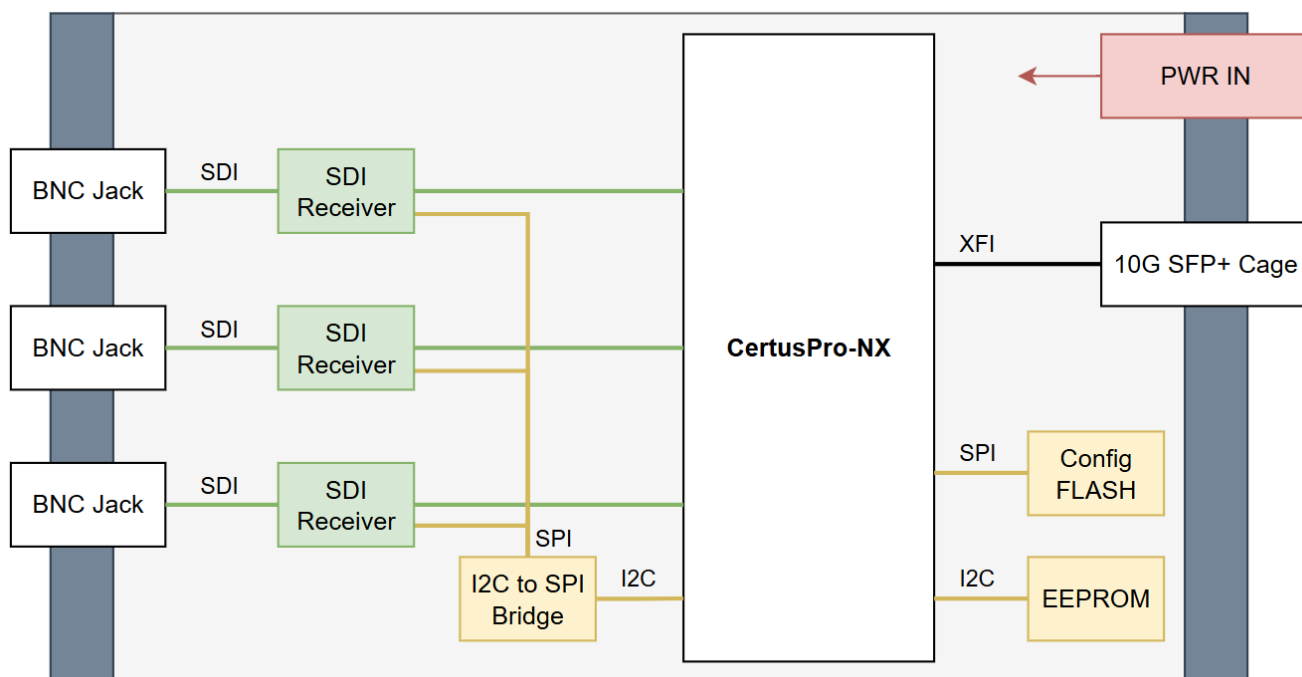
With its rugged, compact, and energy-efficient design, the DA328 Holoscan SDI Adapter is ideally suited for defense, industrial, and medical applications.

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



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.

