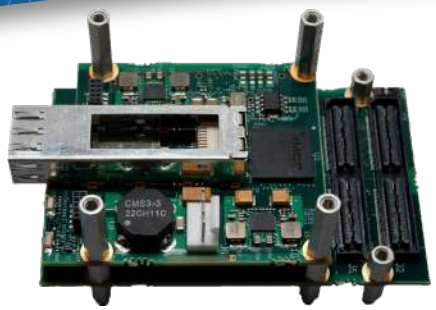
DATA SHEET



iPORT NTx-Ten Embedded Video Interface

High-performance video connectivity using 10 GigE interface technology

Overview

Pleora's iPORT™ NTx-Ten Embedded Video Interface provides system and camera manufacturers with a straightforward way to integrate 10 Gigabit Ethernet (GigE) video connectivity to their products. Using the NTx-Ten, manufacturers can shorten time-to-market, reduce development and deployment risk, and lower design and system costs.

The NTx-Ten interacts seamlessly with Pleora's other products in networked or point-to-point digital video systems. The hardware also complies fully with the GigE Vision® 2.0 and GenICam™ standards, ensuring interoperability with third-party equipment in multi-vendor environments.

A sophisticated on-board Programmable Logic Controller (PLC) and support for the IEEE 1588 Precision Time Protocol allows users to precisely measure, synchronize, and control the operation of other system elements.

GigE Vision and GenICam are both agnostic to Ethernet link speed, which means the NTx-Ten can be combined into systems alongside GigE Vision cameras operating at 1 Gb/s, with no software modifications.

Ordering Information

905-0005	• iPORT™ NTx-Ten Embedded Video Interface Board set.
905-0007	• iPORT™ NTx-Ten Embedded Video Interface Development Kit, which contains 905-0005, heat sink, power supply, a 10 GigE NIC, two SFP+ fiber modules, 2 m of fiber optic cabling, and eBUS SDK USB stick.

The NTx-Ten converts video data to Ethernet packets and sends it with low, consistent latency over a 10 GigE link to receiving software or hardware. The NTx-Ten is compatible with fiber-based links via an SFP+ (small form-factor pluggable) connector, and connects easily to off-the-shelf 10 GigE components such as network cards and switches.

Features

- GigE Vision 2.0 and GenICam compatible
- Support for transmission of video from up to two sensors simultaneously
- Up to 96-bit, 125 MHz parallel LVTTL/LVCMOS video input, and up to eight interleaved taps
- Line scan and area scan modes
- 128 MB frame buffer to help ensure data integrity
- Updateable firmware via the 10 GigE port for ease of manufacturing and feature upgrades in the field

Pleora's iPORT NTx-Ten Embedded Video Interface is supported by:

- A Development Kit to help speed time-to-market by enabling the rapid design of prototypes and proof-of-concept demonstrations, often without requiring hardware development;
- The GenICam Integration Package (consisting of the iPORT AutoGen XML generation tool and a firmware reference design) which makes it fast and easy to create a user-friendly GenICam interface (contact sales for pricing information on this integration package)

GiGE VISION GENICAM

iPORT NTx-Ten Embedded Video Interface

Networked Video Connectivity Solutions

iPORT™ Embedded Video Interfaces	• Highly reliable, over 8 Gbps data transfer rate with low, end-to-end latency • OEM in-system board set • Purpose-built hardware
eBUS SDK	• eBUS SDK: Single API to receive video over GigE, 10 GigE, and USB that is portable across Windows, Mac, and Linux • eBUS Tx: Software implementation of a full device level GigE Vision transmitter • eBUS Rx: High-speed reception of images or data for hand-off to the end application • eBUS Player Toolkit: View streams and develop, test and evaluate advanced features
GigE Vision®	• Fully compatible firmware load • Packet resend capability to ensure reliability • Comprehensive data transfer diagnostics • Serial communications over Ethernet

Sensor Compatibility

Parallel digital bus	• Single channel mode – 8 taps, 12 bits per tap • Dual channel mode – 2 or 4 taps per channel, with up to 12 bits per tap • Up to 125 MHz clock
Tap configurations	• Supports interleaved 2-tap and 4-tap configurations • Support for key line scan non-interleaved tap configurations

Connectors

Power	• 2-pin header, Molex 22-23-2041
Network	• Supports 10GBASE-SR, -LR, and –LRM using linear or limiting SFP+ modules
Video, serial, and IO interface	• Two 120-pin connectors • Samtec QSH-060-01-F-D-A

External Communication Features

4 x TTL inputs **4 x TTL outputs** **4 x TTL inputs/outputs** (configurable)	• Provides a flexible, general-purpose interface • Allows synchronization of multiple devices or system elements • Flexible triggering capabilities

Physical and Power Characteristics

Size (L x W x H)	• 87.5 mm (including SFP+ cage overhang) x 52 mm x 32 mm
Operating temperature	• 0 to 70°C*
Storage temperature	• -40°C to 85°C
Power supply	• 12 V
Power consumption	• Approximately 9 W (dependent on SFP+ module in use)
MTBF @ 40°C	• 1 124 231 hours

*The product is specified for operation within the stated ambient and case temperature range of its components.

Networking Features

10 Gigabit Ethernet-based	• Industry-standard, easy-to-use equipment • Supports DHCP, LLA, and static IP addressing • Supports IPv4, UDP, IGMPv2, and ICMP • Supports IEEE 1588 Precision Time Protocol • Long-reach connectivity, up to 40 km with optical cabling
Multicast capability	• Standards-based, IGMPv2 • Enabled advanced distributed processing and control architectures

Pleora Technologies Inc.
340 Terry Fox Drive, Suite 300
Kanata, Ontario
Canada, K2K 3A2

Tel: +1.613.270.0625
Fax: +1.613.270.1425
Email: info@pleora.com