DATA SHEET

iPORT NTx-GigE Embedded Video Interface

Rapidly add high-performance GigE Vision 2.0 connectivity to systems and cameras

Overview

Pleora's iPORT™ NTx-GigE Embedded Video Interface hardware helps manufacturers shorten time-to-market, reduce risk, and lower costs by providing a straightforward way to integrate GigE Vision 2.0 video connectivity into cameras, x-ray detector panels, and imaging systems.

The NTx-GigE Embedded Video Interface interacts seamlessly with Pleora's other products in networked or point-to-point digital video systems. It complies with the GigE Vision® 2.0 and GenICam™ standards, ensuring interoperability in a multi-vendor environment.

The ultra-compact NTx-GigE is easily embedded into small-body cameras, flat-panel x-ray detectors, and imaging systems. Power over Ethernet (PoE) and external power options provide design flexibility, while lowering component and operating costs. The product supports the IEEE 1588 Precision Time Protocol to synchronize image capture functions and other system elements, enabling the exact triggering of image acquisition.

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

- An evaluation kit to help speed time-to-market by enabling the rapid design of prototypes and proof-of-concept demonstrations, often without requiring hardware development;
- eBUS™ SDK, a feature-rich application development toolkit for manufacturers to rebrand and distribute with their end-products; and
- The AutoGen XML generation tool and a firmware reference design, which makes it fast and easy for manufacturers to create a user-friendly GenICam interface for their products.

GiGE VISION

GENICAM

Features

- Compact and low power
- GigE Vision and GenICam compatible
- Throughput approaching 1 Gb/s
- Up to 32-bit, 120 MHz parallel LVTTL/LVCMOS video input, and 4 interleaved taps
- Line scan and area scan modes
- 128 MB frame buffer to accommodate multi-mega pixel sensor sizes
- Supports both POE and external-powered options
- Updateable firmware via the GigE port for easy feature upgrades in the field

Related Products

The iPORT NTx-GigE, together with the iPORT NTx-U3 for USB3 Vision™ connectivity family, are pin-compatible hardware solutions that provide manufacturers with a cost-effective approach to support all video interface needs.

Ordering Information

900-6004	• iPORT NTx-GigE Embedded Video Interface*
900-6005	• iPORT NTx-GigE Evaluation Kit**

*Board set includes GPIO daughter card and loose 12-pin circular connector.

**Evaluation Kit includes includes GPIO daughter card with soldered circular connector, NTx-Mini Adapter, prober board, Ethernet cable, eBUS SDK installation USB stick, user guide, and power supply.

For more information, visit www.pleora.com

Pleora Technologies

iPORT NTx-GigE Embedded Video Interface

Hardware

User Circuitry Interface	100-pin Samtec Connector: LSHM-150-04.0-L-DV-A-N-TR
External Interface	12-pin Hirose Connector: HR10A-10P-12P(73)
GigE Interface	RJ-45
GigE PHY	Marvell 88E1510
FPGA	Altera Cyclone V
Image Buffer	128MByte 16-bit wide DDR3
Persistent Memory	128Mbit Serial FLASH
Clock Generator	Included

Inputs/Outputs on User Circuitry Interface

Video Input	2.5V LVTTL/LVCMOS
GPIO Inputs	4 x 2.5V LVTTL/LVCMOS
GPIO Outputs	4 x 2.5V LVTTL/LVCMOS
UART Inputs	3 x 2.5V LVTTL/LVCMOS
UART Outputs	3 x 2.5V LVTTL/LVCMOS
Camera Control Outputs	4 x 2.5V LVTTL/LVCMOS

GPIO on 12-Pin Circular Connector

GPIO Inputs	4 connections routed to User Circuitry Interface
GPIO Outputs	3 connections routed to User Circuitry Interface
UART Input	Connection routed to User Circuitry Interface
UART Output	Connection routed to User Circuitry Interface

Frame Grabber

Number of Channels	1
Scan Modes	Area Scan (Progressive) and Line Scan
Pixel Depth (bits)	8, 10, 12, 14, 16, 24, 32
Pixel Clock	• Min: 20 MHz • Max: 120 MHz
Taps per Data Channel	• Up to 4
Image Width (pixels)	• Min: 8 • Default: 640 • Max: 16,376 • Increment: 8
Image Height (pixels)	• Min: 1 • Default: 480 • Max: 16,383 • Increment: 1
Windowing/Region of Interest	Yes
Tap Reconstruction	Interleaved only

Characteristics

Size (LxWxD)	37.0mm x 37.0mm x 28.1mm (approximate, excluding RJ-45 Jack and GPIO daughter card)
Weight	TBD
Operating Temperature	0°C to 55°C
Storage Temperature	-40°C to 85°C
Power Supply	Standard IEEE 802.11af, up to 7 Watts External Powered: 4.8 to 16 Volts nominal
Power Consumption	Less than 2 Watts when streaming at 1 Gbps

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