



iPORT NTx-Mini-S Embedded Video Interface

All the benefits of the proven NTx-Mini in a low thickness form factor

Overview

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

NTx-Mini-S embedded hardware 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® and GenICam™ standards, enabling interoperation with third-party equipment in multi-vendor environments. The embedded hardware converts video data to packets over a GigE link and sends it with low, consistent latency to receiving software or hardware.

To speed time-to-market, Pleora offers a Development Kit for the NTx-Mini-S. This kit allows manufacturers to produce prototypes and proof-of-concept demonstrations easily and rapidly, often without undertaking hardware development.

Pleora's iPORT NTx-Mini-S Embedded Video Interface also includes:

- eBUS™ SDK, a feature-rich application development toolkit for manufacturers to rebrand and distribute with their end-products;
- A sophisticated on-board programmable logic controller (PLC), which allows users to precisely measure, synchronize, trigger, and control the operation of vision system elements such as strobe lights and rotary encoders; and
- The AutoGEV XML generation tool, which makes it fast and easy for manufacturers to create a user-friendly GenICam interface for their products.

Features

- Very low thickness form factor
- Low power
- GigE Vision and GenICam compliant
- Throughput approaching 1 Gb/s
- Up to 24-bit, 90 MHz parallel LVTTTL/LVCMOS video input, and 2 interleaved taps
- Line scan and area scan modes
- 32 MB frame buffer for store-and-forward applications
- Updateable firmware via the GigE port for ease of manufacturing and feature upgrades in the field

Applications

- Sensor devices requiring a very low thickness form factor
- Specialty cameras



For more information, visit www.pleora.com



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Networked Video Connectivity Solutions

iPORT™ Embedded Video Interfaces	<ul style="list-style-type: none"> Highly reliable, 1 Gb/s data transfer rate with low, end-to-end latency OEM board 32 MB of DDR2 RAM
eBUS™ SDK	<ul style="list-style-type: none"> eBUS Universal Pro driver Sample applications, a demonstration of multi-device network connectivity Driver installation tool Documentation
AutoGEV™ XML Generation Tool	<ul style="list-style-type: none"> Unique GenICam™ XML management tool for seamless GenICam integration
GigE Vision®	<ul style="list-style-type: none"> Fully compliant firmware load Guarantees delivery of all packets Comprehensive data transfer diagnostics

Connectors

PLC/GPIO Interface	<ul style="list-style-type: none"> 20-pin Hirose FH12-20S-0.5SH(55)
Network Interface	<ul style="list-style-type: none"> 8-pin (Hirose DF19G-8P-1H(54))
Camera head interface	<ul style="list-style-type: none"> 60-pin (Hirose FH28E-60S-0.5SH(05))

Data Acquisition Features

Video Interface connector (2.5V LVCMOS/LVTTL)	<ul style="list-style-type: none"> Compatible with internal signaling of video source
Integrated acquisition engine	<ul style="list-style-type: none"> Can acquire images from a wide variety of sources, with pixel depths up to 24 bits, color or B/W, and multi-tap at up to 90 MHz
Free running or externally triggered	<ul style="list-style-type: none"> Flexible acquisition modes
Static configuration	<ul style="list-style-type: none"> Configuration settings are saved to on-board Flash memory

Characteristics

Size (L x W x H)	<ul style="list-style-type: none"> 43.0 x 67.1 x 5.0 mm
Operating temperature	<ul style="list-style-type: none"> Commercial¹
Storage temperature	<ul style="list-style-type: none"> -40°C to 85°C
Power supply	<ul style="list-style-type: none"> 4.5V to 16V
Power consumption	<ul style="list-style-type: none"> From 1.6 W (input voltage and temperature dependent)
MTBF at 40°C	<ul style="list-style-type: none"> 2,347,064 hours
ECCN	<ul style="list-style-type: none"> 5A991.b

¹Case and junction temperature limits vary by IC device. Please refer to User Guide for specific IC operating temperature specifications and thermal management information.

Networking Features

GigE-based	<ul style="list-style-type: none"> 10/100/1000 Mb/s IEEE 802.3 (Ethernet), IPv4, IGMPv.2, UDP and ICMP (ping) Long reach: 100 m point-to-point, further with Ethernet switches or fiber
GigE Vision Protocol	<ul style="list-style-type: none"> Guarantees delivery of all packets Comprehensive data transfer diagnostics
Multicast capability	<ul style="list-style-type: none"> Enables advanced distributed processing and control architectures

Programmable Logic Features

4 inputs 4 outputs to PLC/GPIO connector 4 outputs to video interface connector (2.5V LVCMOS/LVTTL)	<ul style="list-style-type: none"> Provides a flexible, general-purpose interface Allows synchronization of multiple devices or system elements Flexible triggering capabilities, including Boolean combinations, deserialized Camera Link control signals, encoders, and time stamps Built-in debouncers
3 serial links (2.5V LVCMOS/LVTTL)	<ul style="list-style-type: none"> Serial control² of video source and other devices via PC application over the GigE link
Delayer, rescaler, general-purpose counter	<ul style="list-style-type: none"> Allows full synchronization of video source and other system elements
Timestamp trigger, counter, and reset	<ul style="list-style-type: none"> Allows system actions to be triggered based on timestamps Allows resets to be broadcast to all iPORT IP engines in system from host
Host interrupts	<ul style="list-style-type: none"> Allows host to be interrupted based on events on any input or internal signal

²Various serial communication protocols are supported

Ordering Information

904-3008	<ul style="list-style-type: none"> iPORT™ NTx-Mini-S Embedded Video Interface main board.
904-3009	<ul style="list-style-type: none"> iPORT™ NTx-Mini-S Embedded Video Interface development kit including 904-3008, flat flex cables, power supply, Gigabit Ethernet desktop NIC, Ethernet cable, 12-pin circular connector soldered on FlexEBoard, and eBUS SDK USB stick.