VNXP-FGX2-VIO

4K Video Capture/Transmit, with up to Four SDI In/Out

Key Features

- VNX+ extremely small form factor rugged module
- Integrated WOLF Frame Grabber eXtreme 2 (FGX2)
- Up to two 12G-SDI or up to four 6G/3G/HD-SDI SerDes inputs and outputs
- Module power: 12 to 25W (depending on options)

Additional Features

- PCIe Gen3 x4
- Optional 8Gb DDR4 RAM for additional application support
- NVIDIA GPUDirect RDMA support for low latency data exchange with an NVIDIA GPU
- Linux and Windows drivers
- Standalone operation with embedded Linux OS
- VxWorks RTOS drivers optional
- Extended product lifespan

Overview

The VNXP-FGX2-VIO provides a high data rate, high density video capture and transmit platform with the FGX2, WOLF's second-generation frame grabbing technology. FGX2 is a 4K-capable digital and analog frame grabber with conversion and transmit capability, built on the Xilinx® Kintex® UltraScale+™ series of FPGA devices. It is ideally suited for machine vision, synthetic vision or video processing applications deployed in harsh environments where SWaP (Size, Weight and Power) is at a premium.

This module can be paired with a WOLF NVIDIA-powered SBC or GPU module to provide extremely low latency peer-to-peer communication which will reduce CPU overhead when processing or encoding large amounts of data.

MCOTS options include the ability to change interfaces to other analog or digital video standards. RTOS drivers are optionally available upon request.

Mechanical / Open Systems Architecture

- High level of ruggedization:
  - ☐ Rugged conduction cooled
  - ☐ Operating temperature: -40° to +70°C, optional low power mode to +85C
  - ☐ Vibration (sine wave): 10G peak, 5 - 2000Hz
  - ☐ Shock: 40G peak
- Dimensions: 89mm length x78mm width x19mm height
- Weight (approximately): TBD
- ANSI/VITA 90

VNX+™

This information is Preliminary and subject to change.

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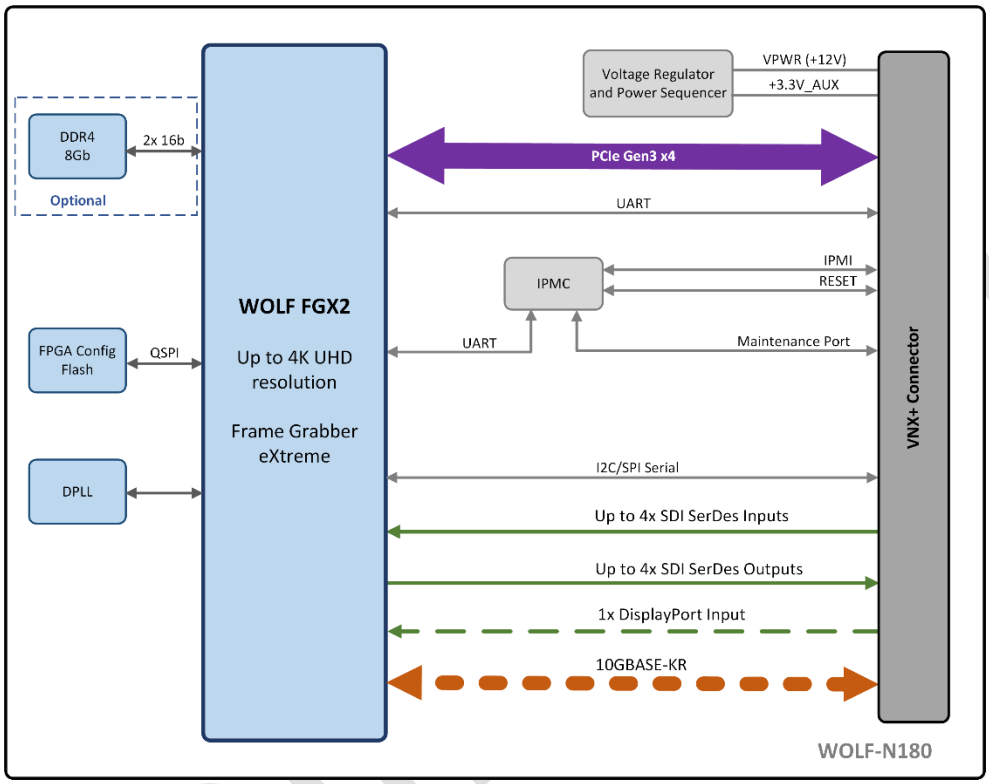
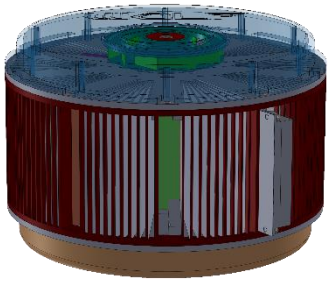
Display Interface MCOTS Options

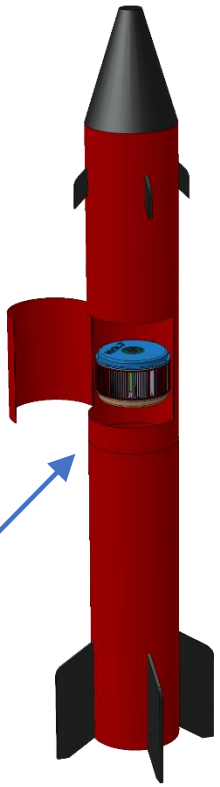
WOLF can provide support for virtually any video format including 12/6/3G-SDI, CoaXPress, ARINC 818-2/3, STANAG-3350 A/B/C, CVBS, RS170, RS343, LVDS, DVI, DisplayPort, Camera/Channel Link, and custom. Contact us to discuss your specific requirements.



VNX+ VITA 90

VNX+ is a new small-form-factor (SFF) VITA draft proposed standard based on the published VITA 74 VNX standard. The VNX standard defines a form factor intended for spaces that are too small for a VPX module, with 19mm height and 12mm height options as well as double-height options, such as space and airborne applications. The VNX+ standard expands on VNX introducing higher power capacities and new connectors. Innovative new chassis will also be required to house the new VNX+ modules.





This information is subject to change

Ordering Codes

The following table defines series of common order codes for the VNXP-FGX2-VIO module. The asterisks denote characters of the part number that are defined based on common configuration options. Some configuration options for this module include:

- Display Interfaces
- Conformal Coatings
- Variant Locked
- Default Power Threshold

Ordering Number	Description
VNX+ with WOLF FGX2	
N18033-F***-***VNXPvA0	VNX+, 12G-SDI, 2 in and 2 out
N18033-F***-***VNXPvA0	VNX+, ARINC 818 3840x2160p60, 16-bit YCbCr, 2 in and 2 out
N18033-F***-***VNXPvA0	VNX+, 6G-SDI, 4 in and 4 out

* Contact Sales for the latest Ordering Numbers and available options.

Manufacturing and Quality Assurance

WOLF designs modules to pass the following environmental standards:

- MIL-STD-810 (United States Military Standard for Environmental Engineering Considerations and Laboratory Tests)
- MIL-HDBK-217 (Reliability Prediction of Electronic Equipment)
- RTCA DO-160 (Environmental Conditions and Test Procedures for Airborne Equipment) on request

WOLF complies with the following management systems:

- AS9100D: Quality Management System - Requirements for Aviation, Space and Defense Organizations (certified)
- ISO 9001:2015: Quality management systems (certified)
- AS5553: Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition (compliant)
- NIST SP 800-171: Protecting Controlled Unclassified Information in Nonfederal Systems (compliant)

Boards are manufactured to meet the following standards:

- IPC-A-610 CLASS 3 (Acceptability of Electronic Assemblies)
- IPC 6012 CLASS 3 (Qualification and Performance Specification for Rigid Printed Boards, Class 3 for High Reliability Electronic Products)
- IPC J-STD-001 (Requirements for Soldered Electrical and Electronic Assemblies)

AS9100 • ISO 9001 CERTIFICATION Intertek

ITAR Free

GOVERNMENT-INDUSTRY DATA EXCHANGE PROGRAM GIDEP

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Datasheet Rev.5

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