XMC-FGX2-SDI-8IO

4K Digital & Analog Video Capture, Convert, Transmit

Key Features

- WOLF Frame Grabber eXtreme 2 (FGX2) capture, convert and transmit engine
- Up to two 12G-SDI inputs and outputs
- Up to six additional 3G-SDI inputs and outputs
- Two CVBS NTSC/PAL inputs, HDMI optional
- Low operating power, 12 to 25W (depending on options)

Additional Features

- PCIe x8 Gen3
- Optional 8Gb DDR4 RAM for additional application support
- Standalone operation with embedded Linux OS
- NVIDIA GPUDirect RDMA support for low latency data exchange with an NVIDIA GPU
- Windows and Linux drivers
- VxWorks RTOS drivers optional
- Extended product lifespan

Specifications

- High level of ruggedization:
  - ☐ Rugged conduction cooled
  - ☐ Operating temperature: -40° to +85°C
  - ☐ Vibration (sine wave): 10G peak, 5 - 2000Hz
  - ☐ Shock: 40G peak
- VITA 46.9 I/O compliant mapping for 3U and 6U VPX configurations
- SOSA Aligned mapping
- ICD compatible with WOLF-3080
- Dimensions: TBA

Overview

The WOLF-3183 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 devices. It is ideally suited for machine vision, synthetic vision or video processing applications deployed in harsh environments where low latency counts and SWaP is at a premium.

This module's ICD aligns with SOSA and ANSI/VITA 46.9 and provides an excellent upgrade path from the previous generation WOLF-3080 with a compatible hardware ICD and comparable thermal envelope. This module can be paired with a WOLF NVIDIA-based GPGPU 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 CoaXPress, ARINC-818, or to other analog or digital video standards. RTOS drivers are optionally available upon request.

This is preliminary and subject to change.

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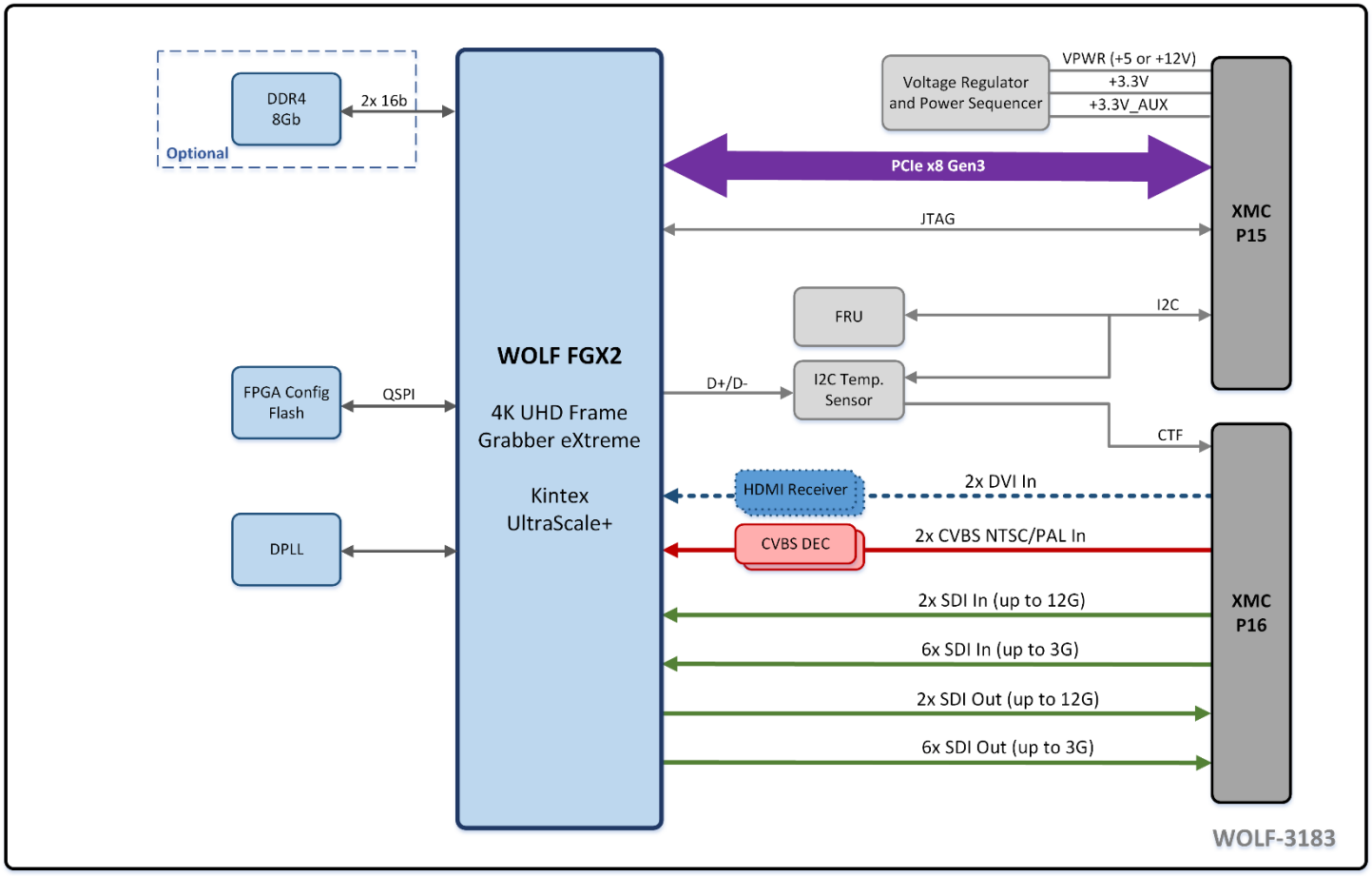

Designed for System Integration

This module's ICD aligns with SOSA and ANSI/VITA 46.9. When mapped to VITA 46.9 it uses a 4x SDI on 8D, 4x SDI on 12D pattern.

This module provides a pin compatible upgrade path from the previous generation WOLF-3080 with a compatible hardware ICD and a comparable thermal envelope.

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Ordering Codes

The following table defines series of common order codes for the XMC-FGX2-SDI-8IO module. The asterisks denote characters of the part number that are defined based on common configuration options. Some common configuration options for this module are:

- Conformal Coatings
- HDMI Capture
- Display Interfaces
- DDR4 Memory
- Variant Locked
- RTOS Drivers

Ordering Number	Description
318332-F3***-XMCvA0	XMC 2.0, Conduction Cooled, WOLF FGX2, 8 SDI In/Out, 2 CVBS In
318332-F3***-XMCvA0	XMC 2.0, Conduction Cooled, WOLF FGX2, 8 SDI In/Out, 2 CVBS In, HDMI In

* Contact Sales for the latest Ordering Numbers and available options

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

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)

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GOVERNMENT-INDUSTRY DATA EXCHANGE PROGRAM GIDEP

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