

XMC-FGX2-8IO

4K or HD Video Capture/Transmit: SDI, ARINC 818, CVBS

KEY FEATURES

- WOLF Frame Grabber eXtreme 2 (FGX2) with up to 8 inputs and 8 outputs
- 12G-SDI, 3G/HD-SDI inputs and outputs
- ARINC 818 inputs and outputs
- CVBS NTSC/PAL inputs
- Optional: HDMI/DVI inputs
- 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; uses 4x SDI on 8D, 4x SDI on 12D pattern
- SOSA Aligned mapping
- ICD compatible with WOLF-3080
- Dimensions: TBA

OVERVIEW

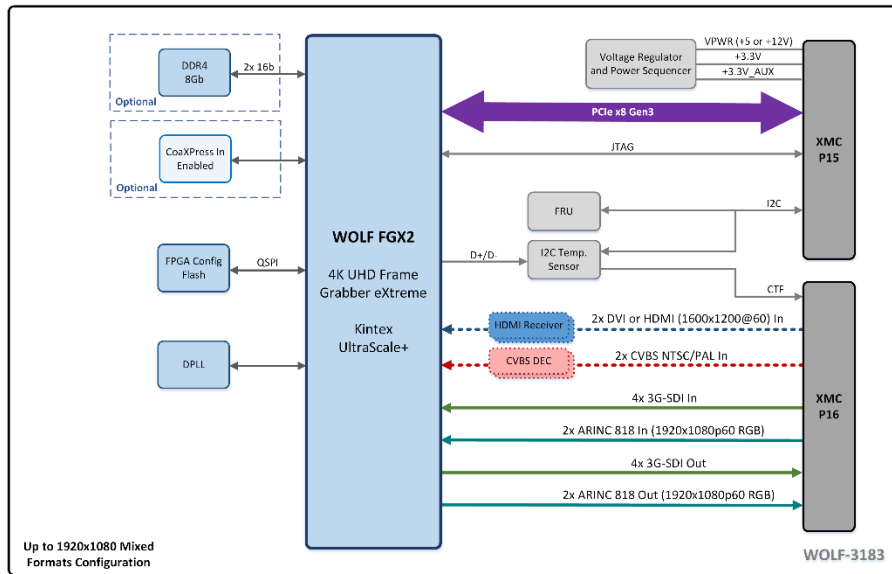
The WOLF-3183 provides a high data rate, high density video capture and transmit platform with the FGX2, WOLF's second-generation frame grabbing technology. FGX2 is a 4K-capable digital and analog frame grabber with conversion and transmit capability, built on the Xilinx® Kintex® UltraScale+™ series of FPGA 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 for 3U and 6U VXP configurations. It provides an excellent upgrade path from the previous generation WOLF-3080 with a compatible hardware ICD and 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.

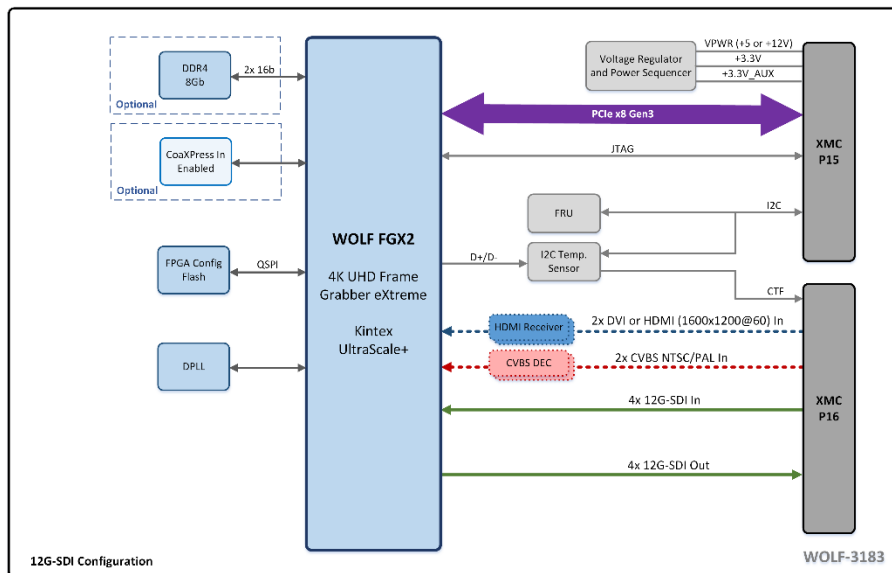
MCOTS options include the ability to change interfaces to other analog or digital video standards. RTOS drivers are optionally available upon request.



This information is subject to change

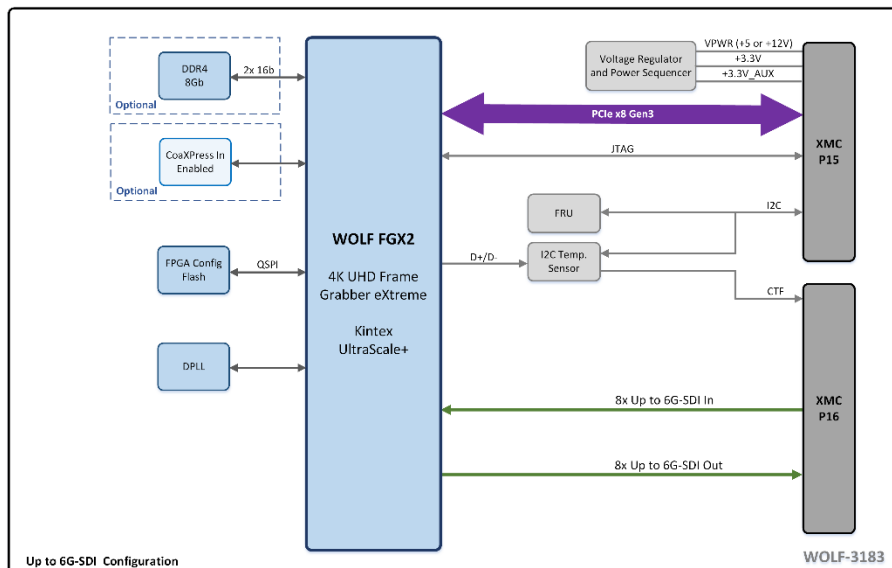


This configuration features a mix of digital and analog formats, with up to 1920x1080 frame resolutions supported.



This configuration is focused on 12G-SDI inputs and outputs with support for additional CVBS or DVI/HDMI optional.

Support for UHD resolution ARINC 818 is also optional.



This configuration is for applications that require the maximum number of 3G-SDI I/O with 8 inputs and 8 outputs.

This information is subject to change

ORDERING CODES

The following table defines series of common order codes for the XMC-FGX2-8IO 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:

- Display Interface Options
- Conformal Coatings
- Variant Locked
- XMC Connector
- DDR4 Memory
- RTOS Drivers

Ordering Number	Description
318332-F***-XMCvA0	XMC 2.0, Conduction Cooled, WOLF FGX2, 4x 3G-SDI In, 4x 3G-SDI Out, 2x ARINC 818 In, 2x ARINC 818 out (1920x1080p30 RGB)
318332-F***-XMCvA0	XMC 2.0, Conduction Cooled, WOLF FGX2, 4x 12G-SDI In, 4x 12G-SDI Out
318332-F***-XMCvA0	XMC 2.0, Conduction Cooled, WOLF FGX2, 8x 3G-SDI In, 8x 3G-SDI Out

* 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

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)



Datasheet Rev.4

WOLF-3183