

XMC-270 High-performance Frame Grabber



The XMC-270 is a high-performance video frame grabber providing multichannel simultaneous high-resolution digital and analog video capture, with output capability. The XMC-270 is a VITA 42.3, PCI Express[®] (PCIe) XMC form factor, ruggedized, high-performance video capture and frame grabber with output capability. The XMC-270 supports high-resolution digital and analog video, including legacy interlaced formats.

The XMC-270 is based on the Xilinx[®] Virtex[®]-5, a highperformance field programmable gate array with advanced serial connectivity and a built in PCle core. Curtiss-Wright Controls Embedded Computing leverages this powerful FPGA to provide industry leading video capture and frame grabbing capabilities, while providing a flexible solution for enhancements and customization.

The XMC-270 comes with a comprehensive software application interface to control and utilize the capabilities of the hardware. This software can be used standalone or in conjunction with graphic display card video APIs such as Seaweed's SeaWind X Window System Video Interface. Support is available for VxWorks[®] and Wind River Linux[®] with Curtiss-Wright PowerPC[™] and x86 single board computers.

Learn More Sales Info: sales.cwcembedded.com Sales Email: sales@cwcembedded.com





XMC-270

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Features

- 8 Lane PCIe interface supporting x1, x2, x4 and x8 link widths
- Simultaneous video capture capability for one of the following streams or a combination of their subset:
 - Six (6) CVBS/S-Video NTSC, PAL or RS170 inputs
 - Dual DVI inputs up to 1600 x 1200 @ 60 Hz (with reduced blanking)
 - Dual progressive/interlaced RGB inputs up to 1280 x 1024 @ 60 Hz with support for RS-170, RS-343 and STANAG 3350 A/B/C
- Color depths include (not applicable to all inputs):
 - 8-bit YCbCr (BT.656-4)
 - 32-bit RGB8888 (with Alpha)
 - 16-bit RGB565
 - 8-bit Mono (green only)
- Capture modes include:
 - Full frame rate
 - Reduced frame rate (user programmable)
 - Snap shot (frame grabber mode)

- Video output capability:
 - Dual DVI outputs, which are simultaneous retransmissions of the DVI input channels
- Video integrity monitoring (VIM) for video freeze detection on DVI channels
- A Xilinx Virtex-5 FPGA is utilized on-board to provide the video capture functionality and the ability for enhanced and customized operations.
- Thermal sensors
- Flexible I/O via PN6, PN4 or front panel
- Available in various air and conduction-cooled ruggedization levels
- Path to certifiability for DO-254 and DO-178B
- MSI and Legacy Interrupt support
- Operating systems:
 - VxWorks 6.x
 - Wind River Linux (call for availability)

Figure 1: XMC-270 Block Diagram

