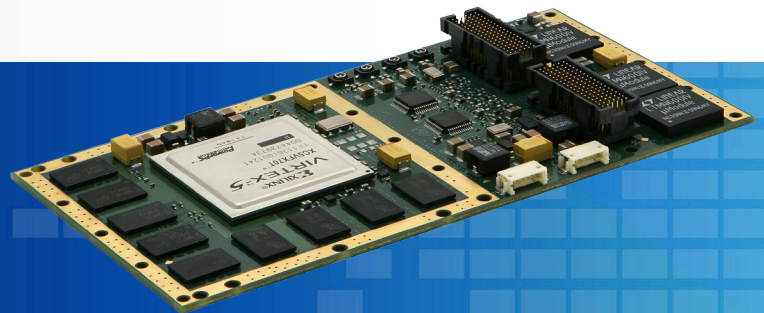


BuiltSAFE™ VCP-8162

Dual Channel XMC Frame Grabber

- Xilinx Virtex-5 FX70T FPGA
- 2x onboard HD-SDI inputs
- 2x HD-SDI XMC mezzanine inputs
- Up to 8x analog video inputs on XMC (consult factory)
- Rugged Conduction-Cooled



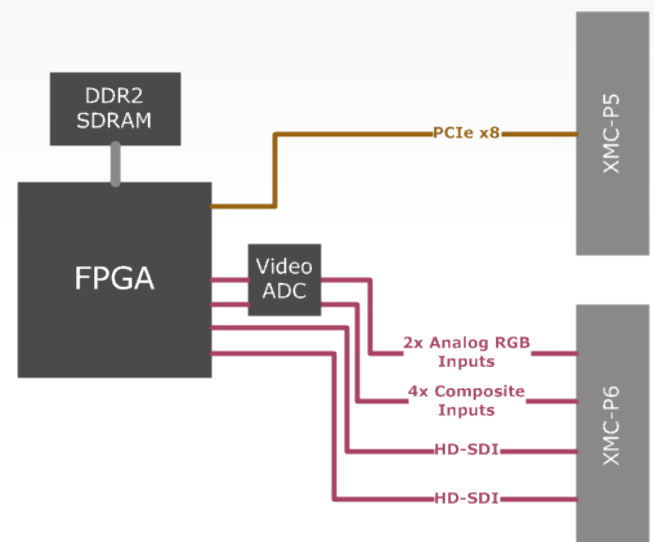
Mercury's BuiltSAFE™ products bring the highest level of flight safety assurance to aerospace and defense applications. Our proven, reusable Design Assurance Level (DAL) certified artifacts for mission computing, avionics, networking and datalink comms processing save time and cost while decreasing risk.

The BuiltSAFE VCP-8162 is a rugged, conduction-cooled XMC frame grabber mezzanine for video applications. It is specifically designed for the most demanding applications, combining hard real-time video capture for two video channels in parallel and rugged packaging.

The VCP-8162 has different SDI input solutions (two onboard, two on XMC-P6) compatible with HD input signals at up to 1.5 Gb/s. Other analog video input formats are also available. The video coding functionality provided by the BuiltSAFE VCP-8162 is designed to guarantee smooth real-time, low-latency coding up to HD formats. Digitized video is available from the processor board via PCIe. Up to two HD-SDI or two analog video inputs or a combination of one SDI and one analog can be processed simultaneously.

BuiltSAFE for Avionics

Mercury's expertise and experience in safety certifiable solutions has been built on successful execution of dozens of programs over three decades. This domain knowledge is the foundation of our BuiltSAFE portfolio of open architecture modules, systems and software for avionics, communications, video servers, and mission computing.



Mercury Systems is a leading commercial provider of secure sensor and mission processing subsystems. Optimized for customer and mission success, Mercury's solutions power a wide variety of critical defense and intelligence programs.



ACQUIRE



DIGITIZE



PROCESS



STORAGE



EXPLOIT



DISSEMINATE

Technical Specifications

Compliance

Conduction-cooled XMC (VITA 42)
SMPTE 292M, SMPTE 296M

Power Consumption

Minimum	typical	maximum	units
-	21.5	25	Watts

Memory

512 MB DDR2 SDRAM at 6.4 GB/s peak
FPGA/User-Programmable/User I/O Lines
Xilinx Virtex-5 FX70T FPGA

Inputs

2x onboard HD-SDI (SMPTE 292M, SMPTE 296M)
2x HD-SDI on XMC-P6 (SMPTE 292M, SMPTE 296M)
8x analog video: CVBS (up to 8), RGB/YUV (up to 2), S-Video (up to 4)
on XMC-P6 (consult factory)
Simultaneous capture of up to 2x HD-SDI or 2x analog video or a
combination of 1x HD-SDI and 1x analog video
Synchronization on green (RGB inputs), or separate horizontal/vertical
synchronization inputs

High-Speed Links / Connections

1x PCIe x8 on XMC-P5 (VITA 42.3)

Ruggedization Levels

Level	Description	Cooling Type	Operating Temperature	Vibration (1 hour per axis)	Operating Shocks
C3	Rugged CC	Conduction	-40°C to 70°C [CC3]	5-100 Hz: increase at 3 dB/octave, 100-1000 Hz: 0.1 g ² /Hz, 1000-2000Hz: decrease at 6 dB/octave	40g, 11ms saw-tooth, three axes

Environmental Specifications

Condition	Limits, standards	Comments
Non-operating temperature	-55°C to 105°C [C4]	
Humidity	95%	
Altitude	-1,500 to 60,000 feet	May require conformal coating
Fungus resistance	No nutrient materials	
Workmanship	IPC-A-160 class 3	
Soldering	IPC J-STD-001 class 3	
PCB Manufacturing	IPC-A-600 class 3	
Conformal coating	IPC-CC-830	Optional
Materials	REACH compliant	ROHS variants as an option
Flammability	UL 94 Class V-0	
Quality	EN 9100:2008	

Product Ordering

VCP-8162B0	Conduction-cooled frame grabber XMC module
DGW-34620E	VxWorks® 653 driver for VCP-8162
DGX-34620D	Linux® driver for VCP-8162

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INNOVATION THAT MATTERS™

MERCURY MISSION SYSTEMS INTERNATIONAL S.A.
Avenue Eugène-Lance 38, PO Box 584
CH-1212 Grand Lancy 1 • Geneva – Switzerland
+41 (0)22 884 51 00

CORPORATE HEADQUARTERS

50 Minuteman Road • Andover, MA 01810 USA
(978) 967-1401 • (866) 627-6951 • Fax (978) 256-3599