

PMC VIEW-2

Graphics PMC module

Graphics and Frame Grabber functionality

- PMC module
- Graphics with frame buffer with direct PCI access
- Overlay and Underlay planes
- Monochrome video acquisition

→ preliminary

III Main Features

- Graphics with frame buffer access
- 3 analog monochrome video inputs
- 3 digital video inputs (SDI)
- Analog (VGA) and digital (SDI+DVI) video outputs
- 8-bit video frame buffer (underlay), 8/24 bit for graphics
- 8-bit overlay frame buffer (with "transparent" value)
- 8 to 24 bit LUTs for video outputs
- 32 bit PCI Interface supporting random access to video RAM
- 128 MByte frame buffer memory
- Single-slot PMC format

III Technical Details

The PMC_View-2 is a PMC mezzanine card with graphics and frame buffer functionality in one board.

III Graphics functionality

The graphics functionality consists of a frame buffer, where display data is written by the system's CPU.

The frame buffer can be divided into an overlay, which is visible on the monitor as long as the overlay color is not "transparent"- In that case the

underlying base screen (underlay) is visible. The transparency of the overlay can be set on by-pixel basis, allowing for arbitrary shapes of overlay windows. Graphics pixels can have a width of 8 or 24 bits.

I/O	Standard	# of I/Os
Analog video inputs	RS-170, 1 Vpp, 75 Ohm	3
Digital video inputs	SDI	3
Analog Video output	RGB (VGA), 1 Vpp	1
Digital video output	SDI	1
Digital video output	DVI	1

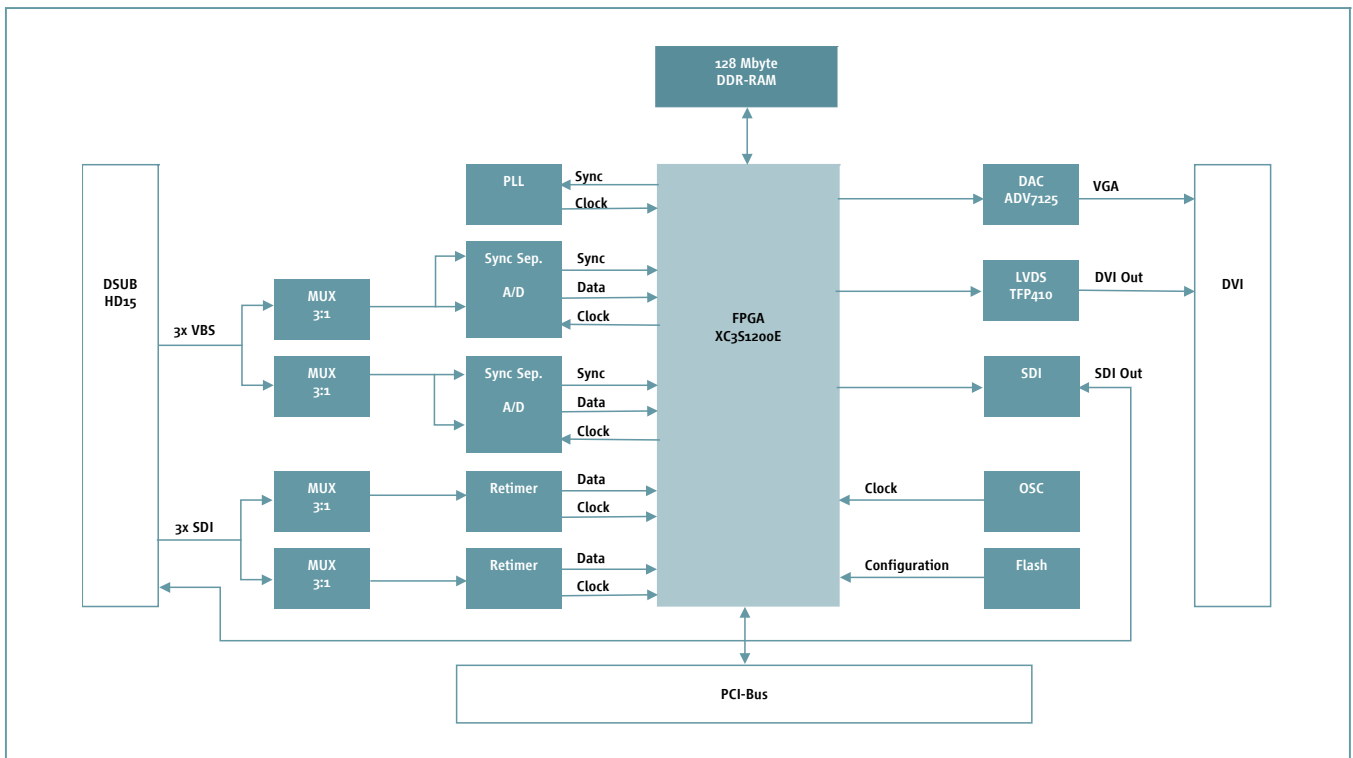
Analog graphics output is generated by a look-up table and triple high-speed digital-to-analog converters, driving 75-Ohm transmission lines. Maximum video data rate is 140 MHz, resolutions up to 1280 * 1024 * 60 Hz are supported with 24 bits per pixel.

III Memory Configuration

128 Mbytes DDR memory are used as frame buffer. It holds overlay and base screen data.

III Frame grabber functionality

Video acquisition logic on the module supports 2 analog-to-digital converters



(ADCs) and 2 SDI de-serializers. Video data can be stored into the on-board frame buffer or into main memory of the base board via PCI DMA transfer.

III SDI Interfaces

Digital video inputs and outputs conform to SMPTE 259M with a serial transmission with 270 Mbit per second, video timing is equivalent to CCIR 656 (standard 50 Hz video timing).

III PMC/PCI Interface

The module has a PCI interface with 33 MHz / 32 bits. Mechanically, it complies to the PMC specification (single-slot).

III Software

The PMCView 2 drivers are implemented for Standard Linux. Linux is best when a full operating system is needed. The real-time operating systems VxWorks and OS-9000 are also available on request.

III Front-panel I/O

The front-panel bracket carries VGA, DVI, and dual SDI connectors.

III Board-internal I/O

The board has four additional on-board connectors for use with coaxial cables for dual SDI input and output.

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III Specifications

PMC

- 32-bit/33-MHz interface (PCI electrical), 3.3 V signaling
- 3.3 V operation
- Single-slot

III Environmental Conditions

- Storage Temperature: -40 °C – 70 °C, at 10% - 100% non-condensing.
- Operating Temperature: 0 °C – 55 °C (2 m/s forced air cooling)
- Maximum Operating Humidity: 85 % relative

III Power Requirements (PMC board only)

- 1.0 A max. at + 3.3 VDC ± 5 %
- 1.0 A max. at + 5.0 VDC ± 5 %

III MTBF Values

- T.b.d. hrs (computed after MIL HDBK-217F)
- T.b.d. hrs (realistic value from industry standard experience)

III Connectors

Front Panel

- DVI
- VGA 15-pin Sub-D

III Regulatory

- CE: EN50082-2, EN50081-1, EN55011.

III Documentation

- Hardware / Software – free / internet

Please contact your local sales office for detailed information.

III Ordering options

V-PMVI-200: PMC, 128 MB DRAM

