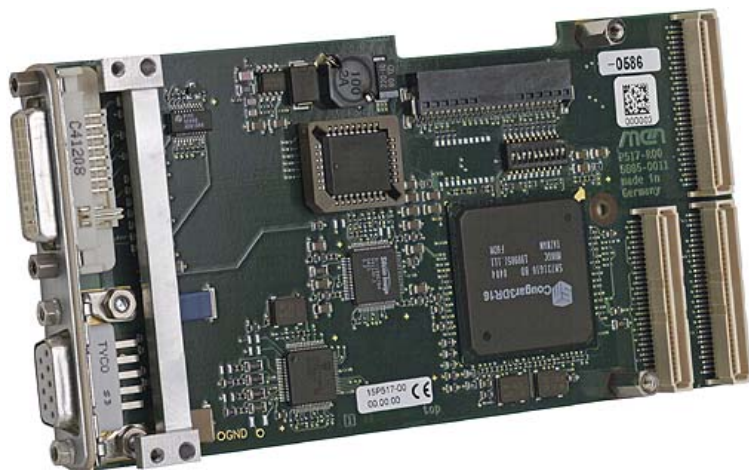


P517 – Graphics Accelerator PMC

- Graphics controller SM731
- 16 MB integrated graphics RAM
- 4 Mbit video BIOS ROM
- Up to 1600 x 1200 pixels
- Up to 16.7 M colors
- Up to 85 Hz refresh rate
- LCD (up to UXGA) and CRT via DVI-I (front)
- PanelLink via DVI-I (front)
- S-Video I/O and Composite Video out via D-Sub (front)
- 2x LVDS via on-board connector



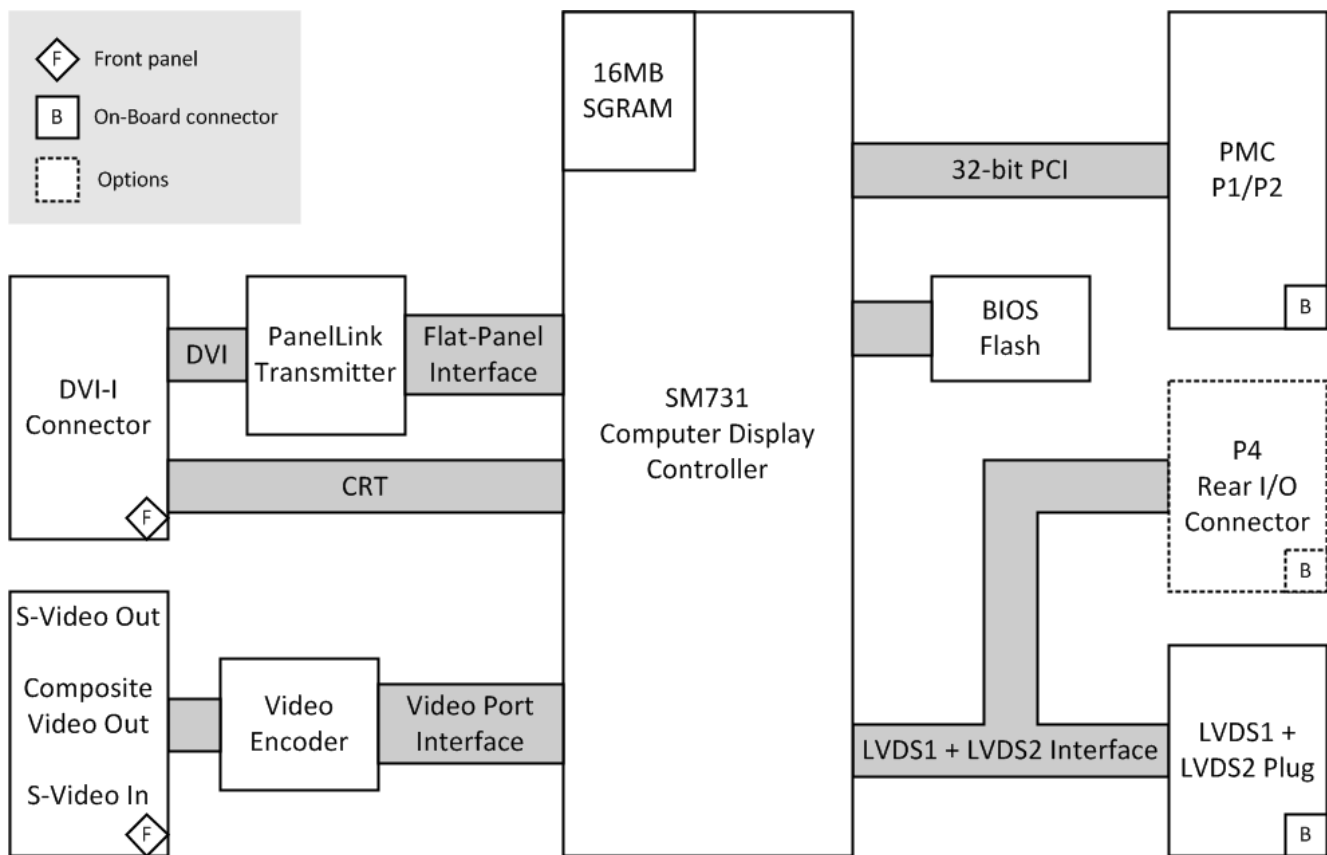
The P517 is a high-performance graphics controller suitable for any PMC compliant host carrier board in any type of bus system, i.e. CPCI, VME or on any type of stand-alone SBC. A similar functionality is also available on PC-MIP®, a PCI-based mezzanine card in a smaller form factor. Appropriate PMC and PC-MIP® carrier cards in 3U, 6U and other formats are available from MEN or other manufacturers.

The P517 features the Silicon Motion SM731 3D/2D dual display controller which manages graphics processing. The SM731 supports a 235-MHz, 24-bit RAMDAC at a maximum of 1600 x 1200 pixels

resolution and delivers enhanced multi-display capabilities. It can drive two independent digital displays (dual digital), either with identical or with different screen displays. Simultaneously, it can drive LCD, CRT and TV displays (DualMon). The controller also incorporates two 112-MHz max pixel clock LVDS channels that can drive two separate panels or a single high-resolution panel (UXGA).

The mezzanine module P517 provides a Digital Video Interface (DVI-I) for LCD and CRT via a DVI-I front-panel connector. It also provides an S-Video input and output and Composite Video output via a D-Sub front-panel connector. Both LVDS channels are supported via an onboard plug connector (optionally via the P4 rear I/O connector). These connections can be used to control a panel.

Diagram



Technical Data

Graphics Control	■ SM731 controller ■ Video □ Zoom video port □ Video filtering □ Multiple independent hardware video windows ■ Memory □ 16MB embedded SGRAM □ 64-bit memory interface □ Various on-chip DRAM memory configurations ■ DVI via PanelLink transmitter □ Integrated Dual Channel LVDS transmitters □ Single or dual pixel per clock □ DualMon support □ Up to 1600x1200 resolution □ Up to 16.7M colors ■ RAMDAC □ 235 MHz □ 24 bits □ Up to 1600x1200 resolution □ Up to 16.7M colors ■ Video BIOS ROM □ 4 Megabit (512K x 8 bits)
Interfaces	■ DVI-I via front-panel connector ■ S-Video Output/Input and Composite Video Output via front-panel connector ■ LVDS1 and LVDS2 via onboard connectors
PMC Characteristics (PCI)	■ Compliant with PCI Specification 2.2 ■ 32-bit/33-MHz, 3.3V V(I/O) ■ Target
Peripheral Connection	■ Via front panel on one DVI-I connector and one standard 9-pin D-Sub receptacle connector ■ Via onboard 50-pin plug connector
Electrical Specifications	■ Isolation voltage: tbd. ■ Supply voltage/power consumption: □ +5V (4.85V..5.25V), 900 mA max. □ +3.3V (3.0V..3.6V), 1.4 A typ.
Mechanical Specifications	■ Dimensions: conforming to IEEE 1386.1 ■ Weight: 84 g
Environmental Specifications	■ Temperature range (operation): □ 0..+60°C □ Industrial temperature range on request □ Airflow: min. 10 m³/h ■ Temperature range (storage): -40..+85°C ■ Relative humidity (operation): max. 95% non-condensing ■ Relative humidity (storage): max. 95% non-condensing ■ Altitude: -300 m to + 3,000 m ■ Shock: 15 g/11 ms ■ Bump: 10 g/16 ms ■ Vibration (sinusoidal): 2 g/10..150 Hz ■ Conformal coating on request
MTBF	■ Approx. 240,000 h @ 50°C (derived from MIL-HDBK-217F)
Safety	■ PCB manufactured with a flammability rating of 94V-0 by UL recognized manufacturers
EMC	■ Tested according to EN 55022 (radio disturbance), IEC1000-4-2 (ESD) and IEC1000-4-4 (burst)

Technical Data

Software Support

- Driver support for Windows® 2000/XP, OS-9® (incl. C library and shared library module for XiBase9)
- [For more information on supported operating system versions and drivers see Downloads.](#)

Configuration & Options

Options

Peripheral Connection

- Via P4 rear I/O connector

Ordering Information

Standard P517 Models	15P517-00	Graphics accelerator, 16MB integrated SGRAM, 4 Mbit Flash BIOS, S-Video In/Out and Composite Video Output, 0..+60°C, no RoHS
Miscellaneous Accessories	05P000-01	25 mounting screw sets to fix PMC/XMC modules on carrier boards
Software: Windows®	This product is designed to work under Windows®. See below for potentially available separate software packages from MEN.	
	13P017-71	Windows® 2000: Graphics driver for P517 (SMI, object code)
	13P017-72	Windows® XP: Graphics driver for P517 (SMI, object code)
Software: OS-9®	This product is designed to work under OS-9®. For details regarding supported/unsupported board functions please refer to the corresponding software data sheets.	
	13P017-01	OS-9®: C library for P517 for simple portations of various graphics packages based on a frame buffer interface
	13P017-02	OS-9®: Shared library module XiGfx.dll. for P517 for XiBase9
For operating systems not mentioned here contact MEN sales.		
Documentation	Compare Chart mezzanine functions on PMC/XMC and PC-MIP® » Download	
	20P517-00	P517 User Manual

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