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Find the *Aitech Defense Systems M577* at our website: *Click HERE*

M577

Multi-Channel Frame Grabber XMC

Aitech
Embedded Computing *without* Compromise



- Single Width XMC
- PCIe x4 Host Interface
- Video Inputs
  - 7 x Composite supporting RS-170A (NTSC)/PAL
  - 3 x S-Video supporting NTSC/PAL
  - 2 x SDI supporting HD and SD resolutions
- Up to 4 x Inputs Available Simultaneously
- Universal VPWR 5V/12V
- Low Power Consumption
- Windows®, Linux®, VxWorks® Support
- Conduction and Air-Cooled Versions
- Vibration and Shock Resistant



M577

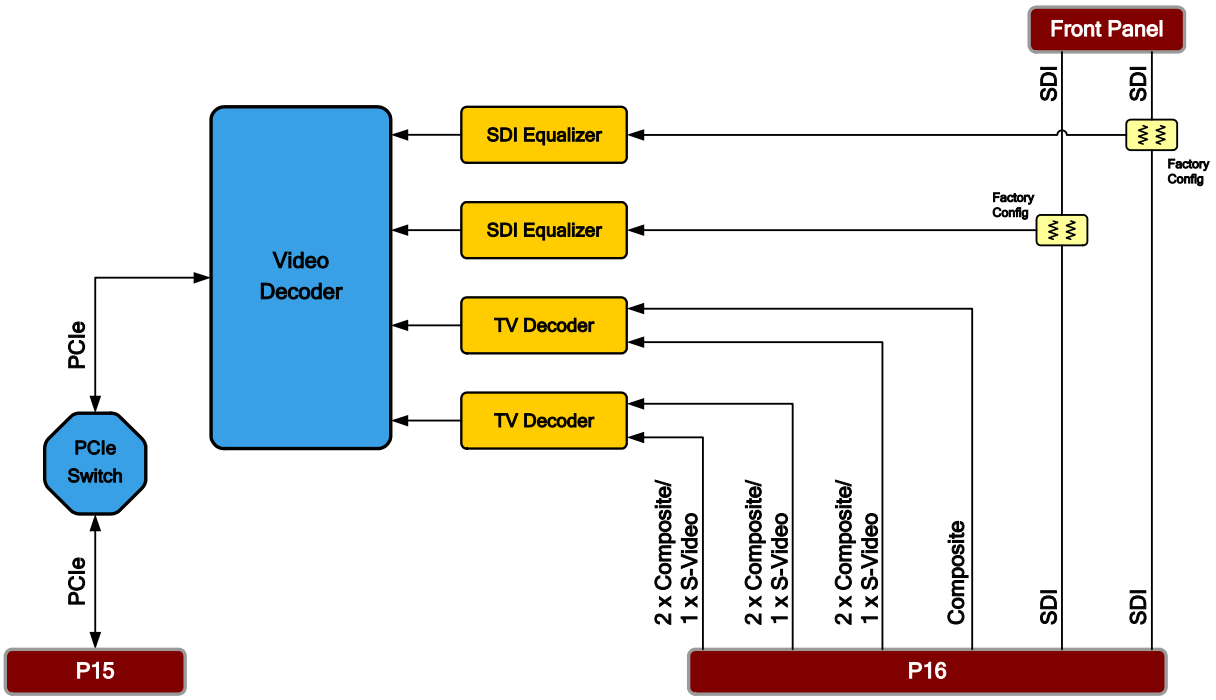
Multi-Channel Frame Grabber XMC

Aitech
Embedded Computing *without* Compromise

Aitech's M577 frame grabber XMC provides video capture functionality with low power consumption. The M577 provides SDI and composite/S-Video input interfaces.

Video capture and DMA transfers are performed by a high-performance, low-power video decoder. Video is transferred to host memory via the PCIe interface, using the video decoder's integrated DMA engines.

The mechanical and electrical design of the M577 XMC guarantees reliable operation over the full range of rugged application environments. It is available in industry standard conduction-cooled and air-cooled form factors.



Board Architecture

Video Capture	• Up to 4 x inputs available simultaneously • Auto-detection/configuration of supported resolutions for all video input interfaces • SDI inputs supported natively by the M577 video decoder (both channels available simultaneously) • Composite/S-Video inputs implemented via two Analog TV decoders (up to 2 channels available simultaneously) Each Analog TV decoder can process one composite or S-Video input at a time (2 channels routed to different decoders can be used simultaneously; 2 channels routed to the same decoder cannot be used simultaneously) S-Video inputs and 6 of the composite video inputs are routed to shared pins (3 pairs of pins, each software configurable as 2 x composite or 1 x S-Video) • Video transfer to host memory using the video decoder DMA engines
Host Interface	PCIe x4 port at P15 supporting x4/x2/x1 port widths

Video Inputs

	Number of Ports	Port Routing		Remarks
		Conduction-Cooled	Air-Cooled	
SDI	2	XMC P16 connector	Front panel SMB connectors	Both channels can be used simultaneously
Composite	7	XMC P16 connector	XMC P16 connector	Ports routed to shared pins, up to 2 channels can be used simultaneously (see Video Capture above)
S-Video	3			

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Supported Resolutions

Video Standard	Video Signal Format	Resolution Specification					Input Interface	
		Total Lines	Active Lines	Aspect Ratio	Frame Rate	Interlaced/ Progressive	Composite/ S-Video	SDI
Analog TV	RS-170A (NTSC)	525	483	4:3	60	I	●	
	PAL	625	576	4:3	50	I	●	
SMPTE	480/60i	525	483	4:3	60	I		●
	576/50i	625	576	4:3	50	I		●
	720/60p	750	720	16:9	60	P		●
	1080/60i	1125	1080	16:9	60	I		●
	1080/30p	1125	1080	16:9	30	P		●

Software

Drivers are available for the Windows, Linux, and VxWorks operating systems

Mechanical

	Form Factor & Dimensions	Weight
Air-Cooled	Single-Width XMC per ANSI/VITA 42.0	< 300 g (0.67 lbs.)
Conduction-Cooled	Single-Width XMC per ANSI/VITA 42.0	< 275 g (0.61 lbs.)

Power

	+3.3 V	VPWR (Universal +5V/+12V)	Total
Maximum	0.3 A	1.2 A (+5 V) or 0.5 A (+12 V)	7 W

Notes: M577 is powered by the host +3.3V and VPWR supplies (±12V and +3.3V_AUX supplies are not required)

Environmental

Specs per VITA 47	Air-Cooled			Conduction-Cooled	
	Commercial	Rugged	Military	Rugged	Military
Operating Temp.	AC1 (0 to +55 °C) (2)	AC3 (-40 to +70 °C) (2)	AC4 (-40 to +85 °C) (1,2)	CC3 (-40 to +70 °C) (3)	CC4 (-40 to +85 °C) (1,3)
Non-Operating Temp.	C1 (-40 to +85 °C)	C3 (-50 to +100 °C)	C4 (-55 to +125 °C)	C3 (-50 to +100 °C)	C4 (-55 to +125 °C)
Vibration	V1	V2	V2	V3	V3
Operating Shock	OS1	OS1	OS1	OS2	OS2
Altitude	15,000 ft.	35,000 ft.	70,000 ft.	35,000 ft.	70,000 ft.
Relative Humidity (4)	0 - 90%	0 - 95% with Acrylic (Standard),			
Conformal Coating	N/A	0 - 100% with Urethane (Optional)			

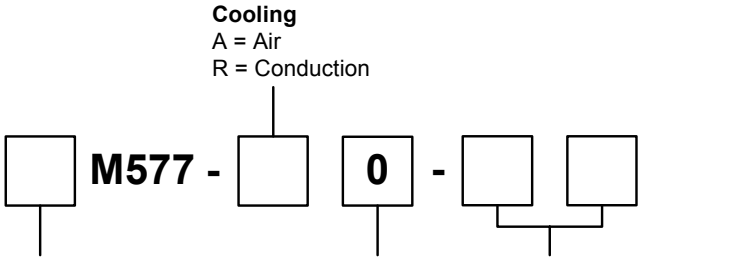
Notes:
(1) -55 °C available, contact an Aitech representative for more information
(2) Operating ambient air temperature (with sufficient airflow)
(3) Operating card edge temperature
(4) Non-condensing

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Ordering Information



Example: 4M577-R0-00

Contact Aitech

Contact your Aitech sales representative for additional product information, and for inquiries regarding customized configurations of the M577 and additional software support.



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