



4 Channel Video Processing System

“High powered solution for PC104+ applications.”

The Raptor+ is a Compact State-of-the-Art All-in-One Video System capable of processing up to 4 analog video channels at D1/4CIF 30 frames per second (fps) or 2 High-Definition Serial-Data-Interface (HD-SDI) video channel at HD 60 fps using H.264, Mpeg-4 or MJPEG video compressions. This versatile All-in-One platform is designed to deliver DVD or HD quality analog and/or digital video outputs plus advanced integrated Video Analytics (VA) including: Automatic License Plate Recognition (ALPR), Video Content Analysis (VCA), Video Stabilization, and other Real-Time video processing applications.

In addition to processing video, the Raptor+ supports a wide selection of I/O including: Audio, Serial Ports, USB, TTL Inputs, Dry Contacts, HDMI or HD-SDI output, providing the necessary control and status requirements of even the most demanding applications. The Raptor+ also contains on board NAND Flash and also supports optional internal SATA Hard Drive and SD media interfaces for the selective storage of video streams.

The Raptor+ is made of an Industrial-Grade PC104+ form factor main-board and Add-on powerful Digital Signal Processor (DSP) subsystem DIMM module. The Raptor+ takes advantage of the Mango IVS software framework, which enables VA partners to create an exceptional processing platform for their solutions.

Key Features

- **Multiprocessing:** Video processing base board and optional daughter board for Video Analytics
- **Encoding:** H.264, Mpeg-4 and MJPEG
- **Streaming:** Dual and triple streams, Unicast & Multicast
- **Resolutions:** Analog input up to D1 @ 30 FPS; HD-SDI input up to 1080p @ 60 FPS
- **Web-based Interface:** Simple password-protected Web GUI for configuration and viewing live video
- **HDMI Output:** 4 channels of live video directly to HDMI monitor
- **Audio I/O:** G.711 mono mode
- **PTZ Control I/F:** RS-422/485
- **Alarms and Contact Closures:** TTL inputs and dry contacts
- **USB I/F:** Optional USB ports
- **Local Storage Recording:** NAND Flash, SD media or SATA HD storage I/F
- **VMS Integrations:** RTSP or ONVIF Profile S support
- **Industrial Temperature Range:** -40°C to 70°C (-40°F to 158°F)

TECHNICAL SPECIFICATIONS

VIDEO

Video In	4 Composite CVBS (1Vpp 75 Ohm NTSC / PAL) or 2 HD-SDI input
Video Out	1 CVBS out put and 1 HDMI output for live monitoring of all 4 CVBS channels
Resolutions	D1, 4CIF, CIF, QCIF up to 30 FPS or 720p / 1080i / 1080p up to 60 FPS (User selectable)
Compression	H.264 High / Main / Baseline profiles, Mpeg-4 and MJPEG
Bit Rates	Configurable 32 Kbps to 4 Mbps

AUDIO

Audio In / Out	4 Mono In, 1 MIC in / Stereo out, G.711 compression
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NETWORK

Interface	10/100/1000 Fast Ethernet
Protocols	RTP, RTSP, HTTP, UDP, TCP/IP, IGMP, ARP, ONVIF Profile S
Streaming	Unicast

ALARMS

Input / Output	4 TTL inputs / 4 DPDT Type relays (up to 1 Amp @ 30VDC load)
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SERIAL PORTS

Interface	RS232, RS422/485, TTL UART
PTZ Support	AD-RS422, BBV-Star, CyberScan1, Phillips-TC7560, Pelco-D, Pelco-P, RS-422-Dome
Advanced	Virtual Serial Port (VSP) API + Remote Control over IP

SYSTEM

Processor / OS	TI DM8148 (ARM@1GHz, DSP@750 MHz) and optional TI C6654 DSP @ 850MHz DIMM Module / Embedded Linux Operating System
Memory	256 MByte Flash, 1 GByte DDR3 + 512Mb DDR3 on the optional DIMM Module
Local Storage	32Gb NAND Flash, On board SD Card socket, SATA drive I/F
Additional	RTC (Real Time Clock), IP Protection Chip for Licensing S/W
Power Supply	+3.3VDC@ 1A, +5VDC@1.5A (+5VDC@2.5A with optional DIMM Module)
LEDs	4 Video Input Status LEDs, 1 HD-SDI Video Input Status LED, 3 System Status LEDs

ENVIRONMENTAL

Form Factors	PC104+ Main Board & Optional DIMM 205P DSP Module
Operating Temp.	Industrial: -40°C to 70°C (-40°F to 158°F)

WEIGHT	110gr (3.9 oz)
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DIMENSIONS	L: 4.55 inches [115mm] W: 3.77 inches [100mm] H: 3.77 inches [100mm]
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