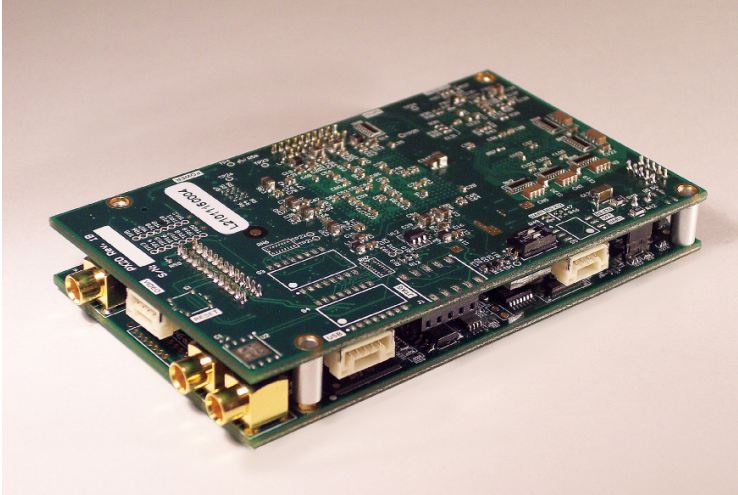


Discovery 60 PCB Image Processor



The Discovery 60 PCB uses an FPGA in addition to dual-core processor technology to provide a powerful FPGA+DSP platform capable of executing a complete suite of real-time video image-processing functions simultaneously. Like the Discovery 40 PCB, the Discovery 60 PCB includes an ARM-9 general-purpose microprocessor running embedded Linux for robust user-interface and control implementations. The Discovery 60 PCB has the same footprint as the Discovery 40 PCB.

Like the Discovery 40 PCB, the The Discovery 60 PCB runs applications firmware from Pixion Imaging's *Discovery Algorithm Suite* to provide an exceptionally powerful a turn-key video image-processing system for military, homeland security, surveillance, scientific, and other high-end imaging applications.

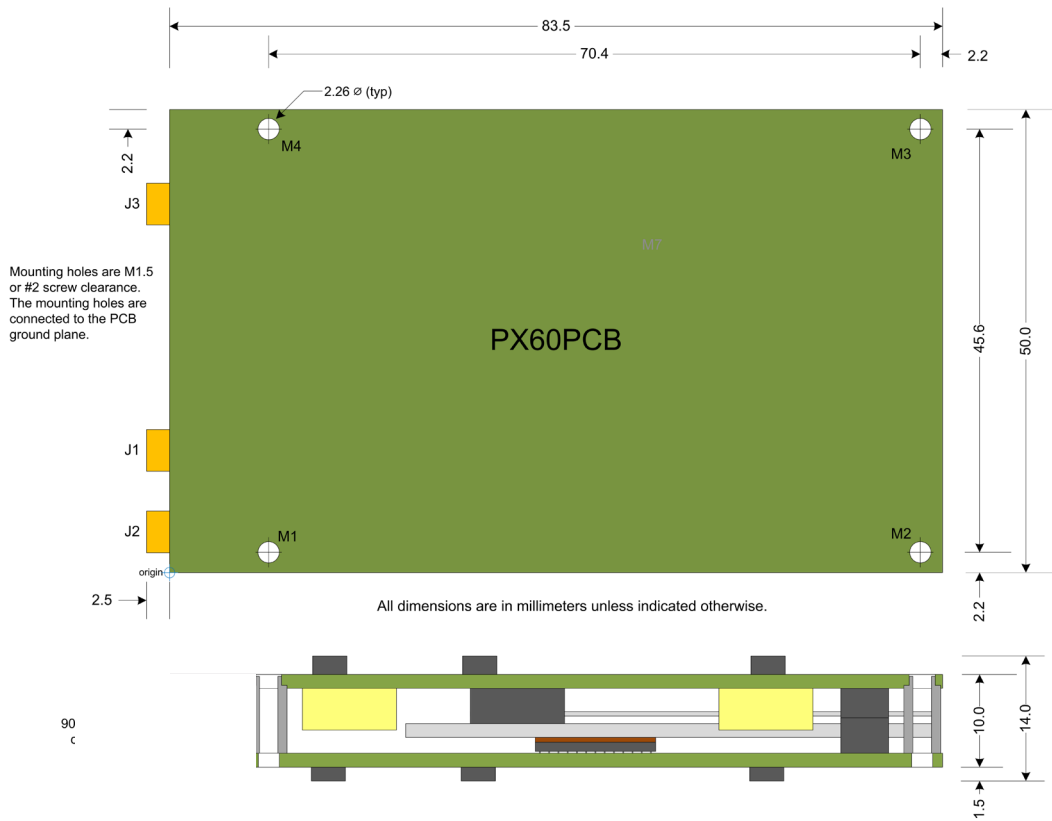
Specifications

Video inputs	
Video In	75 ohm, composite (CVBS, RS-170), 1 V p-p, NTSC or PAL format
Video outputs	
Video Out	Composite (CVBS, RS-170), 1 V p-p into 75 ohm load, video format same as "Video In" signal
Video loop-through	Composite (CVBS, RS-170), 1 V p-p into 75 ohm load, buffered "Video In" signal
Video bypass feature	
Video-signal-processing bypass (solid-state switching), software-controlled or hardware external control (logic-level); default mode on power-down or watchdog failure is bypass	Buffered output
Alternate power input	
3.3 to 5.5 VDC, 40 mA maximum	Alternative power input to maintain bypass and loop-through amplifiers if main power source fails
Control ports	
Serial port	RS-232 or +3.3 V UART, Switch-selectable
GPIOs	
Logic-level I/O (each line programmable as input or output)	6 lines, 1.8 V logic levels, unbuffered (external buffers and ESD protection may be required)
Power requirements	
Supply voltage	5.0 VDC \pm 10%
Load regulation	\pm 5%, maximum ripple 50 mV p-p, transient response 2 ms for 50% load change
Line regulation	\pm 5%

Supply current	650 mA typical (at 5.0 VDC)
Environmental	
Ambient temperature range, operating [1]	0 to 70 °C standard
Ambient temperature range, storage	-60 to 85 °C
Humidity	3% – 90%, non-condensing
Dimensions	
H x W x D (with MCX extension, 90-deg MCX connectors)	50.0 x 86 x 14.0 mm
Weight (with MCX extension, 90-deg MCX connectors)	67 g

Software
Region of interest - Selects region of video to be processed
Brightness control - Dynamic range control for adjusting the balance between dark and light areas
Power contrast - Sharpens features in low contrast areas and increases the difference between the light and dark portions for each feature
Dehazing - Color recovery and haze (rain, fog, smoke, dust, murky water) removal
Noise reduction - Removes noise by frame averaging
Motion adaptive noise reduction - Removes noise in stationary features and leaves moving features unprocessed so the don't disappear
Gamma correction - Controls brightness, similar to the brightness function on a TV or computer monitor

Mechanical drawing





For more information

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