

SOFTHARD

MH family

Trigger Connector Specification

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2 Revision History

Revision	Date	Who	What
0.10	07.12.2011	SL	Initial draft created

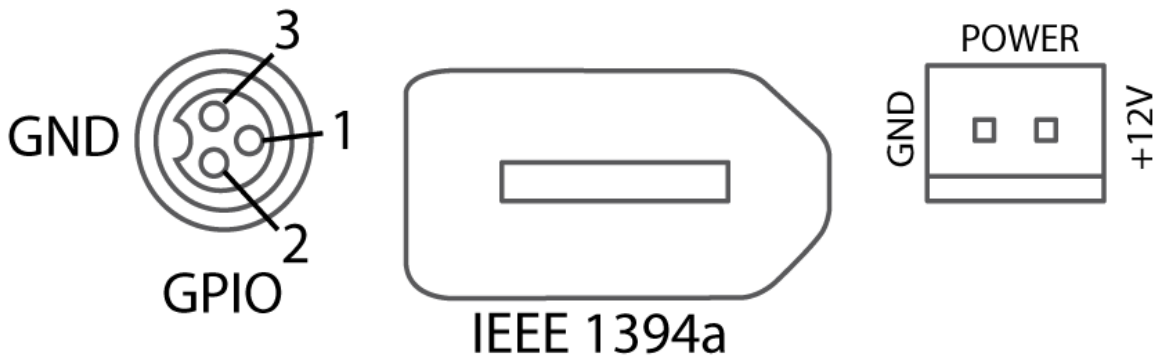
3 Description

The document describes trigger connector of MH family of cameras. Connector provides signals required for camera synchronization.

4 Connector type and location

Connector mounted on the camera PCB is: SR38-4R-3S, or equivalent:

Schematically connector location and pin numbering shown on the image below:



5 Signal descriptions and parameters

5.1 Signal Table

Pin	Name	description	Function
1	GND	Ground	Signal Ground
2	GX2	Strobe Output	Output to trigger flash, or other use
3	GX1	Trigger Input	Input to Trigger exposure

5.2 Signal description

5.2.1 Ground

This signal connected to the internal signal ground

5.2.2 GX2 – Strobe Output

This pin connected to the FPGA output via serial resistor of 1K Ω . No additional ESD protection. Normal signal functionality is to represent the camera busy state. During the exposure and readout time the signal is low and it is high all other time.

5.2.3 GX1 – Trigger Input

This pin connected to the FPGA input via serial resistor of 1K Ω . No additional ESD protection. Normal signal functionality is to start the acquisition in triggering modes on signal edge. Software can select either positive or negative edge for triggering.

5.3 Electrical parameters

5.3.1 GXn DC characteristics

Parameter	Symbol	Min	Nom	Max	Units
Input voltage that indicates a Low logic level	V_{IL}	-	-	0.8	V
Input voltage that indicates a High logic level	V_{IH}	2.0	-	-	V
Input leakage current	I_L	-10	-	+10	μ A
Input voltage extremes to avoid turning on I/O protection diodes	V_{IN}	-0.5	-	3.8	V
Output voltage that indicates a Low logic level	V_{OL}			0.4	V
Output voltage that indicates a High logic level	V_{OH}	2.9			V
Output current condition under which V_{OL} is tested	I_{OL}		0.4		mA
Output current condition under which V_{OH} is tested	I_{OH}		-1.0		mA