

# SOFTHARD

MH family

Trigger Connector Specification

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# 1 Table of Contents

<b>1</b>	<b>Table of Contents</b> .....	<b>2</b>
<b>2</b>	<b>Revision History</b> .....	<b>3</b>
<b>3</b>	<b>Description</b> .....	<b>4</b>
<b>4</b>	<b>Connector type and location</b> .....	<b>4</b>
<b>5</b>	<b>Signal descriptions and parameters</b> .....	<b>4</b>
5.1	Signal Table .....	4
5.2	Signal description .....	5
5.2.1	<i>Ground</i> .....	5
5.2.2	<i>GX2 – Strobe Output</i> .....	5
5.2.3	<i>GX1 – Trigger Input</i> .....	5
5.3	Electrical parameters.....	5
5.3.1	<i>GXn DC characteristics</i> .....	5

## 2 Revision History

Revision	Date	Who	What
0.10	07.12.2011	SL	Initial draft created

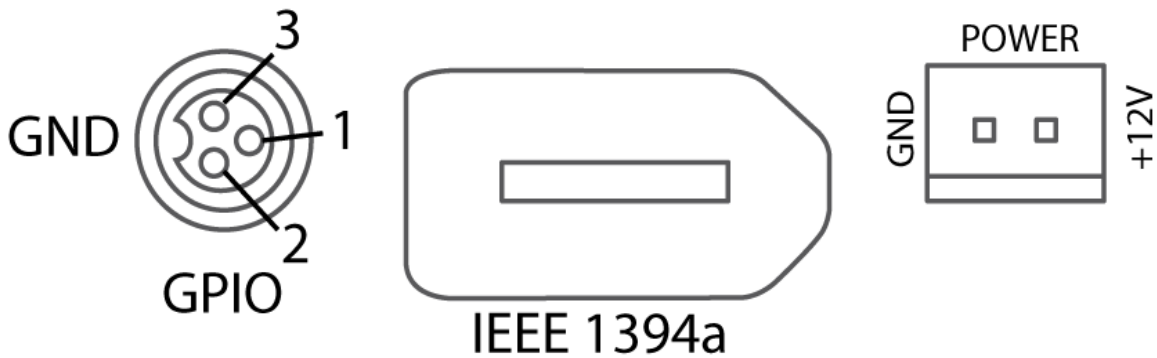
### 3 Description

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 $\Omega$ . 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 $\Omega$ . 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	$\mu$ 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