

SDI-MP1010-GM-60P-M-RA

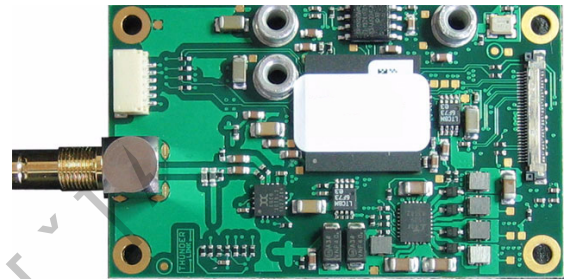
3G/HD-SDI Output Video Transceiver

This is a family of small form factor modules for formatting and converting generic digital video streams to standard compliant formats. Different interface standards are supported from the transmitter side including DVI/HDMI, 3G-SDI and HD-SDI. Supported physical media are copper and fibre cables.

These modules connect to the digital video interface of Tamron block cameras and support several progressive and interlace HDTV formats. SDI-MP1010-GM-60P-M-RA outputs serial digital video (SDI) up to 1080p60.

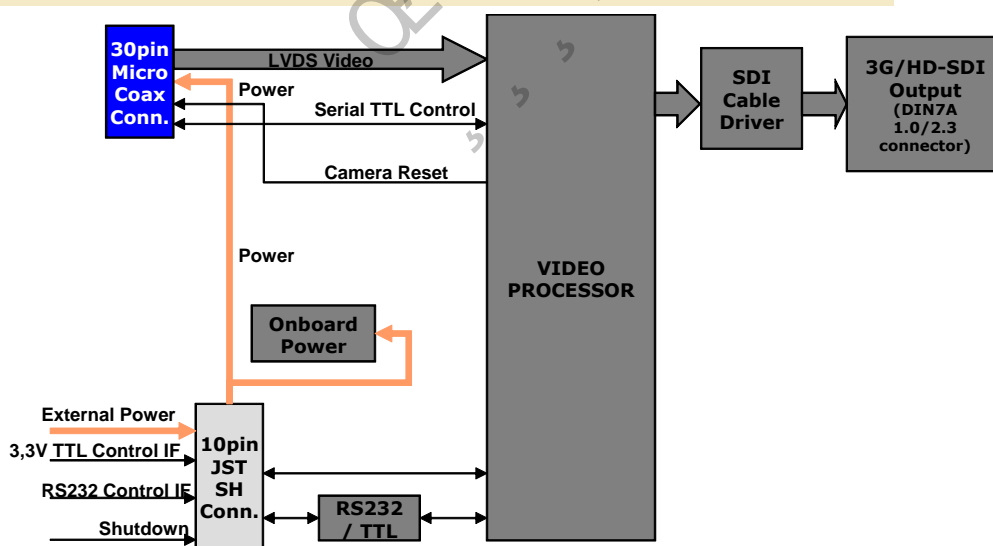
SDI-MP1010-GM-60P-M-RA Features

- + Supports Tamron MP1010M-VC ultra compact camera module
- + Digital 4channel LVDS video input from camera
- + 1080p output at 60Hz, 50Hz, 30Hz and 25Hz
- + 720p output at 60Hz and 50Hz
- + 1080i output at 60Hz and 50Hz
- + Full automatic video input standard detection
- + 3G/HD-SDI output
- + SDI output compliant to SMPTE ST424M Level A and ST292M
- + Native digital signal processing chain for best image quality
- + RS232 and TTL level serial control interface
- + Supply voltage 12V DC regulated
- + Board Side Mount



**3G/HD-SDI
Output
1080p60
1080p50**

Block Diagram SDI-MP1010-GM-60P-M-RA



Order Codes:

SDI-MP1010-GM-60P-M-RA

Right angle MCX connector (M-RA)

Connector Options (MOQs apply)

- D-ST Straight DIN7A
- H-ST Straight HDBNC
- H-RA Right angle HDBNC
- M-ST Straight MCX
- M-RA Right angle MCX

Specification Camera Interface

INPUTS:

DATA	4 CH. LVDS digital video (from camera)
CLOCK	LVDS (from camera)
CONTROL Rx	3.3V TTL serial control interface

OUTPUTS:

CONTROL Tx	3.3V TTL serial control interface
RESET	3.3V TTL, active low

Power and Environment

POWER INPUT:

9.5V to 12V DC regulated (12.5V DC absolute maximum)
 Power consumption (MP1010M-VC + SDI-MP1010-GM-60P-M-RA) 4.5W (cam motors inactive)
 Power consumption SDI-MP1010-GM-60P-M-RA: 1.5W, 125mA @ 12V DC (typ.)
 Power consumption value conditions:
 Power 12V DC, video mode 1080p60
 Ambient temperature +25°C/77°F
 Humidity 30%

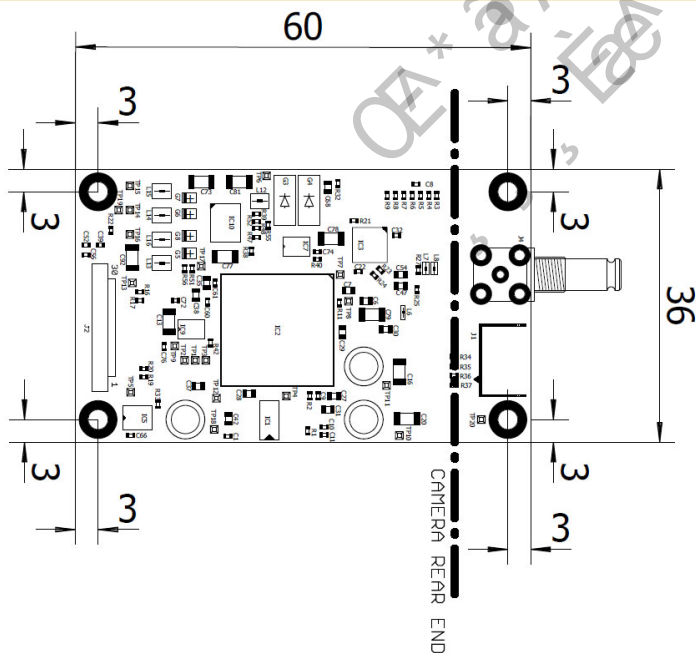
OPERATING CONDITIONS:

Ambient temperature (min/max): -5°C/+60°C = 23°F/140°F
 Humidity: 20%-80%

STORAGE CONDITIONS:

Temperature (min/max): -20°C/+60°C = -4°F/140°F
 Humidity: 20%-80%

Board Mechanical



All dimensions in mm.

Maximum top component height = 3.0mm
(without coaxial connector)

Maximum bottom component height = 3.0mm

PCB thickness = 1.56mm

Outer mounting hole drill diameter 2.6mm

Outer mounting hole land diameter 5.2mm

SAFETY NOTES:

All digital inputs are specified for maximum voltages of 3.3V (+5%).

Pin Assignment of I/O Connectors

J1 JST BM06B-SRSS-TB

Do not connect

J2 KEL USL00-30L-A

Camera IF, use supplied 30wire micro coaxial cable only

J3 JST BM10B-SRSS-TB

Power and RS232/TTL Control IF

- 1 DC IN
- 2 DC IN
- 3 GND
- 4 GND
- 5 Reset / Shut Down, pull to GND to reset/shut down SDI-MP1010-GM-60P-M-RA and camera*
- 6 GND
- 7 TXD_TTL (serial IF transmit, 3.3V) and/or temperature alert output
- 8 RXD_TTL (serial IF receive, 3.3V)
- 9 RXD_232 (serial IF receive, RS232 level)
- 10 TXD_232 (serial IF transmit, RS232 level)

*for reset, pull to GND for one second or longer

Note: Connect RS232 or TTL serial interface, not both

J4 75 ohms coaxial jack

Default type: MXC-Right Angle

3G/HD-SDI output

Onboard Mode Switches

Switch	OFF (default)	ON
1 - factory use	Keep OFF	--
2 - factory use	Keep OFF	--
3 - factory use	Keep OFF	--
4 - factory use	Keep OFF	--

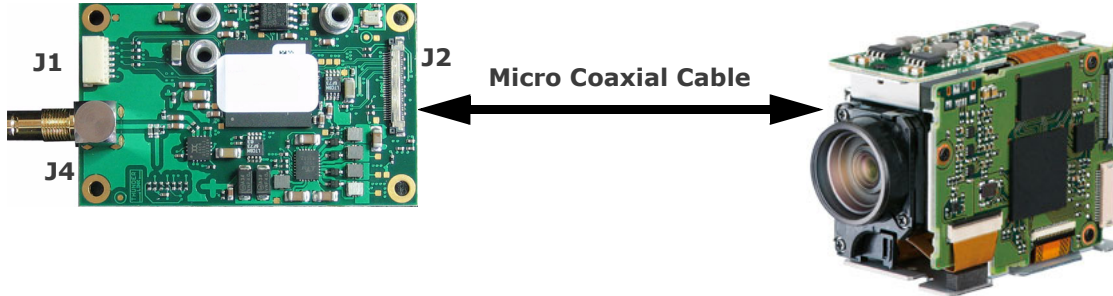
Table 1: Onboard Switch Functions

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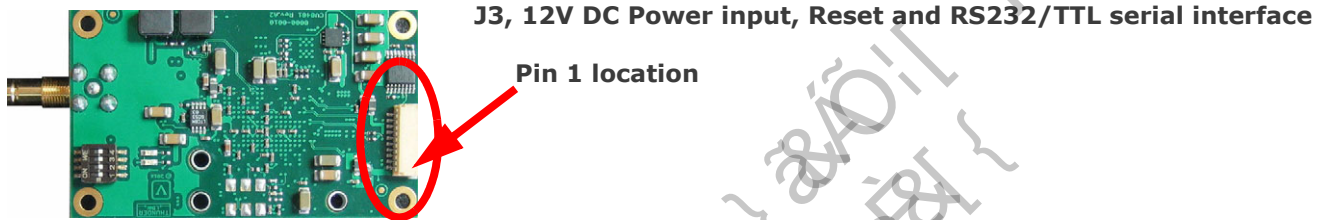
Connection Diagram

SDI-MP1010-GM-60P-M-RA top side

MP1010M-VC Camera (sold separately)

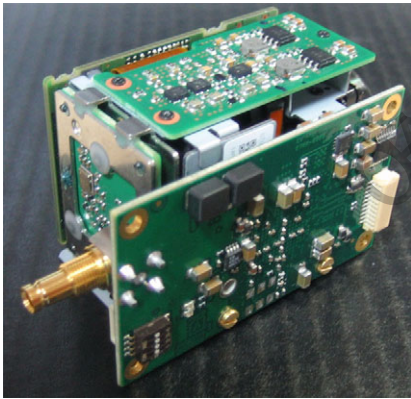


SDI-MP1010-GM-60P-M-RA bottom side

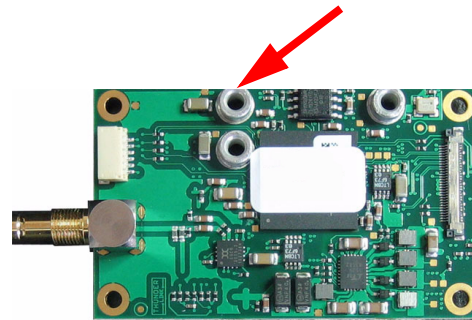


SDI-MP1010-GM-60P-M-RA Side Mount on MP1010M-VC Camera

SDI-MP1010-GM-60P-M-RA can be directly mounted on side of camera (fitting screws included). PCB has three metal spacers assembled.



Metal spacer for side mount



SAFETY NOTES: All digital inputs are specified for maximum voltages of 3.3V (+5%).

Reset Operation

When applying power to SDI-MP1010-GM-60P-M-RA, the camera is also automatically powered. During power up all functions on the video transceiver board, are reset and initialized.

During operation a manual reset can be applied by pulling pin no. 5 of connector J1 to 0V (GND). This resets also the camera.

Camera Control

Camera control can be done by connecting a PC or CCU via RS232 or serial 3.3V TTL interface to SDI-MP1010-GM-60P-M-RA. The interface is passed through to the camera that all VISCA protocol based software can be used.

Cable Kit Contents

TLCK-B cable kit:

External connecting cables:

1 pcs. - 10pin flying leads cable for power and control (RS232/TTL), lead length = 15cm / 5.9inch

Camera connecting cables:

1 pcs. - 30pin KEL USL type micro coaxial cable, connector on both sides, length = 20cm / 7.8inch

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