



Interfacing an Analog Camera  
with a DOMINO Board

## ***Pacific FAB9150A***

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## Main characteristics

<b>Sensor</b>	Area-scan, monochrome
<b>Image size</b>	1617 (H) x 1220 (V) Pixels
<b>Line rate</b>	Line per second
<b>Frame rate</b>	15 frames per second
<b>Last update</b>	24 Nov 2011

## Configurations

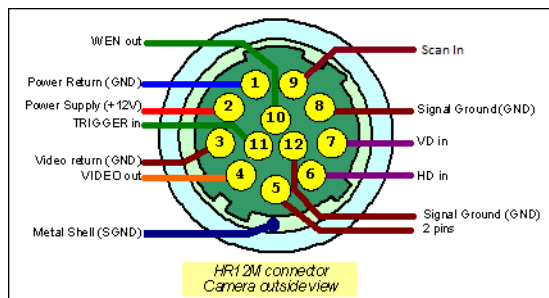
Configuration	CAM file	Description
<b>P15RA</b>	FAB9150A_P15RA.cam	Asynchronous reset, Grabber controls exposure, Analog synchronization + WEN.
<b>P15SA</b>	FAB9150A_P15SA.cam	Progressive Free-Run Scanning, Analog synchronization.

## Compatible Cables

Configuration	Cable name	Designator	Usage
P15SA, P15RA	Single Channel RGC wo Pixel Clock	A15-C22-XX	Asynchronous reset Single HD15M connector

## Connection Information

### HD15F Pin-out



Valid for all configurations

### Signal Mapping

#### Cable "Single Channel RGC wo Pixel Clock"


Pin name @ Camera	Pin name @ Board	Configuration		Usage
		P15SA	P15RA	
VIDEO out	V1+	✓	✓	Analog channel
VIDEO return GND	V1-	✓	✓	
Power Supply +12 V	+12 V	✓	✓	Power supply
Power Return GND	PGND	✓	✓	
HD in	HIO	-	-	Horizontal synchronization
VD in	VIO			Vertical synchronization
TRIGGER in	RST	-	✓	Asynchronous reset
Signal Return GND	GND	✓	✓	Signal return
Signal Ground GND	Metal Shell SGND	✓	✓	EMC shield
WEN OUT	Gate	-	✓	Gate pulse

Refer to the camera cable A15-C22-xx for additional useful manufacturing information.


## Camera Setup

### DIP Switch

Valid for configuration P15SA

Look	Switch	Setting	Effect
 <p>OFF ON</p> <p>1 2 3 4 5 6 7 8 9 10</p>	1	ON/OFF	Electronic shutter switches: Refer to "Establishing exposure time"
	2	ON/OFF	
	3	ON/OFF	
	4	OFF	Shutter mode settings: Normal shutter mode
	5	OFF	
	6	OFF	Scan mode: Full frame
	7	OFF	
	8	OFF/ON	Gain: fix or manual
	9	OFF	Control scan mode via Pin 9: Invalid
	10	OFF	DH/VD Input and Output setting: Output

Valid for configuration P15RA

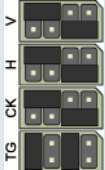
Look	Switch	Setting	Effect
 <p>1 2 3 4 5 6 7 8 9 10</p>	1	ON/OFF	Irrelevant
	2	ON/OFF	
	3	ON/OFF	
	4	ON	Shutter mode setting: Pulse width trigger shutter mode 1
	5	OFF	
	6	OFF	Scan mode: Full frame
	7	OFF	
	8	OFF/ON	Gain: fix or manual
	9	OFF	Control scan mode via Pin 9: Invalid
	10	OFF	DH/VD Input and Output setting: Output

**Establishing exposure time for P15SA**

Switch 1	Switch 2	Switch 3	Exposure
OFF	OFF	OFF	Shutter is OFF (66.7 ms)
OFF	OFF	ON	Exposure time is 9.74 ms
OFF	ON	OFF	Exposure time is 3.94 ms
OFF	ON	ON	Exposure time is 1.94 ms
ON	OFF	OFF	Exposure time is 952 $\mu$ s
ON	OFF	ON	Exposure time is 455 $\mu$ s
ON	ON	OFF	Exposure time is 207 $\mu$ s
ON	ON	ON	Exposure time is 83 $\mu$ s

## Board Jumpers Setup

The Domino Iota and Domino Alpha 2 jumper blocks should be configured as follows (valid for all configurations). Settings for the jumper block facing the connector the camera is linked to

Jumper block	MultiCam parameter	Value	Meaning
	JumperV	TTL	The pin 4 (VIO) and pin 5 (EXP) of the connector feeding the channel can be used as input or output in TTL format.
	JumperH	TTL	The pin 14 (HIO) and pin 15 (GATE) of the connector feeding the channel can be used as input or output in TTL format.
	JumperCK	ZLANE	Pin 9 and pin 10 of the channel connector are used as a third video lane borrowed to the Z connector.
	JumperL1	DT	The video lane 1 is sensed as a differential 75 W terminated analog signal applied at pin 1 (V1+) and pin 2 (V1-).
	JumperL2	DT	The video lane 2 is sensed as a differential 75 W terminated analog signal applied at pin 11 (V2+) and pin 12 (V2-).