



Interfacing an Analog Camera
with a DOMINO Board

CIS VCC-G20X30T1

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Main characteristics

Sensor	Area-scan, monochrome
Image size	1020 (H) x 768 (V) Pixels
Line rate	1000 Line per second
Frame rate	30 frames per second
Last update	14 Nov 2011

Configurations

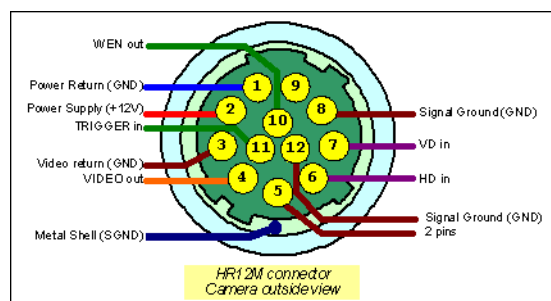
Configuration	CAM file	Description
P30RA	VCC-G20X30T1_P30RA.cam	Asynchronous reset, Grabber controls exposure, Analog synchronization + WEN.
P30SA	VCC-G20X30T1_P30SA.cam	Progressive Free-Run Scanning, Analog synchronization.
P30SA_D	VCC-G20X30T1_P30SA_D.cam	Progressive Free-Run Scanning, Analog synchronization + WEN.

Compatible Cables

Configuration	Cable name	Designator	Usage
P30SA P30SA_D P30RA	Single Channel RGC wo PxClk	A15-C22-XX	Asynchronous reset Single HR12M connector

Connection Information

HD15F Pin-out



Valid for all configurations

Signal Mapping

Cable "Single Channel RGC wo PxClk "


Pin name @ Camera	Pin name @ Board	Configuration			Usage
		P30SA	P30SA_D	P30RA_D	
VIDEO out	V1+	✓	✓	✓	Analog channel
VIDEO return GND	V1-	✓	✓	✓	
Power Supply +12 V	+12 V	✓	✓	✓	Power supply
Power Return GND	PGND	✓	✓	✓	
HD in/out	CC1/HIO	-	-	-	Horizontal synchronization
VD in/out	CC3/VIO		✓		Vertical synchronization
TRIGGER in	CC5 / RST		-	✓	Asynchronous reset
WEN Out	CC2 / GATE			✓	Gate pulse
Signal Ground GND	GND	✓	✓	✓	Signal return
Metal Shell SGND	Metal Shell SGND	✓	✓	✓	EMC shield

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

Camera Setup

DIP Switch

Valid for configuration P30SA, P30SA_D


Look	Switch	Setting	Effect
	1	ON/OFF	ee Establishing Exposure Time
	2	ON/OFF	
	3	ON/OFF	
	4	OFF	Binning Partial Setting Mode: Full Frame Scan
	5	OFF	Scanning Mode: Normal Operation
	6	OFF	
	7	OFF	
	8	ON/OFF	Gain Setting: Fix 0dB / Manual. As requested by the application
	9	OFF	Binning Partial Setting Mode: Full Frame Scan
	10	OFF	HD/VD Input Output: HD/VD Output

Establishing Exposure Time

Valid for configurations P30SA, P30SA_D

Switch 1	Switch 2	Switch 3	Exposure
OFF	OFF	OFF	Shutter is OFF
OFF	OFF	ON	Exposure time is 1/200 s
OFF	ON	OFF	Exposure time is 1/500 s
OFF	ON	ON	Exposure time is 1/1000 s
ON	OFF	OFF	Exposure time is 1/2000 s
ON	OFF	ON	Exposure time is 1/4000 s
ON	ON	OFF	Exposure time is 1/8000 s
ON	ON	ON	Exposure time is 1/20000 s

Valid for configuration P30RA

Look	Switch	Setting	Effect
	1	ON/OFF	Irrelevant
	2	ON/OFF	
	3	ON/OFF	
	4	OFF	Binning Partial Setting Mode: Full Frame Scan
	5	ON	Scanning Mode: Trigger Operation by Pulse Width Setting (SYNC Reset)
	6	ON	
	7	OFF	
	8	ON/OFF	Gain Setting: Fix 0dB / Manual. As requested by the application
	9	OFF	Binning Partial Setting Mode: Full Frame Scan
	10	OFF	HD/VD Input Output: HD/VD Output

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 Ω terminated analog signal applied at pin 1 (V1+) and pin 2 (V1-).
	JumperL2	DT	The video lane 2 is sensed as a differential 75 Ω terminated analog signal applied at pin 11 (V2+) and pin 12 (V2-).