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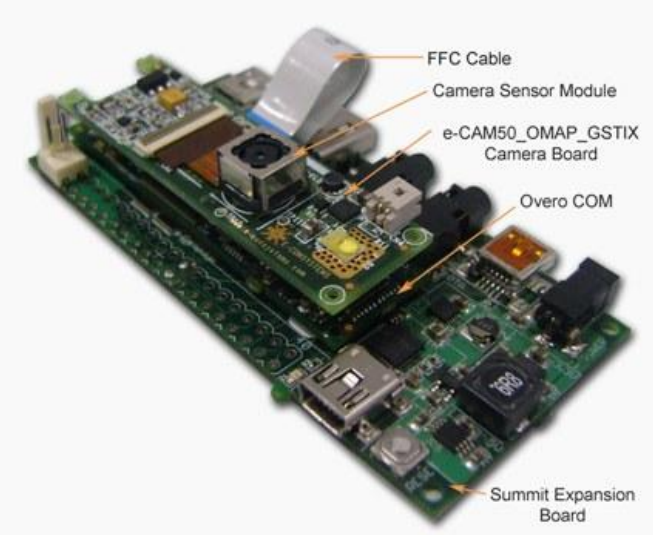
e-CAM50_OMAP_GSTIX



User Manual

Revision 1.2
Tuesday, July 19, 2011

Customer/ Partner

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e-CAM50_OMAP_GSTIX

1 REVISION HISTORY

Rev No	Date	Major Changes	Author
1.0	Nov 10, 2010	Initial draft version	S.Raghavendran
1.1	Nov 10, 2010	Updated E-con cable	S.Raghavendran
1.2	Jul 19, 2011	Updated Picture &Connector pin out details	A.Shifana

2 INTRODUCTIONS

The e-CAM50_OMAP_GSTIX is an add on board from e-con Systems which works plug and play with every Gumstix Overo computer-on-module (COM). This board provides the still capture upto resolution of 5MP.

3 SCOPE

The scope of this document is limited to the attachment of the e-CAM50_OMAP_GSTIX with PALO Board from Gumstix.

The reader is assumed to have knowledge about gumstix processor board OVERO and it is reference Palo board its connector details, working of the same.

4 Attachment of e-CAM50_OMAP_GSTIX board with PALO Board

I. e-CAM50_OMAP_GSTIX front board View

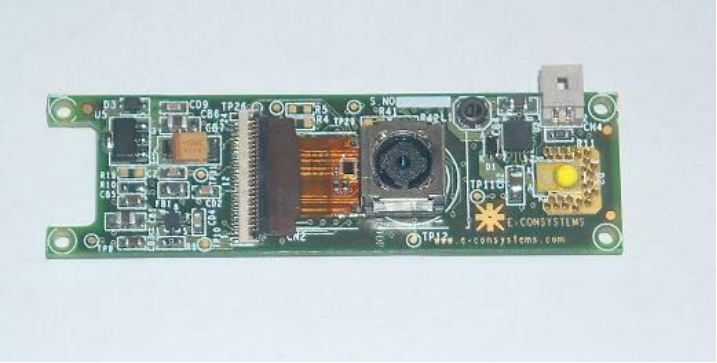

Fig-1

II. e-CAM50_OMAP_GSTIX Rear board View

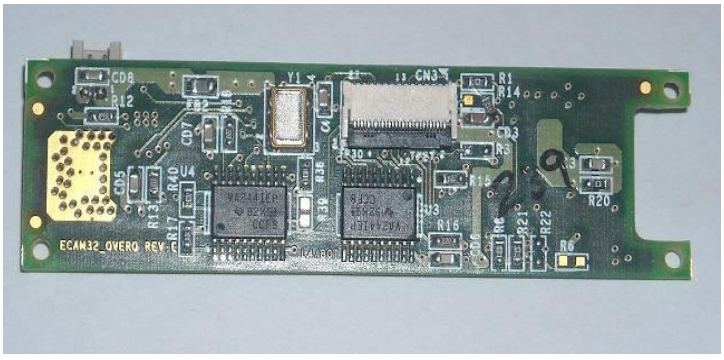

Fig-2

III. PALO Board – View

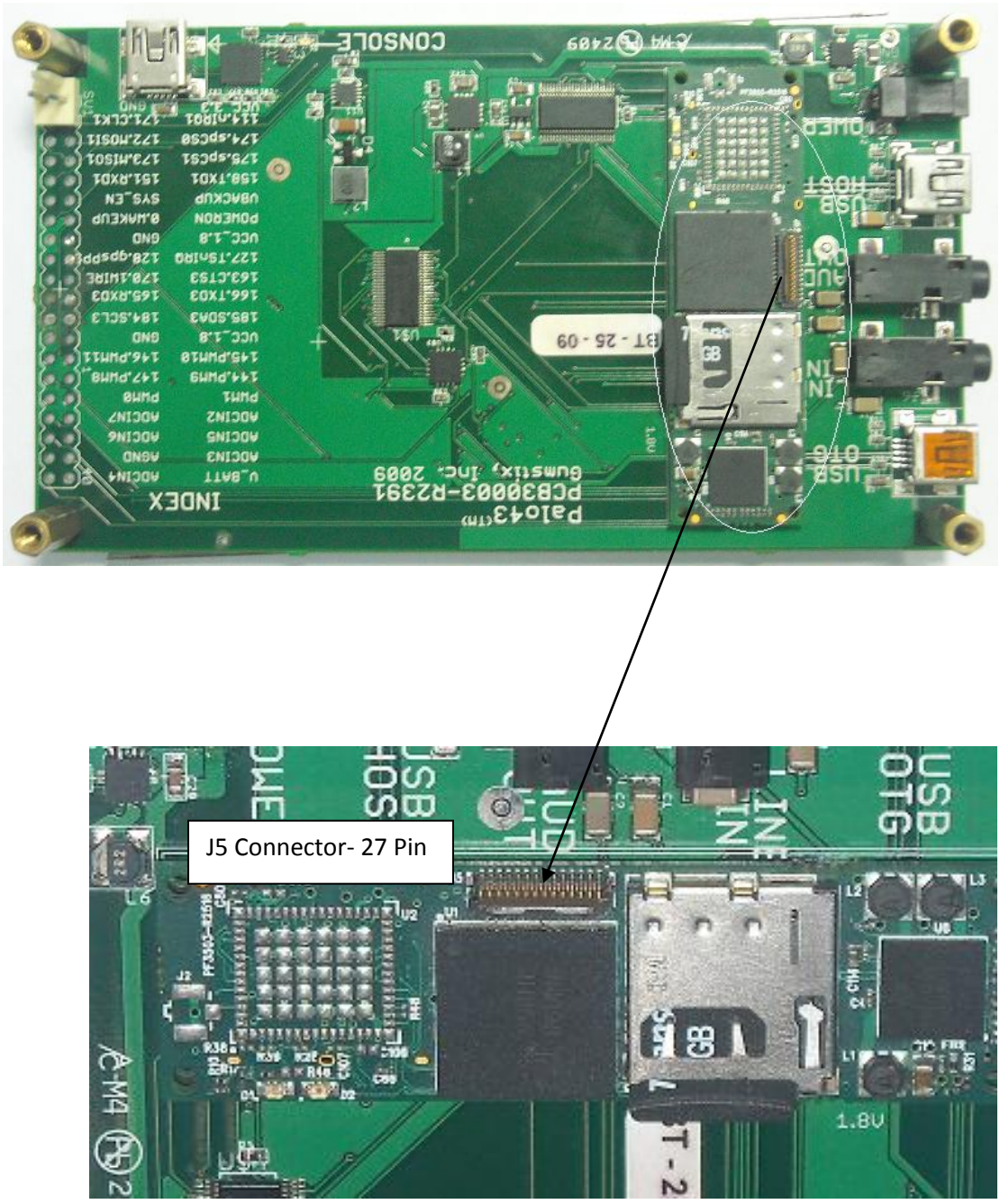

Fig-3

IV. Interface cable

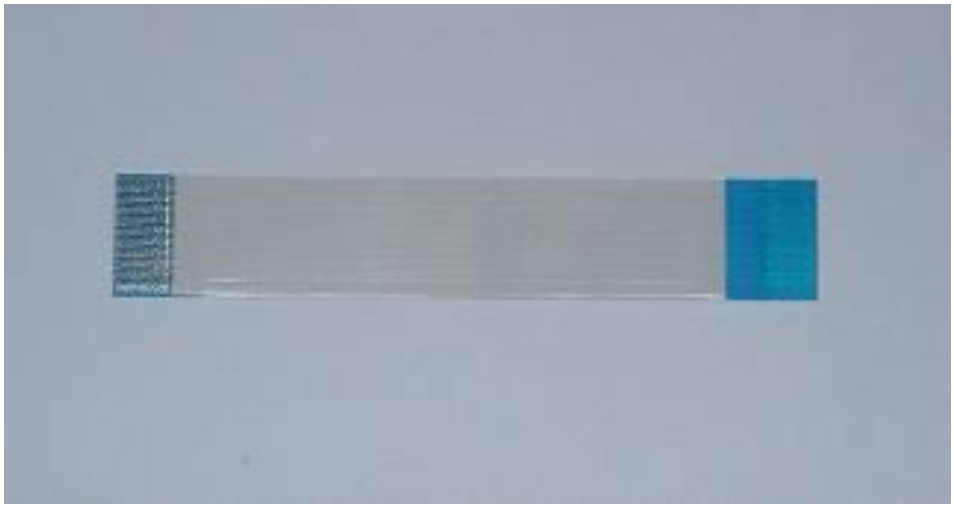

Fig-4

V. Attachment of Interface cable to PALO Board

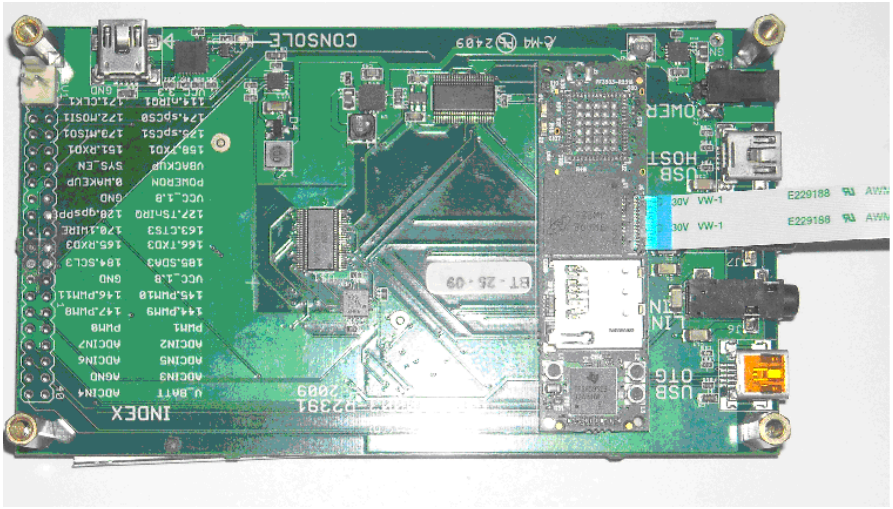

Fig-5

VI. Attachment of Interface cable to e-CAM50_OMAP_GSTIX

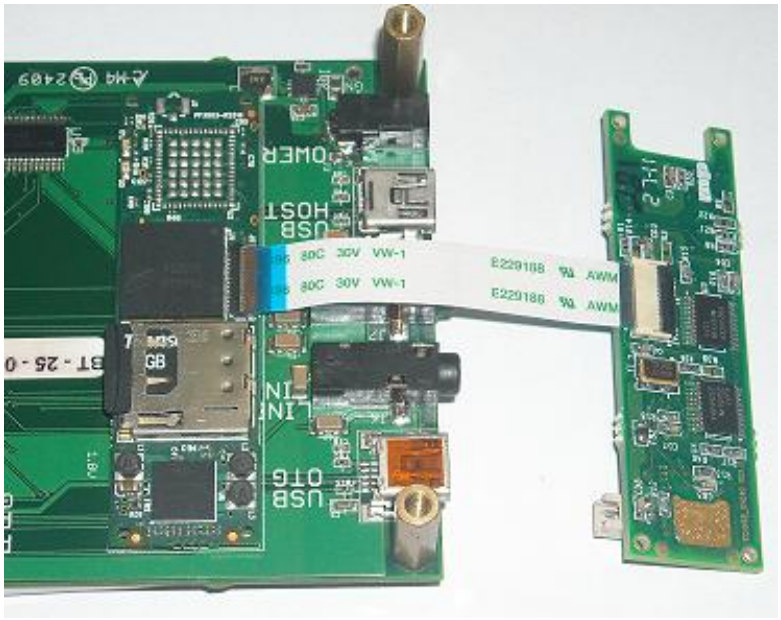

Fig-6

VII. Power cable

Fig-7

VIII. Attachment of Power cable

Connecting Power cable to PALO board

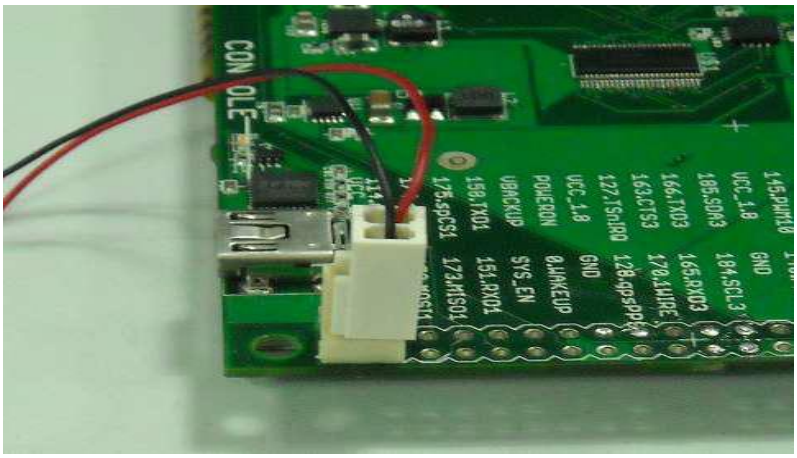

Fig-8

IX. Connecting Power cable to e-CAM50_OMAP_GSTIX Board

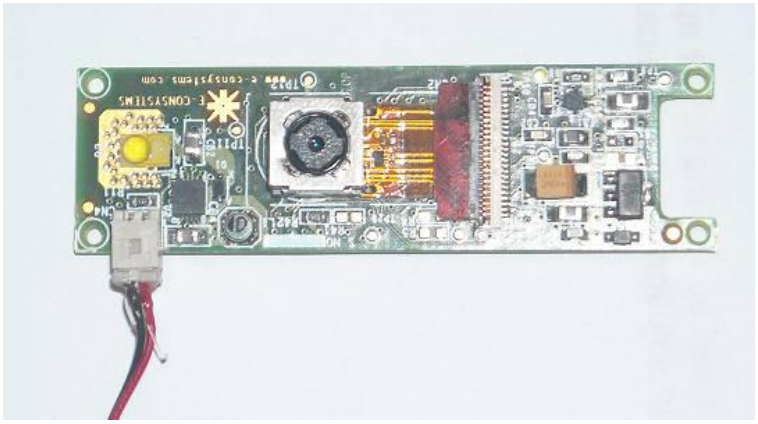

Fig-9

X. Attachment of Power cable and Interface cable

Fig-10

5 Accessories required

1. PALO board from gumstix – 1no
2. Overo processor board -1no
4. Power cable – 1 no
5. 2 Pin male connector- 1 no
4. Interface Cable -1 no
5. SD Card- 1 no

6 Mechanical requirements

The camera board fixing should be fixed as per the target application of customer requirements. econ is not recommending any specific solution for mechanical fixing.

7 Connector Pin out Details

a. PALO Board Connector Pin out (J5- 27 Pin)

J5 Pin No	Signal Name	Description
1	GPIO94_CAM_HS	Camera horizontal Synchronization
2	GPIO95_CAM_VS	Camera vertical Synchronization
3	GPIO96_CAM_XCLKA	Camera Master clock
4	GPIO97_CAM_PCLK	Camera pixel clock
5	GPIO98_CAM_FLD	Camera Reset
6	GPIO99_CAM_D0	Camera Data D0
7	GPIO100_CAM_D1	Camera Data D1
8	GPIO101_CAM_02	Camera buffer Data D2
9	GPIO102_CM_D3	Camera buffer Data D3
10	GPIO103_CIF_DD04	Camera buffer Data D4
11	GPIO104_CIF_DD05	Camera buffer Data D5
12	GPIO105_CAM_D6	Camera buffer Data D6
13	GPIO106_CIF_DD07	Camera buffer Data D7
14	GPIO107_CIF_DD08	Camera buffer Data D8
15	CPIO108_CIF_DD09	Camera buffer Data D9
16	GPIO109_CAM_D10	Camera Data D10
17	GPIO110_CAM_D11	Camera Data D11
18	GPIO111_CAM_XCLKB	Clock signal
19	GPIO167_CAM_WEN	Power down mode enable active high
20	GPIO126_CAM_STROBE	Camera Strobe signal
21	VDDS_1.8	Power
22	SYSEN	System Enable

23	GND	Ground Signal
24	VCC3P3	Power
25	GPIO63_CAM_IRQ	Camera IRQ Signal
26	GPIO184_I2C3_SCL	I2C SCL Signal
27	GPIO185_I2C3_SDA	I2C SDA Signal

b. e-CAM50_OMAP_GSTIX Board Connector Pin out (CN3-27 Pin)

CN3 Pin No	Signal Name	Description
1	OMAP_I2C_SDA	I2C SDA Signal
2	OMAP_I2C_SCL	I2C SCL Signal
3	CAM_IRQ	Camera IRQ Signal
4	VCC3P3	Power
5	GND	Ground Signal
6	SYSEN	System Enable
7	VCC_1P8	Power
8	OMAP_STROBE	OMAP Strobe signal
9	OMAP_CAM_PWDN	Power down mode enable active high
10	OMAP_XCLKB	OMAP Clock signal
11	CAM_OMAP_D11	Camera OMAP Data D11
12	CAM_OMAP_D10	Camera OMAP Data D10
13	BUF_CAM_OMAP_D9	Camera OMAP buffer Data D9
14	BUF_CAM_OMAP_D8	Camera OMAP buffer Data D8
15	BUF_CAM_OMAP_D7	Camera OMAP buffer Data D7
16	BUF_CAM_OMAP_D6	Camera OMAP buffer Data D6
17	BUF_CAM_OMAP_D5	Camera OMAP buffer Data D5
18	BUF_CAM_OMAP_D4	Camera OMAP buffer Data D4

19	BUF_CAM_OMAP_D3	Camera OMAP buffer Data D3
20	BUF_CAM_OMAP_D2	Camera OMAP buffer Data D2
21	CAM_OMAP_D1	Camera OMAP Data D1
22	CAM_OMAP_D0	Camera OMAP Data D0
23	nOMAP_CAM_RST	OMAP Camera Reset
24	CLK_PIXEL_CAM_OMAP_BUF	Camera OMAP pixel clock
25	CLK_MASTER_OMAP_CAM	Camera OMAP Master clock
26	BUF_CAM_OMAP_FV	Camera vertical Synchronization
27	BUF_CAM_OMAP_LV	Camera horizontal Synchronization

C. e-CAM50_5642_MOD camera connector Pin out (CN2 - 24 Pin)

Pin. No	Signal Name	Description
1	GND	Ground signal
2	VCC3P3	Power
3	CAM OMAP D4	Camera data output line 4
4	CAM OMAP D3	Camera data output line 3
5	CAM OMAP D5	Camera data output line 5
6	CAM OMAP D2	Camera data output line 2
7	CAM OMAP D6	Camera data output line 6
8	CLK_PIXEL_CAM_OMAP	Camera Pixel clock
9	CAM OMAP D7	Camera data output line 7
10	GND	Ground Signal
11	CAM OMAP D8	Camera data output line 8
12	CLK_MASTER_OMAP_CAM_BUF	Camera OMAP Master clock
13	CAM OMAP D9	Camera data output line 9

14	VCC1P8	Power
15	DVDD	Do not connect
16	CAM_OMAP_LV	Digital video horizontal synchronization output
17	BUF_OMAP_CAM_PWDN	Power down mode enable active high
18	CAM_OMAP_FV	Digital video vertical synchronization output
19	BUF_nOMAP_CAM_RST	Camera Reset Signal
20	OMAP_I2C_SCL	Sensor I2C SCL signal
21	VCC2P8	Power
22	OMAP_I2C_SDA	Sensor I2C SDA signal
23	GND	Ground Signal
24	SENSOR_STROBE	Camera strobe signal

d. Connector Part Numbers

Connector	Description	Manufacturer	Part Number
27 Pin PALO Board Connector (J5)	0.3mm Contact Pitch, 1mm above the board, Flexible Printed Circuit ZIF Connectors	Hirose Electric	FH26-27S-0.3SHW
27 Pin eCam50 Board Connector (CN3)	CONN FPC Double side contacts 0.30mm 27Pos Right Angled SMD	Omron	XF2B-2745-31A
24 Pin Camera Connector (CN2)	CONN FPC Double side contacts 0.50mm 24Pos Right Angled SMD	Hirose Electric	FH19SC-24S-0.5SH(05)