Serial Interfaces

CN8, CN14 *Top View*

1	-
2	Tx
3	Rx
4	GND

CN8 – Proc. Serial Port (UART3)
CN14 – EC Serial Port
CN22 – Proc. Serial Port (UART4)

SPI Interfaces

J2 – OFW SPI Flash Prog. Port !! +1.8V !!
J3 – EC SPI Flash Prog. Port

J2, J3 *Top View*

1	MISO	+3.3V	2
3	SCK	MOSI	4
5	RST#/CS#	GND	6

MISO is Master In, Slave Out
MOSI is Master Out, Slave In

This pinout is used by J2 and J3 in the laptop. These are slave connectors, allowing in-system programming (ISP) of the onboard SPI Flash ROMs. This pinout is defined by Atmel App. Note AVR910.
Note: MOSI and MISO are swapped on J2 on the A2 prototypes

Camera

CN7 *Top View*

1	Cam_PWRDN
2	PIXDATA7
3	PIXDATA6
4	PIXDATA5
5	PIXDATA4
6	GND
7	PIXDATA3
8	PIXDATA2
9	PIXDATA1
10	PIXDATA0
11	I2C_CLK
12	MCLK
13	I2C_DATA
14	+2.8V
15	+1.8V
16	PIXCLK
17	Cam_RESET
18	Cam_VSYNC
19	Cam_HSYNC
20	GND

Keyboard/Touchpad

CN18 *Top View*

1	TP_DAT
2	TP_CLK
3	GND
4	KBD_DAT
5	KBD_CLK
6	+3.3V

The keyboard and touchpad use PS/2 protocol interfaces

Main Battery

PCN1 *Top View*

1	*N/C*
2	1W_DATA

CN20 *Top View*

1	GND
2	VBAT

RTC Battery

BT1 *Top View*

1	VCC_RTC
2	GND

Internal Microphone

CN5 *Top View*

1	GND
2	INT_MIC

Speakers

CN15, CN17 *Top View*

1	+
2	-

Also used for CN24

Touchscreen

CN22 *Top View*

1	+3.3V
2	SCR_IRQ
3	SCR_SCL
4	SCR_SDA
5	GND
6	GND

Internal/External SD/MMC

CN19/CN21 *Top View*

9	SD_DATA2
1	SD_DATA3
2	SD_CMD
3	GND
4	VCC_SD
5	SD_CLK
6	GND
7	SD_DATA0
8	SD_DATA1
10	GND
TAB1	SD_CD#
TAB2	GND
TAB3	SD_WP

The SD connector pins are not numbered sequentially. In addition, two of the signal pins (TAB1/TAB3) appear to be mounting tabs along the edge.

Backlight

CN2 *Top View*

1	+17V
2	LED1
3	LED2
4	LED3

LCD

CN1 *Top View*

1	VCOM
2	VCOM
3	-7V
4	+9.6V
5	GND
6	GMA10-2
7	GMA8-2
8	GMA6-2
9	GMA5-2
10	GMA3-2
11	GMA1-2
12	GND
13	+1.8V
14	BD00
15	BD01
16	BD10
17	BCLK
18	BREV
19	BD11
20	BD20
21	BD21
22	BSTH
23	BTP1
24	BPOL
25	VCOM
26	+9.6V
27	GND
28	GMA10-1

CN1 (cont.)

29	GMA8-1
30	GMA6-1
31	GMA5-1
32	GMA3-1
33	GMA1-1
34	GND
35	+1.8V
36	FD00
37	FD01
38	FD10
39	FCLK
40	FREV
41	FD11
42	FD20
43	FD21
44	FSTH
45	FTP1
46	FPOL
47	VCOM
48	XAO
49	OE
50	CKV
51	STV
52	+1.8V
53	-7V
54	+18V
55	GND

WLAN Card

CN10 *Top View*

1	GPIO4	+3.3V	2	
3	BT_PRIORITY	GND	4	
5	WL_ACTIVE	+1.8V	6	
7	BT_STATE	TRST#	8	
9	GND	TMS_CPU	10	
11	-	TCK	12	
13	-	TDO	14	
15	GND	TDI	16	
	key			
17	SD_CD	GND	18	
19	GND	PD#	20	
21	SD_CLK	RESET#	22	
23	GND	+1.8V	24	
25	SD_CMD	GND	26	
27	SD_DAT0	+1.8V	28	
29	SD_DAT1	-	30	
31	SD_DAT2	-	32	
33	SD_DAT3	GND	34	
35	GND	USB-	36	*USB supplied but not used*
37	GND	USB+	38	
39	+3.3V	GND	40	
41	SD_VCC	-	42	*SD_VCC is +1.8V on XO-1.75*
43	GND	LED_WLAN#	44	
45	GPIO2	-	46	
47	ECS#	SLEEP_CLK	48	
49	TR3#	GND	50	
51	ANT_SEL_N	+3.3V	52	

OLPC Debug (JTAG) Port

CN6 *Top View*

1	+3.3V
2	+1.8V
3	JTAG_SEL
4	SOC_RESET#
5	SOC_TRST#
6	SOC_TMS
7	SOC_TCK
8	SOC_TDI
9	SOC_TDO
10	GND

Marvell Debug (JTAG) Port

CN13 *Top View*

1	GND	
2	GND	
3	GND	
4	+1.8V_SOC	
5	+1.8V_SOC	
6	+3.3V_SOC	
7	+3.3V_SOC	
8	JTAG_SEL	+1.8V
9	SYS_RESET#	+1.8V
10	SOC_RESET#	+1.8V
11	UART1_TXD	!!! +1.8V levels !!!
12	UART1_RXD	!!! +1.8V levels !!!
13	GND	
14	SOC_TRST#	+1.8V
15	SOC_TMS	+1.8V
16	SOC_TCK	+1.8V
17	SOC_TDI	+1.8V
18	SOC_TDO	+1.8V
19	GND	
20	GND	