

# **UP-CHT01-A10 Board Connectors Description**

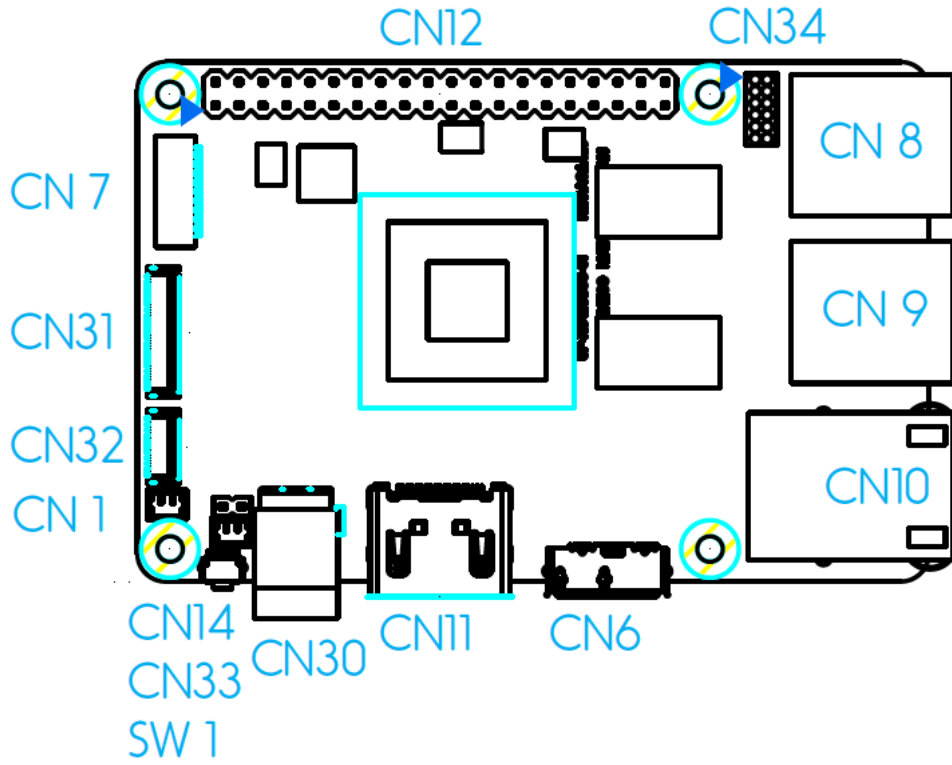
## REVISION HISTORY

Revision	Date	Comments
R. 1.0	2016/05/27	Mass production version

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## 1. UP-CHT01-A10 Board Layout



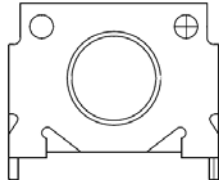
## 2. Connector, Switch References

### 2.1 Connector Index

Reference Designation	Functional Description	Connector Type
SW1	Power Button	(TF) Push Button Switch.HCH.PTS-099
CN1	RTC Battery Wafer	(TF) WAFER BOX 2P.180D.1.25mm.CATCH.1201-700-02S
CN31	MIPI DSI Connector	(TF)FPC/FFC Conn.41P.90D(F).0.6mm.Hirose.FH35C-41S-0.3SHW(50)
CN32	MIPI CSI Connector	(TF)FPC/FFC Conn.21P.90D(F).0.6mm.Hirose.FH35C-21S-0.3SHW(50)
CN6	USB 3.0 Micro Connector	(TF) Micro USB 3.0 Conn.10P.90D.B-type.ATTEND.209E-BE01
CN7	USB 2.0 1x10P Wafer	(TF)Wafer Box.10P.90D.1.0mm.CATCH.1204-700-10RM
CN8	USB Type A Connector 1	(TF)USB CONNECTOR DUAL PORT.8P.TechBest.KS-002D-ANB(2.0)-L
CN9	USB Type A Connector 2	(TF)USB CONNECTOR DUAL PORT.8P.TechBest.KS-002D-ANB(2.0)-L
CN10	RJ45 LAN Connector	(TF) RJ45.14P.90D.W/TF & LED.UDE.RB1-1A5BAK1A
CN11	HDMI Connector	(TF)HDMI CONN.19P.90D(F).A TYPE.FOXCONN.QJ51191-LFB4-7F
CN12	HAT 40 GPIO Connector	(TF) PIN HEADER.2*20P.180D.(M).2.54mm.DIP
CN14	Reset Pin Header	(TF) PIN HEADER.2*1P.180D.(M).2.0mm.DIP
CN30	DC Jack	(TF)DC Power Jack.3P.90D(M).DIP.2.0mm.COXOC.416AEWTJ02004PA
CN34	Update CPLD Header	(TF)PIN HEADER.6*2P.180D(M).1.27mm.Astron.C27-4112-206-1G-R
CN33	Power Button Wafer	(TF)WAFER BOX.2P.180D.(M).1.25mm.CATCH.1201-700-02S

### 3. Switch Settings

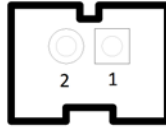
#### 3.1 SW1: Power Button



Switch Position	Functional Description
SW1 1	(default)
SW1 0	Power ON

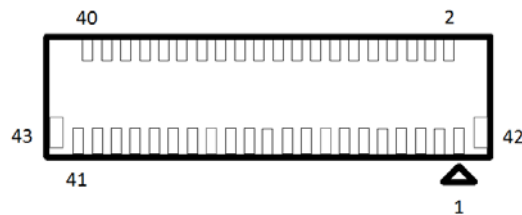
## 4. Connector Pin Assignments

### 4.1 CN1: RTC Battery Wafer



Pin	Signal Description
1	+V_COIN_BAT
2	GND

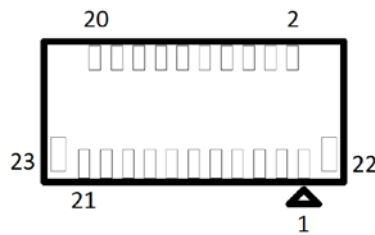
### 4.2 CN31: MIPI DSI Connector



Pin	Signal Description	Pin	Signal Description	Pin	Signal Description
1	MDSI_A_DATA1_DN	16	DDI0_TX0_DP	31	DDI0_HPD_CONN
2	MDSI_A_DATA1_DP	17	DDI0_TX0_DN	32	DDI0_BKLT_R_CTRL
3	GND	18	GND	33	DDI0_VDD_EN
4	MDSI_A_CLK_DN	19	DDI0_TX1_DP	34	DDI0_BKLT_EN
5	MDSI_A_CLK_DP	20	DDI0_TX1_DN	35	NC
6	GND	21	GND	36	NC
7	MDSI_A_DATA0_DN	22	DDI0_TX2_DP	37	+3.3V
8	MDSI_A_DATA0_DP	23	DDI0_TX2_DN	38	+3.3V
9	GND	24	GND	39	+3.3V
10	I2C2_3P3_SCL	25	DDI0_TX3_DP	40	+3.3V
11	I2C2_3P3_SDA	26	DDI0_TX3_DN	41	+3.3V
12	GND	27	GND	42	GND

13	DDI1_DDC_C_CLK	28	DDI0_AUX_DP	43	GND
14	DDI1_DDC_C_DAT	29	DDI0_AUX_DN		
15	GND	30	GND		

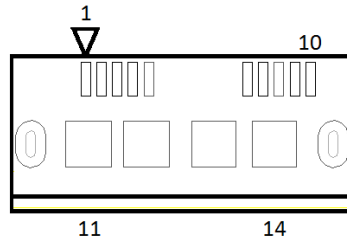
### 4.3 CN32: MIPI CSI Connector



Pin	Signal Description	Pin	Signal Description
1	GND	13	GND
2	MCSI_1_DATA1_DN	14	CAM_MCLK
3	MCSI_1_DATA1_DP	15	GND
4	GND	16	I2C2_SOC_SCL
5	MCSI_1_CLK_DN	17	I2C2_SOC_SDA
6	MCSI_1_CLK_DP	18	CAM_RST_N
7	GND	19	FLASH_RESET_N
8	MCSI_1_DATA0_DN	20	+2.8V
9	MCSI_1_DATA0_DP	21	GND_CAM
10	GND	22	GND
11	+1.2V	23	GND
12	+1.8V		

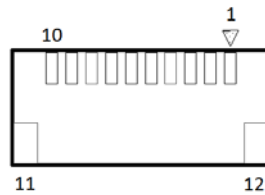
### 4.4 CN6: USB 3.0 Micro Connector





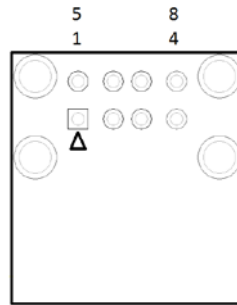
Pin	Signal Description	Pin	Signal Description
1	USB_VCC	8	GND
2	USB2_D-	9	CROSSBAR_TX1_N
3	USB2_D+	10	CROSSBAR_TX1_P
4	USB2_ID	11	GND
5	GND	12	GND
6	CROSSBAR_RX1_N	13	GND
7	CROSSBAR_RX1_P	14	GND

#### 4.5 CN7: USB 2.0 1x10P Wafer



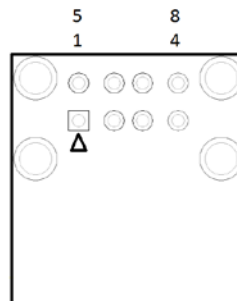
Pin	Signal Description	Pin	Signal Description
1	USB_VCC	7	USB_HSIC_P4_D+
2	USB_HSIC_P3_D-	8	GND
3	USB_HSIC_P3_D+	9	UART0_RXD
4	GND	10	UART0_TXD
5	USB_VCC	11	GND
6	USB_HSIC_P4_D-	12	GND

#### 4.6 CN8: DUAL USB Type A Connector 1



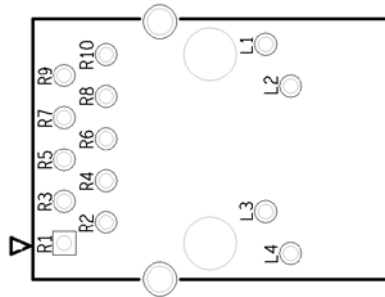
Pin	Signal Description	Pin	Signal Description
1	USB_VCC	5	USB_VCC
2	USB2_P1_D-	6	USB2_P2_D-
3	USB2_P1_D+	7	USB2_P2_D+
4	GND	8	GND

#### 4.7 CN9: DUAL USB Type A Connector 2



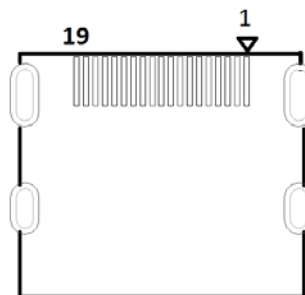
Pin	Signal Description	Pin	Signal Description
1	USB_VCC	5	USB_VCC
2	USB2_P3_D-	6	USB_HSIC_P2_D-
3	USB2_P3_D+	7	USB_HSIC_P2_D+
4	GND	8	GND

#### 4.8 CN10: RJ45 LAN Connector



Pin	Signal Description	Pin	Signal Description
R1	LAN1_MDI0+	R8	LAN1_MDI2-
R2	LAN1_MDI0-	R9	LAN1_MDI3+
R3	LAN1_MDI1+	R10	LAN1_MDI3-
R4	LAN1_MDI1-	L1	LAN_ACTLEDP
R5	LAN1_MDI2+	L2	LAN_ACTLEDN
R6	LAN1_MDI2-	L3	LAN_LINK100#
R7	LAN1_MDI2+	L4	LAN_LINK1000#

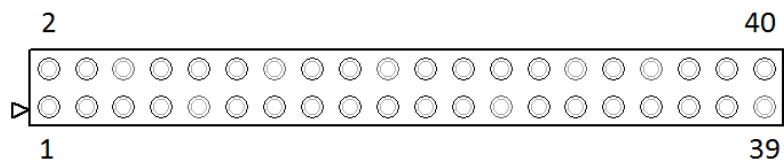
#### 4.9 CN11: HDMI Connector



Pin	Signal Description	Pin	Signal Description
1	DDI2_TX0_HDMI_DP+	11	GND
2	GND	12	DDI2_CLK_HDMI_DN-

3	DDI2_TX0_HDMI_DN-	13	HDMI_CEC_D
4	DDI2_TX1_HDMI_DP+	14	NC
5	GND	15	DDI2_DDC_CLK
6	DDI2_TX1_HDMI_DN-	16	DDI2_DDC_DAT
7	DDI2_TX2_HDMI_DP+	17	GND
8	GND	18	+5V_HDMI
9	DDI2_TX2_HDMI_DN-	19	DDI2_TYPE_C_HPD
10	DDI2_CLK_HDMI_DP+		

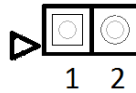
#### 4.10 CN12: HAT 40 GPIO Connector



Pin	Signal Description	Pin	Signal Description
1	+3.3V	2	+5V
3	I2C1_SDA	4	+5V
5	I2C1_SCL	6	GND
7	ISH_GPIO0	8	UART_TX
9	GND	10	UART_RX
11	SD2_CMD	12	I2S_CLK
13	SD2_CLK	14	GND
15	SD2_SD0	16	SD2_SD1
17	+3.3V	18	SD2_SD2
19	SPI2_MOSI	20	GND
21	SPI2_MISO	22	SD2_SD3
23	SPI2_CLK	24	ISH_SPI2_CS0
25	GND	26	ISH_SPI2_CS1
27	I2C0_SDA	28	I2C0_SCL

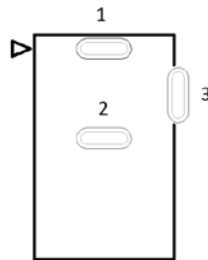
29	ISH_GPIO2	30	GND
31	ISH_GPIO3	32	PWM0
33	PWM1	34	GND
35	I2S2_FRM	36	GPIO27
37	GPIO13	38	I2S2_RX
39	GND	40	I2S2_TX

#### 4.11 CN14: Reset Pin Header



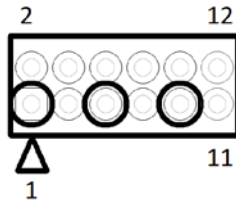
Pin	Signal Description
1	PMU_RSTBTN_N
2	GND

#### 4.12 CN30: DC Jack



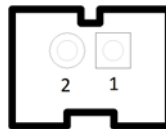
Pin	Signal Description
1	+V5
2	GND
3	GND

#### 4.13 CN34: Update CPLD Header



Pin	Signal Description	Pin	Signal Description
1	CHT_GPIO_TMS	2	CPLD_TMS
3	CHT_GPIO_TDI	4	CPLD_TDI
5	CHT_GPIO_TCK	6	CPLD_TCK
7	CHT_GPIO_TDO	8	CPLD_TDO
9	FAN_PWM	10	+1.8V
11	+5V	12	GND

#### 4.14 CN33: Power Button Wafer



Pin	Signal Description
1	PWR_SW#_CTL_R
2	GND