

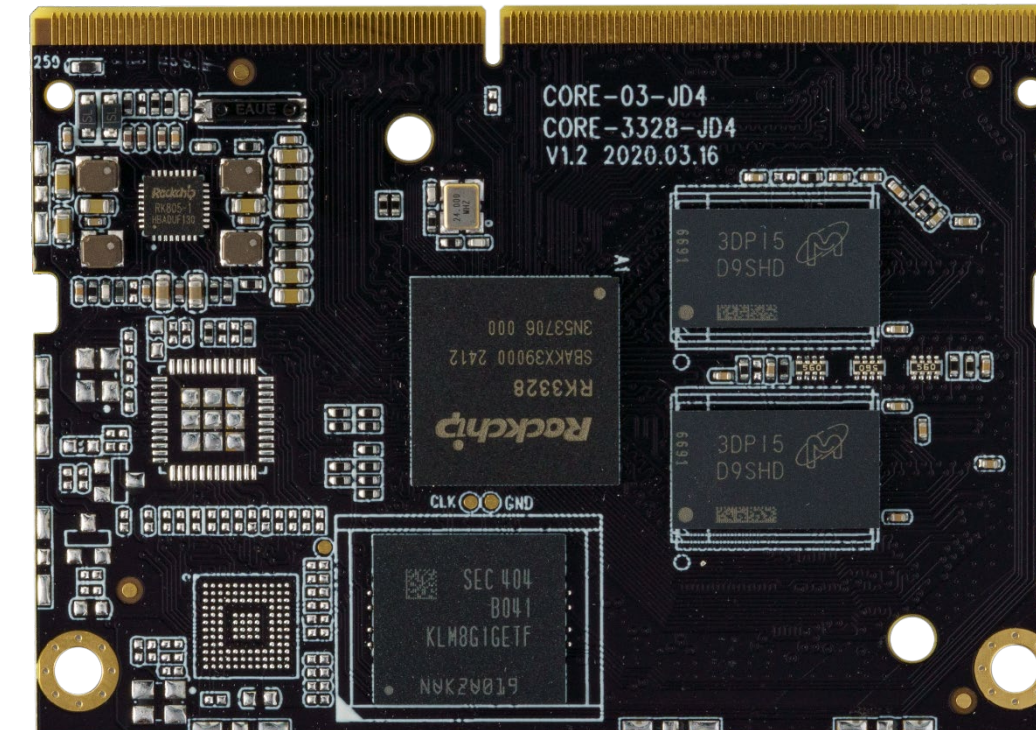


Core-3328-JD4

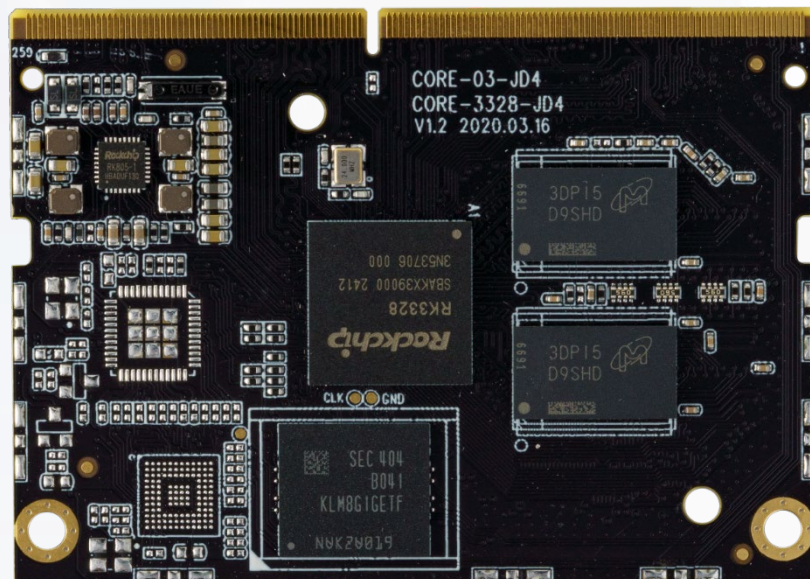
■ Quad-core 64-bit Core Board

V1.2 2024-10-9

T-CHIP INTELLIGENCE TECHNOLOGY



Product features



Quad-core 64-bit Processor

Adopts RK3328 quad-core 64-bit A53 high-performance processor, integrated dual-core Mali-450 GPU. Provide a variety of storage configuration options, users only need to expand the function backplane to quickly achieve project development.



Powerful Hardware Decoding Capability

Supports 4K@60fps H.265/H.264/VP9 video decoding, 1080P@60fps(VC-1, MPEG-1/2/4) multi-format video decoding, and 1080P@30fps H.265/H.264 video encoding.



Strong network communication capabilities

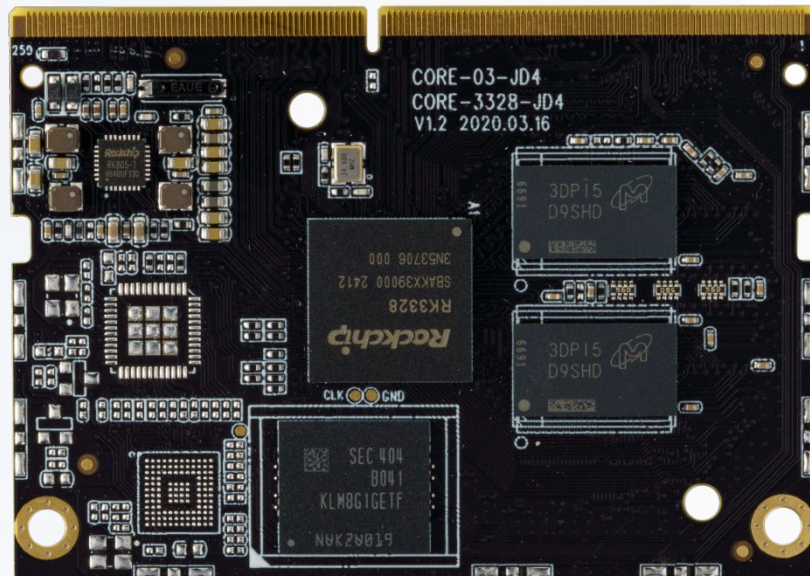
It supports 1 Gigabit Ethernet, and the WiFi module can be expanded through SDIO3.0 signal, so that the network communication has a higher speed.



Stable And Reliable

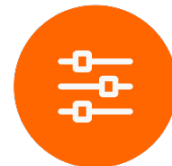
With SODIMM 260P interface, the data transmission and expansion performance can be best achieved, immersion gold process pin, corrosion resistant, 2 studs fixed, stable and reliable. Designed measurement is only 69.6mm × 49.6mm for saving more precious space.

Product features



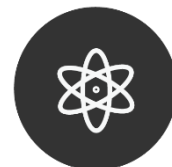
Supports multiple operating systems

It supports Android, Linux+QT, and Ubuntu operating systems, with stable and reliable performance to meet the needs of different scenarios.



Abundant expansion interfaces

It has HDMI2.0, CVBS, USB3.0, USB2.0, I2C, SPI, UART, PWM and other expansion interfaces to meet the peripheral expansion needs of different scenarios.



Open Source

Complete with SDK, tutorial, technical information and development tools can be downloaded on the website, and provide development base plate for purchase, making development and learning easier.



Wide range of applications

Widely used in high-performance computing/storage, high-performance computing/storage, gaming equipment, commercial display equipment, medical equipment, vending machines, interactive printer, industrial computers, etc.

Specifications

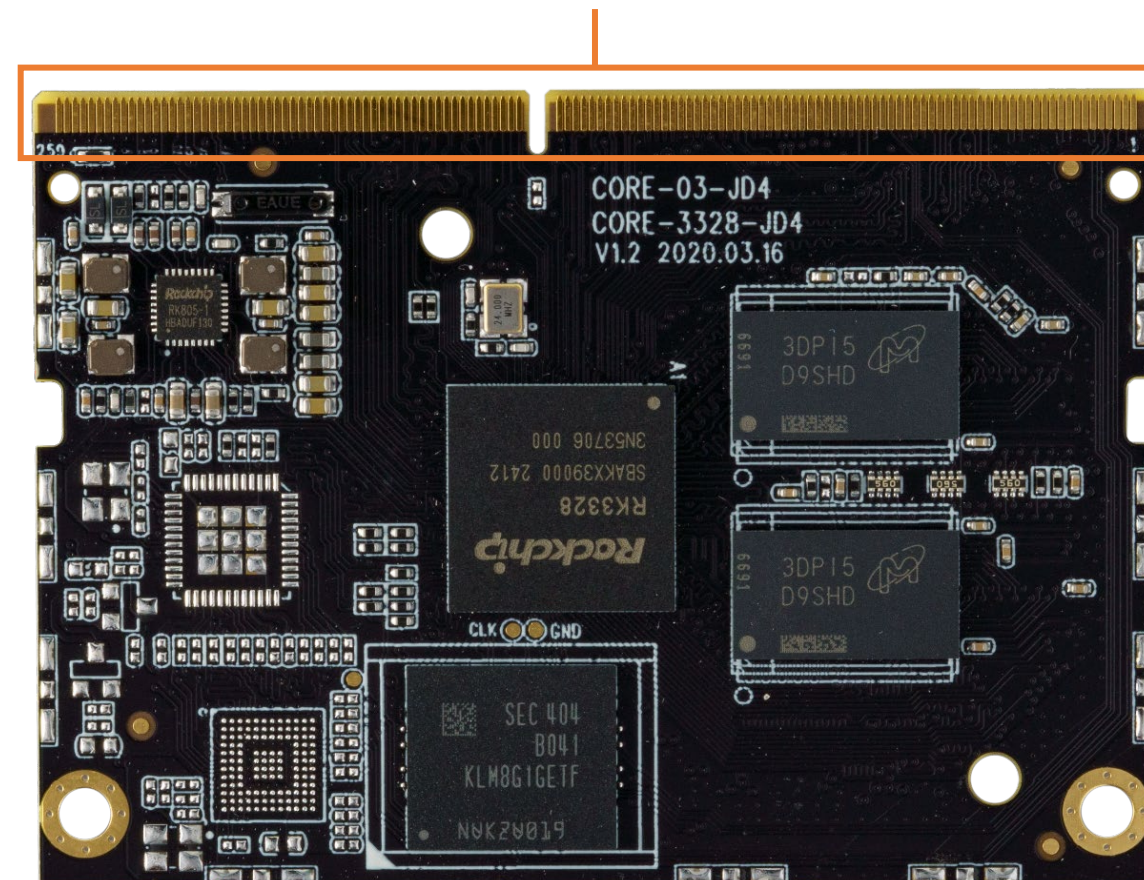


Specifications		
Basic Specifications	SOC	RK3328
	CPU	Quad-core ARM® Cortex-A53 64-bit processor, frequency up to 1.5GHz
	GPU	ARM Mali-450 MP2 GPU, support OpenGL ES1.1/2.0, OpenVG1.1
	Encoding/Decoding	Video Decoding: 4K@60fps H.265/H.264/VP9, 1080P@60fps(VC-1, MPEG-1/2/4) multi-format video decoding Video Encoding: 1080P@30fps H.265/H.264 Video postprocessor: de-interlacing, denoising, edge/detail/color optimization
	RAM	1GB DDR3 (1GB/2GB/4GB optional)
	Storage	8GB eMMC5.1 (8GB/16GB/32GB/64GB/128GB optional)
	Power	5V (voltage tolerance ±5%)
	Power consumption	Normal: 1.5W(5V/300mA), Max: 3.25W(5V/650mA)
	OS	Android, Ubuntu, Linux+QT
	Interface	Gold finger (SODIMM 260P standard interface, 0.5mm pitch)
	Size	69.60mm × 49.64mm × 3.80mm
	Weight	≈13g
	Environment	Operating Temperature: -20℃ ~ 60℃, storage temperature: -20℃ ~ 70℃, Storage Humidity: 10% ~ 90%RH (non-condensing)
Interface Specifications	Ethernet	1 channel of 10/100/1000Mbps Ethernet can be extended via RGMII and RMII interfaces
	Wi-Fi	Extend the Wifi module with SDIO 3.0 signaling
	Video output	1 × HDMI2.0 (4K@60fps) 1 × CVBS (Complies with 480i, 576i standards)
	Audio	1 × HDMI audio output Supports 8-channel I2S/PDM interface and supports 8-channel digital microphone array
	USB	1 × USB3.0 HOST, 1 × USB3.0/USB2.0 OTG, 2 × USB2.0 HOST
	Other interfaces	2 × SPI, 6 × UART, 4 × I2C, 8 × PWM, 1 × SPDIF, GPIOs

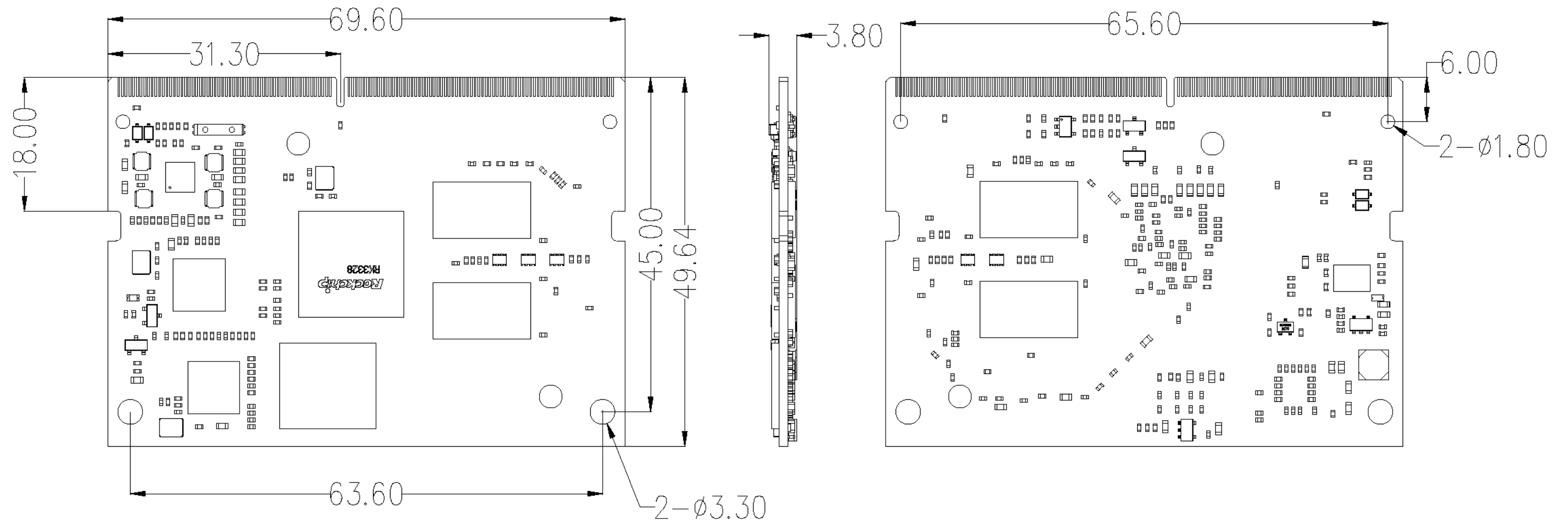
Interface description



Gold finger (SODIMM 260P standard interface, 0.5mm pitch)



Dimension





Interface definition

Notes1:
Pin type: I = input, O = output, I/O = input/output (bidirectional), G= Ground, P = power supply,
DOWN = Internal pull down , UP = Internal pull UP, 0 = Low Level 1 = High level

Part A	pin	Core board pin definition	Pin type	I/O Pull	Default function	Default function description	IO Power domain	RK3328 Pin Number
	1	GND_1	G		GND	GND		
	3	RK805_OUT2			WORK_LED	System working state refers to LED		
	5	RK805_OUT1			DIY_LED	User Defines LED		
	7	USB1_DP			HOST_DP	USB HOST0 Data Plus port (no used)		AA7
	9	USB1_DM			HOST_DM	USB HOST0 Data Minus port (no used)		Y7
	11	NC_1						
	13	GND_2	G		GND	GND		
	15	NC_2						
	17	NC_3						
	19	NC_4						
	21	NC_5						
	23	NC_6						
	25	NC_7						
	27	NC_8						
	29	NC_9						
	31	NC_10						
	33	NC_11						



Interface definition

35	GND_3	G		GND	GND		
37	GPIO1_A5/SDMMC0_DET_N_U_3.3V	I/O	UP	SDMMC0_DET	SDMMC0 card detect signal 0: TF card insert 1: TF card no insert	3.3V	V10
39	GPIO1_A1/SDMMC0_D1/UART2_RX_M0_U_3.3V	I/O	UP	SDMMC0_D1	SDMMC0 data port	Note 2	W11
41	GPIO1_A0/SDMMC0_D0/UART2_TX_M0_U_3.3V	I/O	UP	SDMMC0_D0	SDMMC0 data port		U10
43	GPIO1_A6/SDMMC0_CLK/TEST_CLK0_D_3.3V	I/O	DOWN	SDMMC0_CLK	SDMMC0 clock output		W12
45	GPIO1_A4/SDMMC0_CMD_U_3.3V	I/O	UP	SDMMC0_CMD	SDMMC0 command output		Y13
47	GPIO1_A3/SDMMC0_D3/JTAG_TMS_U_3.3V	I/O	UP	SDMMC0_D3/JTAG_TMS	SDMMC0 data port		AA13
49	GPIO1_A2/SDMMC0_D2/JTAG_TCK_U_3.3V	I/O	UP	SDMMC0_D2/JTAG_TCK	SDMMC0 data port		W13
Note 2: Default is 3.3V; VCCIO5 Domain 1.8V or 3.3V Power supply, Voltage configure by GPIO0_A7; H = 3.3V, L = 1.8V.							
51	GND_4	G		GND	GND		
53	NC_12						
55	NC_13						
57	NC_14						
59	NC_15						
61	GPIO2_B4/SPI_CSN1_M0/FLASH_VOL_SEL_U_3.3V	I/O	UP	GPIO2_B4/SPI_CSN1_M0/FLASH_VOL_SEL	GPIO (no used)	3.3V	T16
63	NC_16						
65	NC_17						
67	GPIO2_D0/I2C0_SCL/FEPHY_LED_LINK_M1_U_3.3V	I/O	UP	I2C0_SCL	I2C0 data	3.3V	P17
69	GPIO2_D1/I2C0_SDA/FEPHY_LED_DATA_M1_U_3.3V	I/O	UP	I2C0_SDA	I2C0 clock	3.3V	R17



Interface definition

	71	NC_18						
	73	NC_19						
	75	NC_20						
	77	NC_21						
	79	NC_22						
	81	NC_23						
	83	NC_24						
	85	NC_25						
	87	NC_26						
	89	NC_27						
	91	NC_28						
	93	NC_29						
	95	NC_30						
	97	GPIO2_A6/PWM2_U_3.3V	I/O	UP	PWM0/GPIO0_B7	PWM output	3.3V	M19
	99	GPIO0_A0/CLKOUT_WIFI_M0_D_3.3V	I/O	DOWN	VCC5V0_USB30_EN	USB30 5V output power enable 1:Enable 0:Disable	5V	L3
	101	GND_5	G		GND	GND		
	103	NC_31						
	105	NC_32						
	107	NC_33						



Interface definition

109	NC_34						
111	NC_35						
113	NC_36						
115	NC_37						
117	NC_38						
119	NC_39						
121	NC_40						
123	GND_6	G		GND	GND		
125	USB30_TXN	I/O		USB30_TXN	USB 3.0 transmission signal DM		H2
127	USB30_TXP	I/O		USB30_TXP	USB 3.0 transmission signal DP		H3
129	USB30_RXP	I/O		USB30_RXP	USB 3.0 receive signal DP		J2
131	USB30_RXN	I/O		USB30_RXN	USB 3.0 receive signal DM		J3
133	USB0_DP			OTG20_DP	USB 2.0 Data signal DP		AA6
135	USB0_DM			OTG20_DM	USB 2.0 Data signal DM		Y6
137	USB30_DP	I/O		USB30_DP	USB 2.0 Data signal DP in USB 3.0 port		K1
139	USB30_DM	I/O		USB30_DM	USB 2.0 Data signal DM in USB 3.0 port		K2
141	NC_41						
143	GND_7	G		GND	GND		
145	USB20_VBUS	I		OTG_DET	Vbus power detect for USB2.0		T6
147	GPIO0_A4/HDMI_HPD_D_3.3V	I/O	DOWN	HDMI_HPD	HDMI hot plug detect signal		U3



Interface definition

149	I2C3_SDA/HDMI_SDA_OD_3.3V	I/O		HDMI_SDA	HDMI I2C data line		V3
151	I2C3_SCL/HDMI_SCL_OD_3.3V	O		HDMI_SCL	HDMI I2C clock		V1
153	HDMI_CEC_U	I/O	UP	HDMI_CEC	HDMI CEC		V2
155	GND_8	G		GND	GND		
157	HDMI_TXCLKN			HDMI_TX_C-	HDMI negative clock line , Core board internal series resistance 0R		W2
159	HDMI_TXCLKP			HDMI_TX_C+	HDMI positive clock line , Core board internal series resistance 0R		Y1
161	HDMI_TX0N	O		HDMI_TX_D0-	HDMI channel 0 negative data line		Y2
163	HDMI_TX0P	O		HDMI_TX_D0+	HDMI channel 0 positive data line		AA2
165	HDMI_TX1N	O		HDMI_TX_D1-	HDMI channel 1 negative data line		Y3
167	HDMI_TX1P	O		HDMI_TX_D1+	HDMI channel 1 positive data line		Y4
169	HDMI_TX2N	O		HDMI_TX_D2-	HDMI channel 2 negative data line		AA4
171	HDMI_TX2P	O		HDMI_TX_D2+	HDMI channel 2 positive data line		Y5
173	GND_9	G		GND	GND		
175	NC_42						
177	NC_43						
179	NC_44						
181	CODEC_AOL	O		AOL	Left channel output of the headphone		P2
183	CODEC_AOR	O		AOR	Right channel output of the headphone		N1
185	FEPHY_RXN	I/O		RD-	Receive data - Negative (no used)		AA8
187	FEPHY_RXP	I/O		RD+	Receive data - Positive (no used)		Y8



Interface definition

	189	FEPHY_TXN	I/O		TD-	Transmit data - Negative (no used)		AA9
	191	FEPHY_TXP	I/O		TD+	Transmit data - Positive (no used)		Y9
	193	NC_45						
	195	NC_46						
	197	NC_47						
	199	NC_48						
	201	NC_49						
	203	NC_50						
	205	GND_10	G		GND	GND		
	207	NC_51						
	209	NC_52						
	211	NC_53						
	213	NC_54						
	215	NC_55						
	217	NC_56						
	219	GND_11	G		GND	GND		
	221	PWRON			POWER_ON	Power on Signal Input, External connection Power key , active low		
	223	NC_57						
	225	VCC_IO_1	P		VCC_IO	Output Voltage 3.3V, Rated output current 300mA	3.3V	



Interface definition

	227	VCC_IO_2	P		VCC_IO	Output Voltage 3.3V, Rated output current 300mA	3V	
	229	VCC_18_1	P		VCC_18	Output Voltage 1.8V, Rated output current 300mA	1.8V	
	231	NC_58						
	233	VCC_5V_S	P		VCC_5V_S	Input Voltage 5V, Rated input current 50mA (System startup power supply)	5V	
	235	VCC_IO_3	P		VCC_IO	Output Voltage 3.3V, Rated output current 300mA	3.3V	
	237	VCC_IO_4	P		VCC_IO		3.3V	
	239	VCC_IO_5	P		VCC_IO		3.3V	
	241	GND_12	G		GND	Power ground		
	243	GND_13	G		GND			
	245	GND_14	G		GND			
	247	GND_15	G		GND			
	249	GND_16	G		GND			
	251	VCC_SYS_1	P		VCC_SYS	System Power supply Input Voltag : Min 4.8V, Typ 5V, Max 5.2V Input current: Typ 450mA ;Max 950mA	5V	
	253	VCC_SYS_3	P		VCC_SYS		5V	
	255	VCC_SYS_5	P		VCC_SYS		5V	
	257	VCC_SYS_7	P		VCC_SYS		5V	
	259	VCC_SYS_9	P		VCC_SYS		5V	
Part B	pin	Core board pin definition	Pin type	I/O Pull	Default function	Defualt function description	IO Power domain	RK3328 Pin Number
	2	GND_17	G		GND	GND		
	4	GPIO2_C2/I2S1_SCLK/PDM_CLK_M0/TSP_D7_M1/CIF_D7_M1_D_3.3V	I/O	DOWN	GPIO2_C2_D/I2S1_SCLK	I2S serial clock	3.3V	R18



Interface definition

	6	GPIO2_C0/I2S1_LRCK_RX/TSP_D5_M1/CIF_D5_M1_U_3.3V	I/O	UP	GPIO2_C0_U/I2S1_LRCK_RX	I2S serial data	3.3V	V15
	8	GPIO2_C1/I2S1_LRCK_TX/SPDIF_TX_M1/TSP_D6_M1/CIF_D6_M1_U_3.3V	I/O	UP	GPIO2_C1_U/I2S1_LRCK_TX	I2S serial data	3.3V	P18
	10	GPIO2_C3/I2S1_SDI/PDM_SDI0_M0/CARD_CLK_M1_U_3.3V	I/O	UP	GPIO2_C3_U/I2S1_SDI	I2S serial data input	3.3V	U16
	12	GPIO2_C7/I2S1_SDO/PDM_FSYNC_M0_U_3.3V	I/O	UP	GPIO2_C7_U/I2S1_SDO	I2S serial data output	3.3V	N17
	14	GPIO2_C6/I2S1_SDIO3/PDM_SDI3_M0/CARD_IO_M1_U_3.3V	I/O	UP	GPIO2_C6_U/I2S1_SDO3	Configurable I2S serial data output	3.3V	V16
	16	GPIO2_C5/I2S1_SDIO2/PDM_SDI2_M0/CARD_DET_M1_U_3.3V	I/O	UP	GPIO2_C5_U/I2S1_SDO2	Configurable I2S serial data output	3.3V	V17
	18	GPIO2_C4/I2S1_SDIO1/PDM_SDI1_M0/CARD_RST_M1_U_3.3V	I/O	UP	GPIO2_C4_U/I2S1_SDO1	Configurable I2S serial data output	3.3V	V18
	20	GPIO2_B7/I2S1_MCLK/TSP_SYNC_M1/CIF_CLKOUT_M1_D_3.3V	I/O	DOWN	GPIO2_B7_D/I2S1_MCLK	I2S clock source	3.3V	N18
	22	GPIO2_A4/PWM0/I2C1_SDA_3.3V	I/O	UP	I2C1_SDA_PMIC	I2C serial port 3,for PMIC , Core board interiorl pull up Resistor 2.2K	3.3V	N19
	24	GPIO2_A5/PWM1/I2C1_SCL_3.3V	I/O	UP	I2C1_SCL_PMIC	I2C serial port 3,for PMIC , Core board interiorl pull up Resistor 2.2K	3.3V	N20
	26	GND_18	G		GND	GND		
	28	GPIO_MUTE_D_3.3V			SPK_MUTE	Speaker silence function	3.3V	N2
	30	NC_59						
	32	NC_60						
	34	NC_61						
	36	NC_62						
	38	NC_63			GND/NC	GND/NC(Pull down 10K to the ground)	GND/NC	
	40	GND_19	G		GND	GND		
	42	GPIO3_B0/TSP_D4/CIF_D4/SPI_CSN0_M2/I2S2_LRCK_TX_M1/USB3PHY_D EBUG8/I2S2_LRCK_RX_M1_D_3.3V	I/O	DOWN	WIFI_REG_ON_H	WIFI module power enable 1:Enable 0:Disable	3.3V	F3



Interface definition

	44	GPIO3_A1/TSP_FAIL/CIF_HREF/SDMMC0EXT_DET/SPI_TXD_M2/USB3PHY_DEBUG2/I2S2_SDO_M1_U_3.3V	I/O	UP	WIFI_WAKE_HOST	WIFI module wake up AP	3.3V	D2
	46	GPIO3_A6/TSP_D2/CIF_D2/SDMMC0EXT_D2/UART1_RX/USB3PHY_DEBUG6_U_3.3V	I/O	UP	SDIO0_D2	SDIO0 data port , for WIFI module	3.3V	F2
	48	GPIO3_A7/TSP_D3/CIF_D3/SDMMC0EXT_D3/UART1_CTSN/USB3PHY_DEBUG7_U_3.3V	I/O	UP	SDIO0_D3	SDIO0 data port , for WIFI module	3.3V	F1
	50	GPIO3_A0/TSP_VALID/CIF_VSYNC/SDMMC0EXT_CMD/SPI_CLK_M2/USB3PHY_DEBUG1/I2S2_SCLK_M1_U_3.3V	I/O	UP	SDIO0_CMD	SDIO0 command output , for WIFI module	3.3V	E3
	52	GPIO3_A2/TSP_CLK/CIF_CLKIN/SDMMC0EXT_CLK/SPI_RXD_M2/USB3PHY_DEBUG3/I2S2_SDI_M1_D_3.3V	I/O	DOWN	SDIO0_CLK	SDIO0 clock output, for WIFI module	3.3V	E1
	54	GPIO3_A4/TSP_D0/CIF_D0/SDMMC0EXT_D0/UART1_TX/USB3PHY_DEBUG4_U_3.3V	I/O	UP	SDIO0_D0	SDIO0 data port , for WIFI module	3.3V	E2
	56	GPIO3_A5/TSP_D1/CIF_D1/SDMMC0EXT_D1/UART1_RTSN/USB3PHY_DEBUG5_U_3.3V	I/O	UP	SDIO0_D1	SDIO0 data port , for WIFI module	3.3V	D1
	58	GND_20	G		GND	GND		
	60	RK805_32KOUT_3.3V			RK805_32KOUT	Output 32.768K CLK	3.3V	
	62	NC_64						
	64	NC_65						
	66	NC_66						
	68	NC_67						
	70	NC_68						
	72	VCC_18	P		1.8V	1.8V (no used)	1.8V	
	74	GPIO1_D2/I2S2_LRCK_RX_M0/CLKOUT_GMAC_M2/PDM_SDI3_M1_D_3.3V	I/O	DOWN	BT_WAKE_HOST	BT module wake up AP	3.3V	V12
	76	NC_69						
	78	NC_70						
	80	NC_71						
	82	GPIO1_D4/CLK32KOUT_M1_D_3.3V	I/O	DOWN	MIPI_CSI_D2P	MIPI-DSI0 differential lane 2 positive	3.3V	V14



Interface definition

84	NC_72							
86	NC_73							
88	NC_74							
90	NC_75							
92	NC_76							
94	NC_77							
96	NC_78							
98	GPIO0_D6/FEPHY_LED_SPEED10/SDMMC0_PWREN_M1_D_3.3V	I/O	DOWN	HP_DET	Headphone detection	3.3V	W10	
100	GPIO2_A1/UART2_RX_M1/POWERSTATE1_U_3.3V	I/O	UP	UART2_RX	Uart2 serial port data input, for AP debug	3.3V	P20	
102	GPIO2_A0/UART2_TX_M1/POWERSTATE0_D_3.3V	I/O	DOWN	UART2_TX	Uart2 serial port data output ,for AP debug	3.3V	P19	
104	NC_79							
106	GPIO2_A2/IR_RX/POWERSTATE2_U_3.3V	I/O	UP	IR_IN/UART3_RX/GPIO0_C1	IR receiver input	3.3V	M21	
108	NC_80							
110	NC_81							
112	GND_21	G		GND	GND			
114	NC_82							
116	NC_83							
118	NC_84							
120	NC_85							
122	VDAC_IOUT	O		VDAC_IOUT	Positive output (no used)		M2	



Interface definition

	124	NC_86						
	126	NC_87						
	128	NC_88						
	130	NC_89						
	132	GND_22	G		GND	GND		
	134	NC_90						
	136	NC_91						
	138	NC_92						
	140	NC_93						
	142	NC_94						
	144	NC_95						
	146	NC_96						
	148	NC_97						
	150	SARADC_IN1			SARADC_IN1	ADC input , Core board interiorl pull up Resistor 10K	1.8V	M17
	152	SARADC_IN0			RECOVER	AD keyboard input , Core board interiorl pull up Resistor 10K	1.8V	M18
	154	NC_98						
	156	NC_99						
	158	NC_100						
	160	NC_101						
	162	NC_102						



Interface definition

164	NC_103							
166	NC_104							
168	NC_105							
170	NC_106							
172	NC_107							
174	NC_108							
176	NC_109							
178	NC_110							
180	GND_23	G		GND	GND			
182	GPIO1_C3/SDMMC1_DET/GMAC_MDIO_M1/PDM_FSYNC_M1_U_3.3V	I/O	UP	RMII_MDIO	MAC management interface data	3.3V	Y21	
184	GPIO1_C7/I2S2_LRCK_TX_M0/GMAC_MDC_M1/PDM_SDI0_M1_D_3.3V	I/O	DOWN	MDC_MAC	MAC management clock	3.3V	W17	
186	GPIO1_B4/SDMMC1_CLK/GMAC_TXCLK_M1_D_3.3V	I/O	DOWN	PHY_TXCLK	PHY_TXCLK , Core board internal series resistance 22R (no used)	3.3V	AA20	
188	GPIO1_B5/SDMMC1_CMD/GMAC_RXCLK_M1_U_3.3V	I/O	UP	RMII_RXER	MAC RX error signal	3.3V	Y20	
190	GND_24	G		GND	GND			
192	GPIO1_C5/I2S2_MCLK/GMAC_CLK_M1_D_3.3V	I/O	DOWN	RMII_CLK	MAC REC_CLK output or external clock input	3.3V	W15	
194	GPIO1_B2/UART0_RTSN/GMAC_RXD1_M1_D_3.3V	I/O	DOWN	RMII_RXD1	MAC RX data	3.3V	W14	
196	GPIO1_B6/SDMMC1_D0/GMAC_RXD3_M1_U_3.3V	I/O	UP	MAC_RXD3	MAC RX data (no used)	3.3V	W19	
198	GPIO1_B3/UART0_CTSN/GMAC_RXD0_M1_D_3.3V	I/O	DOWN	RMII_RXD0	MAC RX data	3.3V	V13	
200	GPIO1_B7/SDMMC1_D1/GMAC_RXD2_M1_U_3.3V	I/O	UP	MAC_RXD2	MAC RX data (no used)	3.3V	W18	



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	202	GPIO1_C6/I2S2_SCLK_M0/GMAC_RXDV_M1/PDM_CLK_M1_U_3.3V	I/O	UP	RMII_RXDV	MAC RX enable 1:Enable 0:Disable	3.3V	W16
	204	GPIO1_B1/UART0_TX/GMAC_TXD0_M1_U_3.3V	I/O	UP	RMII_TXD0	MAC TX data , Core board interiorI pull up Resistor 4.7K	3.3V	AA15
	206	GPIO1_C1/SDMMC1_D3/GMAC_TXD2_M1_U_3.3V	I/O	UP	PHY_TXD2	MAC TX data , Core board interiorI pull up Resistor 4.7K (no used)	3.3V	Y19
	208	GPIO1_C0/SDMMC1_D2/GMAC_TXD3_M1_U_3.3V	I/O	UP	PHY_TXD3	MAC TX data , Core board interiorI pull up Resistor 4.7K (no used)	3.3V	AA19
	210	GPIO1_B0/UART0_RX/GMAC_TXD1_M1_U_3.3V	I/O	UP	RMII_TXD1	MAC TX data , Core board interiorI pull up Resistor 4.7K	3.3V	Y15
	212	GPIO1_D1/I2S2_SDO_M0/GMAC_TXEN_M1/PDM_SDI2_M1_D_3.3V	I/O	DOWN	RMII_TXEN	MAC TX data enable , Core board internal series resistance 22R 1:Enable 0:Disable	3.3V	Y17
	214	NC_111						
	216	GPIO1_C2/SDMMC1_PWREN/GMAC_CRD_M1_D_3.3V	I/O	DOWN	RMII_RST	MAC reset	3.3V	W20
	218	NPOR_U_3.3V	I		RESET_KEY	system reset signal Input,External connection Reset key,active low , Core board interiorI pull up Resistor 10K	3.3V	P21
	220	POWER_EN			EXT_EN	External Power enable output,Voltage 5V 1:Enable 0:Disable	5V	
	222	NC_112						
	224	GND_25	G		GND	GND		
	226	VCC_IO_6	P		VCC_IO	Output Voltage 3.3V,Rated output current 300mA	3.3V	
	228	VCC_18_2	P		VCC_18	Output Voltage 1.8V,Rated output current 300mA	1.8V	
	230	NC_113						
	232	VCC_RTC	P		VCC_RTC	Input Voltage 5V, Rated input current 50mA (Systemstartup power supply)	3.3V/5.0V In	
	234	VCC_IO_7	P		VCC_IO	Output Voltage 3.3V,Rated output current 300mA	3.3V	
	236	NC_114						



Interface definition

	238	VCC_IO_8	P		VCC_IO	Output Voltage 3.3V, Rated output current 300mA	3.3V	
	240	GND_26	G		GND	Power ground		
	242	GND_27	G		GND			
	244	GND_28	G		GND			
	246	GND_29	G		GND			
	248	GND_30	G		GND			
	250	GND_31	G		GND			
	252	VCC_SYS_2	P		VCC_SYS	System Power supply Input Voltag : Min 4.8V, Typ 5V, Max 5.2V Input current: Typ 450mA ;Max 950mA	5.0V	
	254	VCC_SYS_4	P		VCC_SYS		5.0V	
	256	VCC_SYS_6	P		VCC_SYS		5.0V	
	258	VCC_SYS_8	P		VCC_SYS		5.0V	
	260	VCC_SYS_10	P		VCC_SYS		5.0V	
	261	GND_32	G		GND	Power ground		
	262	GND_33	G		GND			
	263	GND_34	G		GND			
	264	GND_35	G		GND			
	265	GND_36	G		GND			
	266	GND_37	G		GND			



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