



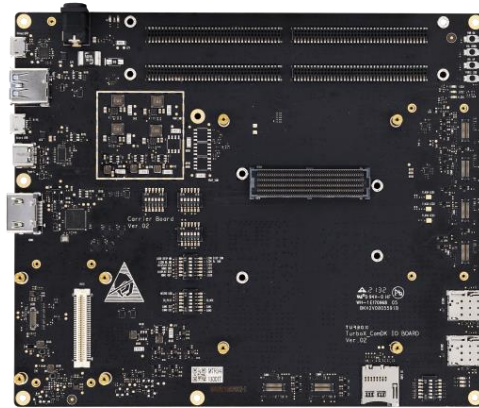
Thundercomm TurboX C6490 Development Kit

**Quick Start Guide**

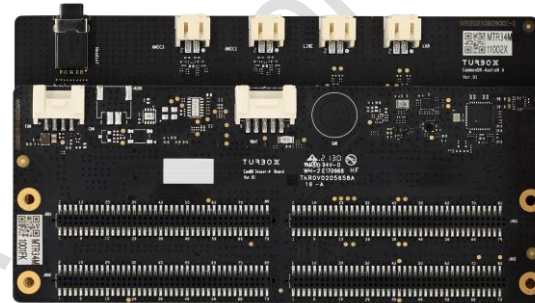
# Package List



C6490 Interposer Board



Main Board



Audio Board + Sensor Board (assembly)



LCD Touch Panel<sup>(1)</sup>



Power Adapter (except Japan)<sup>(2)</sup>



Wi-Fi/BT Antenna



Speaker (x2)



Camera Module

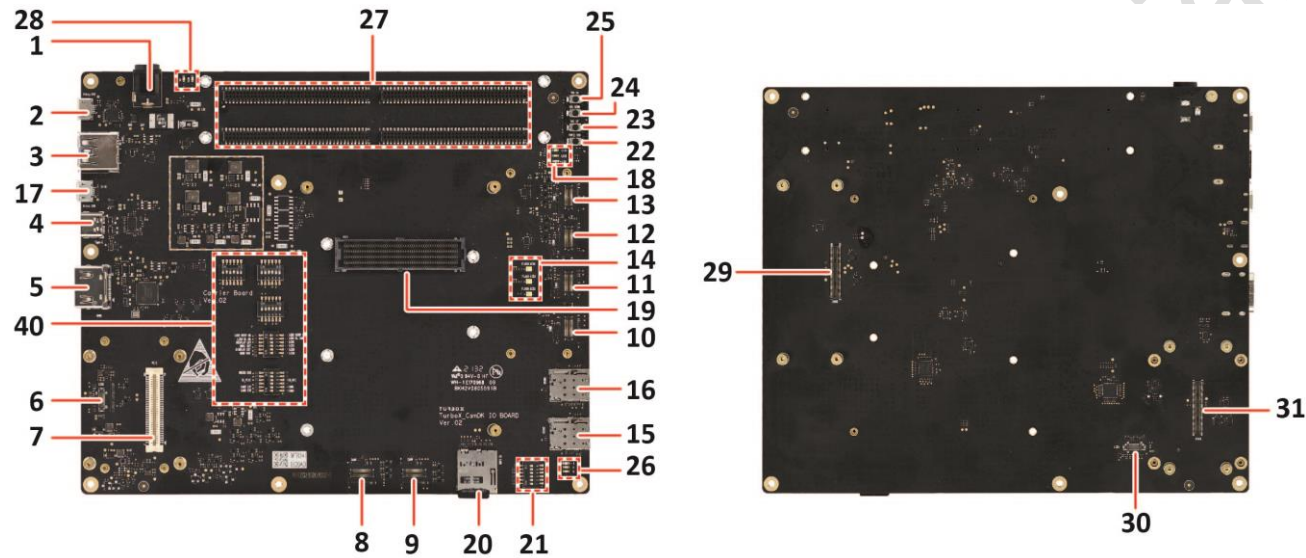
## NOTES:

(1). Optional

(2). Due to PSE regulations, there is no inbox adapter for the products sold to Japan. Please contact your distributor if you have any needs.

Voltage input to DK: typical 12V. Power adapter: ≥ 2A. DC in jack size: 2.5mm x 5.5mm (inner diameter x outer diameter).

# Main Board Interface List



Item	Reference	Description	Item	Reference	Description
1	J600	DC in jack	16	SIM4200	Nano SIM card slot #1
2	USB3400	UART debug port, UART to USB	19	CON1000	500-pin connector to the Interposer Board
3	J3901 <sup>a)</sup>	USB Type-A port, only as host	20	J4100	SD card slot
17	USB3900 <sup>b)</sup>	Micro USB port, sharing DP/DM with USB Type C connector, <b>adb</b> /download/host/device	21	SW4404	6-pin switch, boot configuration and CBL <ul style="list-style-type: none"> <li>• SW1, SDM_WDOG_DISABLE</li> <li>• SW2, SDM_FAST_BOOT_0</li> <li>• SW3, SDM_FAST_BOOT_1</li> <li>• SW4, SDM_FAST_BOOT_2</li> <li>• SW5, SDM_FAST_BOOT_3</li> <li>• SW6, CBL_PWR_N</li> </ul>
4	J3900	USB Type-C port, <b>adb</b> /download/host/device	22	SW4403	Key, Force USB boot button
5	J3800	HDMI out interface, 2.0	23	SW4401	Key, Volume up button

Item	Reference	Description	Item	Reference	Description
6	J3700 <sup>c)</sup>	LCD1 interface (option)	24	SW4402	Key, Volume down button
7	J1200	PCIe expansion module connector, 2 x 2-lane	25	SW4400	Key, Power on button
8	J3401	Camera interface #5	26	<ul style="list-style-type: none"> <li>• LED4406</li> <li>• LED4407</li> <li>• LED4411</li> </ul>	3 x RGB LED from PMIC with independent brightness control: <ul style="list-style-type: none"> <li>• LED4406, red LED</li> <li>• LED4407, green LED</li> <li>• LED4411, blue LED</li> </ul>
9	J3400	Camera interface #4	18	<ul style="list-style-type: none"> <li>• LED4400</li> <li>• LED4402</li> <li>LED4404</li> </ul>	3 x RGB LED from GPIO: <ul style="list-style-type: none"> <li>• LED4400, red LED</li> <li>• LED4402, green LED</li> <li>• LED4404, blue LED</li> </ul>
10	J3300	Camera interface #2	27	<ul style="list-style-type: none"> <li>• J1100</li> <li>• J1101</li> <li>• J1102</li> <li>• J1103</li> </ul>	<ul style="list-style-type: none"> <li>• Low-speed connector to low-speed expansion board</li> <li>• 4 x 80-pin B2B connector</li> </ul>
11	J3301	Camera interface #3	28	<ul style="list-style-type: none"> <li>LED4401</li> <li>LED4403</li> </ul>	<ul style="list-style-type: none"> <li>LED4401, indicating Main Board power OK</li> <li>LED4403, indicating SOM power input OK</li> </ul>
12	J3200	Camera interface #0	29	J3500	90-pin B2B connector, for camera interface expansion such as HDMI in function and so on (with HDMI in)
13	J3201	Camera interface #1	30	J3600	LCD0 interface
14	LED4408 <sup>d)</sup>	LED4408, Flash LED #3	31	J5000	90-pin B2B connector, for display interface expansion such as LVDs, 4k LCM
	LED4409	LED4409, Flash LED #2			
	LED4410	LED4410, Flash LED #1			
15	SIM4201	Nano SIM card slot #2	40	<ul style="list-style-type: none"> <li>• SW1300</li> <li>• SW1301</li> <li>• SW2100</li> <li>• SW2101</li> <li>• SW2200</li> </ul>	DIP switches for board function control

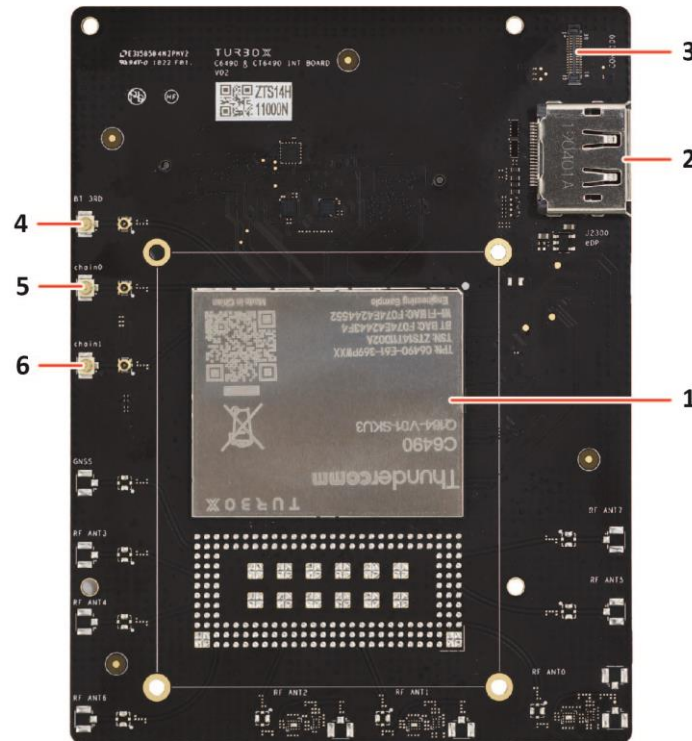
a) Only HS 2.0 signal is available on C6490 SOM.

b) C6490 USB0 is a complete Type-C port. By default, USB3900 is not used.

c) C6490 has only one group of DSI0, and thus all LCD1 interfaces are unavailable.

d) Unavailable on C6490.

## Interposer Board Interface List



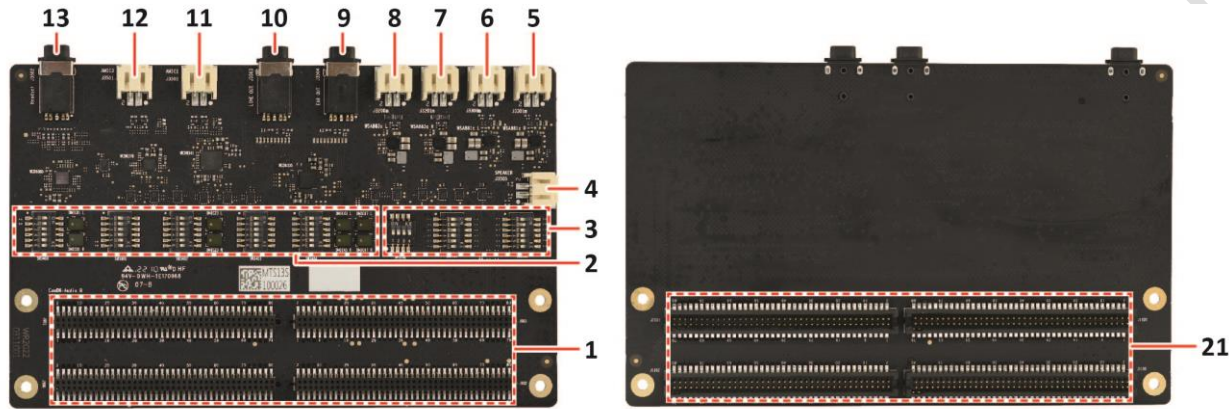
Item	Reference	Description	Item	Reference	Description
1	U1100	C6490 SOM	4	J2004 <sup>c)</sup>	ANT_BT_3RD, reserved for BT standalone antenna in 2-antenna solution
2	J2300 <sup>a)</sup>	eDP connector	5	J2000	Wi-Fi/BT chain0
3	CON1100 <sup>b)</sup>	Camera module connector, CSI4	6	J2002	Wi-Fi/BT chain1

<sup>a)</sup> eDP is dedicated embedded DisplayPort, which is not supported with software temporarily.

<sup>b)</sup> This connector is reserved for internal CSI signal test only, and is thus unavailable to users.

<sup>c)</sup> Reserved for BT standalone antenna solution; unavailable on C6490.

# Audio Board Interface List



Item	Reference	Description	Item	Reference	Description
1	J900 J901 J902 J903	<ul style="list-style-type: none"> <li>• Low-speed connector to low-speed expansion board</li> <li>• 4 x 80-pin B2B connector</li> </ul>	8	J3200M <sup>b)</sup>	Left WSA883x speaker connector
2	SW3400 SW3401 SW3402 SW3403 SW3404	DIP switch for DMIC connection selection	9	J3504	Ear out connector
3	SW3100 SW3101 SW3102	DIP switch to control Audio Board configuration	10	J3503	Line out connector
4	J3505 <sup>a)</sup>	Speaker connector	11	J3500	Analog microphone connector 1
5	J3301M <sup>b)</sup>	Right WSA881x speaker connector	12	J3501	Analog microphone connector 3
6	J3300M <sup>b)</sup>	Left WSA881x speaker connector	13	J3502	Headset connector
7	J3201M <sup>b)</sup>	Right WSA883x speaker connector	21	J1000 J1100 J1101 J1102	<ul style="list-style-type: none"> <li>• Low-speed connector to Main Board</li> <li>• 4 x 80-pin B2B connector</li> </ul>

<sup>a)</sup> Unavailable on C6490.

<sup>b)</sup> C6490 uses WSA8835 as the speaker amplifier, and thus J3201M and J3200M are available for C6490 speaker connection.



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