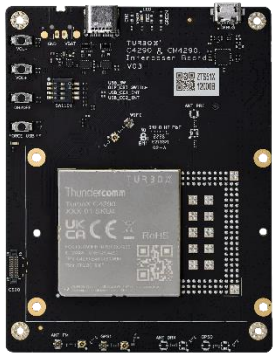
Thundercomm

Thundercomm TurboX C4290 CM4290 Development Kit

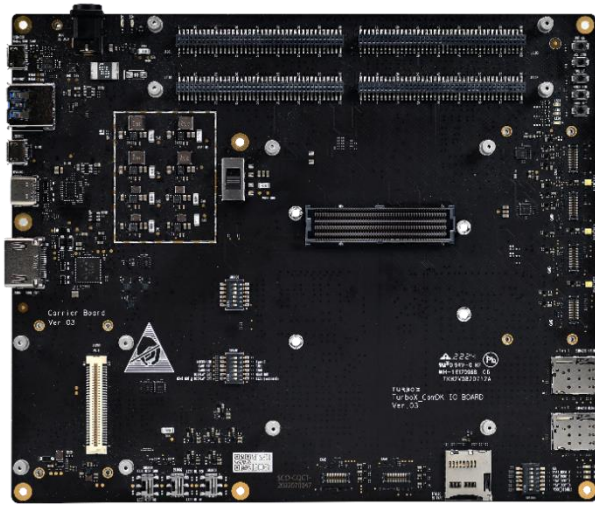
Quick Start Guide

Rev. V1.0
DN: tc-l-2110

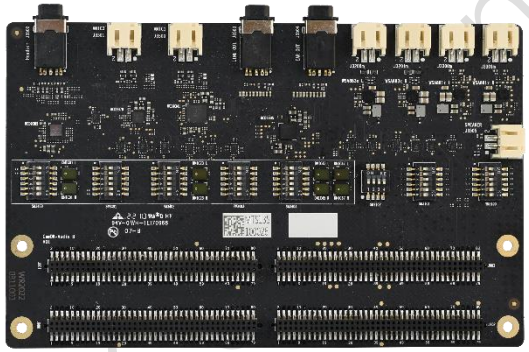
Package List



Interposer Board (With C4290/CM4290 SOM)



Main IO Board



Audio board

Sensor Board

Wi-Fi/BT Antenna

GPS Antenna

Cellular Antenna (x 2) [1)]

Camera Module

LCD Touch Panel [2)]

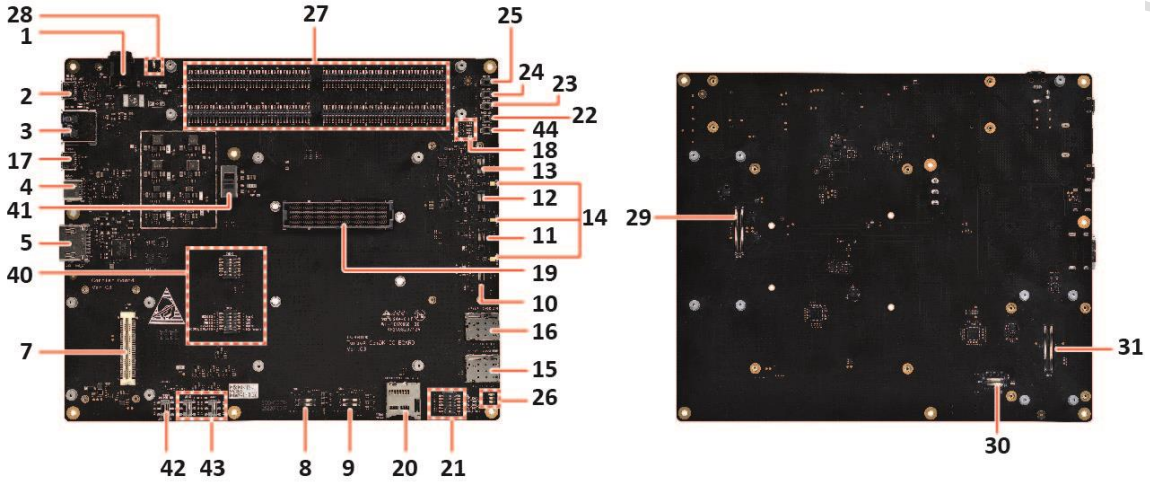
Power Adapter

➲ **NOTES:**

1) Available on CM4290 only.
2) All the listed parts are included in advanced DK package. LCD Touch Panel is not included in standard DK package.

Development Introduction

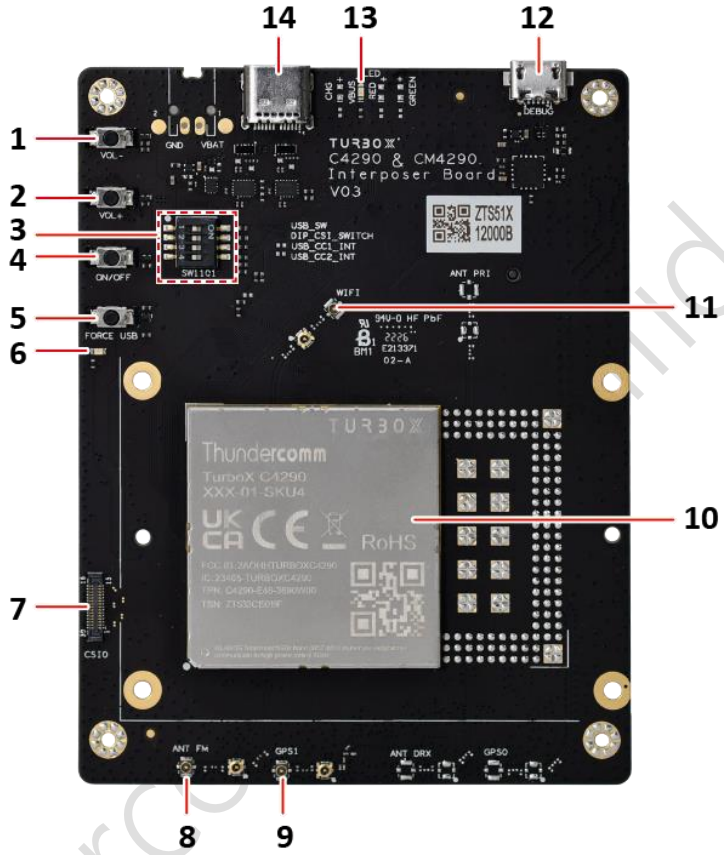
Main Board



1	12V DC jack input, 2.5mm/5.5mm	11	Camera interface #3 (NC) *	20	SD card slot	29	90-pin B2B connector, for camera interface extension
2	UART debug port, UART to USB	12	Camera interface #0	21	6-pin switch, boot configuration	30	LCD0 interface
3	USB Type-A port *	13	Camera interface #1	22	Key, Force USB boot button	31	90-pin B2B connector, for display interface extension *
4	USB Type-C port	14	LED4408, Flash LED #3 * LED4409, Flash LED #2 LED4410, Flash LED #1	23	Key, Volume up button	40	DIP switches for board function control
5	HDMI out interface, 2.0	15	Nano SIM card slot #2 *	24	Key, Volume down button	41	Power slide switch
7	PCIe expansion module connector *	16	Nano SIM card slot #1 *	25	Key, Power on button	42	• VDISP0_P/M_OUT • VDISP0_P/M_OUT_B
8	Camera interface #5 (NC) *	17	Micro USB port	26	RGB LEDs from PMIC	43	• SW3601 • SW3602
9	Camera interface #4 (NC) *	18	RGB LEDs from GPIO *	27	• Low-speed connector to low-speed expansion board • 4 x 80-pin B2B connector	44	Home button *
10	Camera interface #2	19	500-pin connector to the Interposer Board	28	• LED4401, indicating Main Board 4V2 OK • LED4403, indicating SOM power input OK	-	

* indicates that these interfaces are unavailable on C4290.

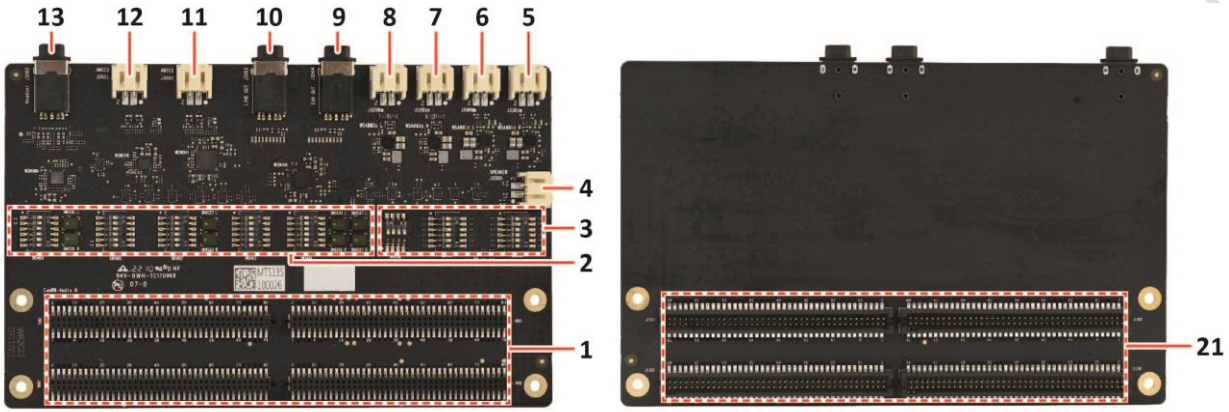
Interposer Board



1	Key, Volume down button	6	Power supply indicator	11	Wi-Fi/BT antenna connector
2	Key, Volume up button	7	Camera module connector, CSI0 *	12	UART debug port, UART to USB
3	DIP switches for board function control (including camera, USB)	8	FM antenna connector	13	VBUS Green: indicating debug USB status
4	Key, Power on button	9	GPS antenna connector	14	Type-C for debug
5	Key, Force USB boot button	10	C4290 SOM	-	

* This connector is reserved for internal CSI signal test only, and is thus unavailable to users, please contact us if you need it.

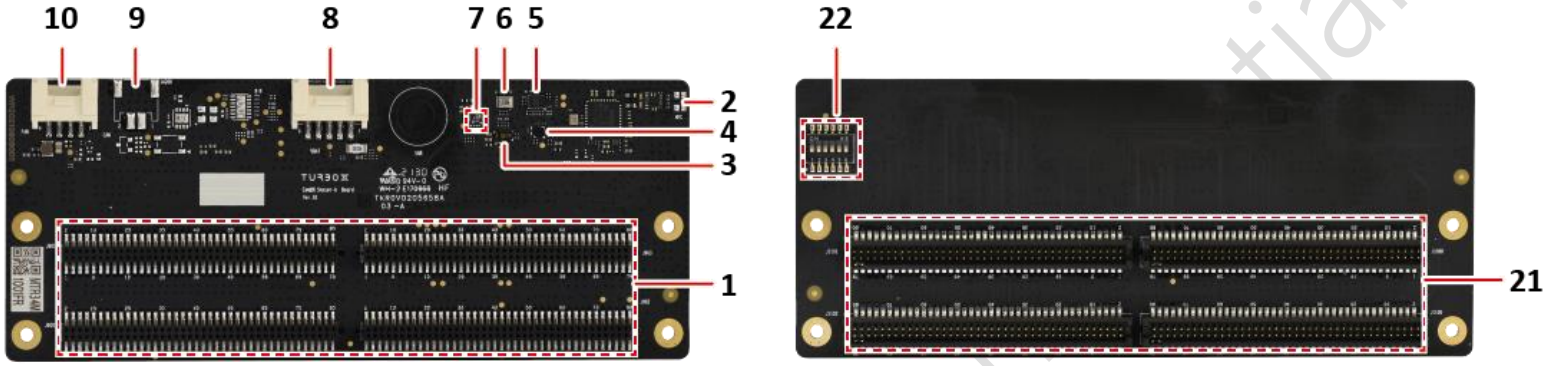
Audio Board



1	• Low-speed connector to low-speed expansion board • 4 x 80-pin B2B connector	6	Left WSA881x speaker connector *	11	Analog microphone connector 1
2	DIP switch for DMIC connection selection	7	Right WSA883x speaker connector *	12	Analog microphone connector 3
3	DIP switch to control Audio Board configuration	8	Left WSA883x speaker connector *	13	Headset connector
4	Speaker connector	9	Ear out connector *	21	• Low-speed connector to Main Board • 4 x 80-pin B2B connector
5	Right WSA881x speaker connector	10	Line out connector	11	-

* C4290 uses WSA8815 as the speaker amplifier, and thus J3301M and J3300M are available for C4290 speaker connection.

Sensor Board

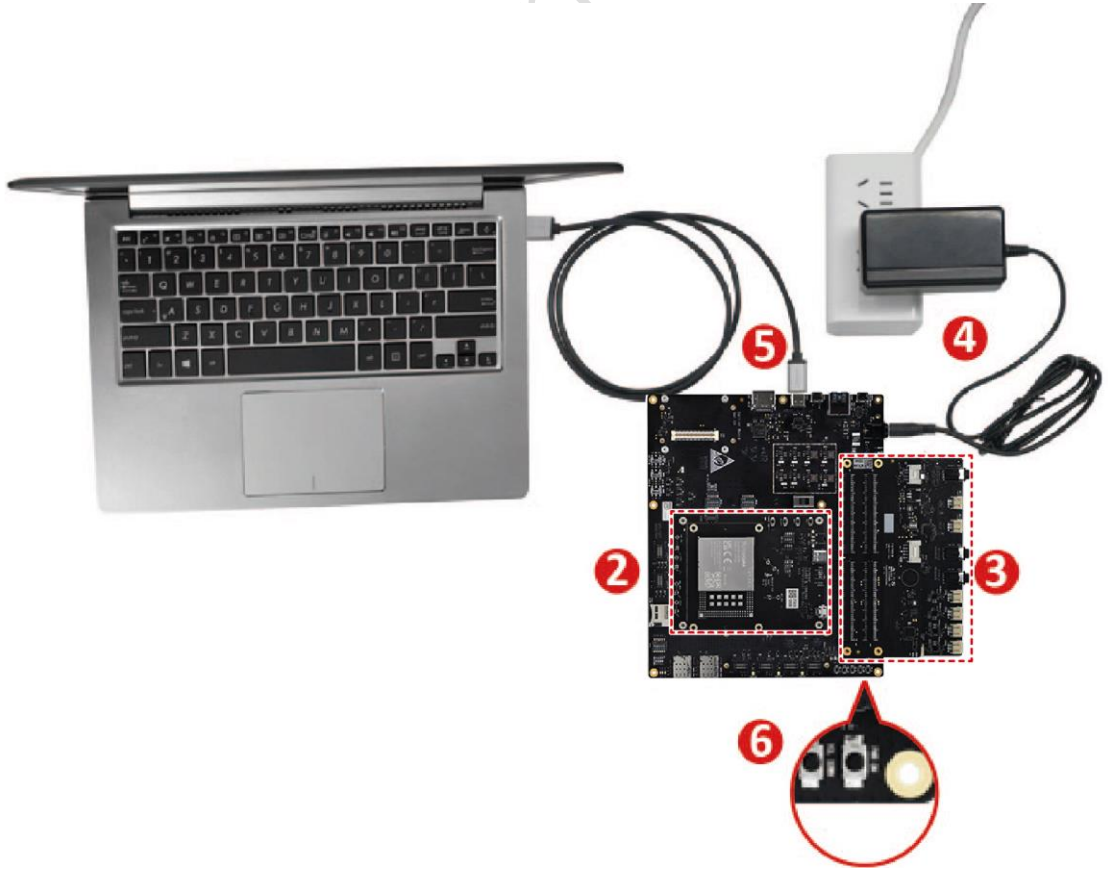


1	• Low-speed connector to low-speed expansion board • 4 x 80-pin B2B connector	5	ACC+GYRO sensor, LSM6DS3TR-C	9	CAN connector (NC)
2	NFC antenna connector	6	Pressure sensor, BMP280	10	FAN connector
3	ALS+ PROXIMITY sensor, TMD2755	7	SAR sensor (NC)	21	• Low-speed connector to Main Board • 4 x 80-pin B2B connector
4	Magnetic, AK09915C	8	Battery connector	22	DIP switch

Let’s Get Started

Follow the steps below to boot up your device.

1. Remove interposer board, sensor board, and main IO board carefully from the package.
2. Connect the interposer board to the main IO board.
3. Connect the sensor board to the main IO board.
4. Connect the power adapter to the board assembly via **12V DC in jack** (connector 1 on Main Board).
5. Connect the board assembly to a computer via
   - **USB Type-C port** (connector 4 on Main Board) if **adb** tool, supported by Android operating system, is needed.
   - **UART debug port** (connector 2 on Main Board) if debug function is needed.
6. Long press **Power on button** (connector 25 on Main Board) to boot up the device.



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