Thundercomm TurboX C410/610 Open Kit

Quick Start Guide

Rev. V1.1.1
DN: tc-g-2111.1
Package List

12V/2A AC Power Adaptor (HTE)

Open Kit Board
(With C410/C610 SOM)

Wi-Fi/BT Antenna (x1)
<table>
<thead>
<tr>
<th>No.</th>
<th>Component</th>
<th>No.</th>
<th>Component</th>
<th>No.</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Power LED</td>
<td>13</td>
<td>Speaker connector 2</td>
<td>25</td>
<td>Ethernet connector</td>
</tr>
<tr>
<td>2</td>
<td>12V DC in jack</td>
<td>14</td>
<td>Force USB Boot button</td>
<td>26</td>
<td>PMIC RGB LED</td>
</tr>
<tr>
<td>3</td>
<td>USB 3.1 Type-A connector (USB 2.0 protocol only)</td>
<td>15</td>
<td>Volume down button</td>
<td>27</td>
<td>Digital microphone 1</td>
</tr>
<tr>
<td>4</td>
<td>Heat sink fixing hole</td>
<td>16</td>
<td>Volume up button</td>
<td>28</td>
<td>Digital microphone 2</td>
</tr>
<tr>
<td>5</td>
<td>Line in connector</td>
<td>17</td>
<td>Power on button</td>
<td>29</td>
<td>Digital microphone 3</td>
</tr>
<tr>
<td>6</td>
<td>Power source selective switch</td>
<td>18</td>
<td>UART debug connector</td>
<td>30</td>
<td>Hardware version</td>
</tr>
<tr>
<td>7</td>
<td>USB 3.1 Gen1 Type C connector</td>
<td>19</td>
<td>GPIO LED</td>
<td>31</td>
<td>LCD connector</td>
</tr>
<tr>
<td>8</td>
<td>Headset connector</td>
<td>20</td>
<td>DisplayPort</td>
<td>32</td>
<td>Digital microphone 4</td>
</tr>
<tr>
<td>9</td>
<td>VBAT + pad</td>
<td>21</td>
<td>Boot config switch</td>
<td>33</td>
<td>Digital microphone 5</td>
</tr>
<tr>
<td>10</td>
<td>BAT thermal pad</td>
<td>22</td>
<td>JTAG debug connector</td>
<td>34</td>
<td>Camera MEZZ board connector</td>
</tr>
<tr>
<td>11</td>
<td>VBAT - pad</td>
<td>23</td>
<td>Micro SD card slot</td>
<td>35</td>
<td>Digital microphone 6</td>
</tr>
<tr>
<td>12</td>
<td>Speaker connector 1</td>
<td>24</td>
<td>Wi-Fi/BT antenna connector</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Boot Config Switch**

Switches 1 to 4 function together as a whole, i.e., the **boot config switch** (item 21) on the board. Combination of their ON/OFF status defines the access sequence of system files for booting the device.

Refer to the table below for detailed information.

<table>
<thead>
<tr>
<th>Switch 1</th>
<th>Switch 2</th>
<th>Switch 3</th>
<th>Switch 4</th>
<th>System File Access Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>1. eMMC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. Micro SD on SDC2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. USB on USB3.1 (SS/FS/FS)</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>1. Micro SD on SDC2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. eMMC</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>Micro SD on SDC2</td>
</tr>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>USB on USB3.1 (SS/FS/FS)</td>
</tr>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>UFS HS-G1 3.1</td>
</tr>
</tbody>
</table>

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Let’s Get Started

Follow the steps below to boot up your device.

1. Take out C410/C610 Open Kit board carefully from the package.
2. Connect the antenna to the Wi-Fi/BT antenna connector (connector 24).
3. Toggle the Boot config switch (item 21) 1-4 to the OFF position.
4. Toggle the Power source selective switch (item 6) to DC IN (uppermost position of the switch).
5. Connect the board to a computer via UART debug connector (connector 18).
   ✱ NOTE: UART debug connector (connector 18), as a debug interface, can be connected if debug function is needed.
6. Connect the power adapter to the board via 12V DC in jack (connector 2).
7. Press the power on button (connector 17) to boot up the device.
   ✱ NOTE: Connect the board to PC through USB 3.1 Gen1 USB Type-C connector (connector 7) if you need the adb function.
Optional camera modules

Sony IMX577 Camera Module Kit

Sony IMX415 Camera Module Kit
Refer to the steps below for connecting the optional camera modules.

- **Connect Sony IMX577 camera module**

  Step 1. Connect the camera module to the Mezz A board.

Step 2. Follow the sub-steps below.

  1) Align the location holes of the four screws (M1.4) of Mezz A board to the screw holes of four copper nuts of the Open Kit board.
2) Press the nuts to fasten the connection of high-speed connectors.

3) Fix the mezzanine board with screws.

Step 3. Preview the camera stream on the Snapdragon camera App.
• Connect the IMX415 camera module

Step 1. Connect the Mezz A board to the camera module.

Step 2. Follow the sub-steps below.

1) Align the location holes of the four screws (M1.4) of Mezz B board to the screw holes of four copper nuts of the Open Kit board.
2) Press the nuts to fasten the connection of high-speed connectors.

3) Fix the mezzanine board with screws.

Step 3. Preview the camera stream on the Snapdragon camera App.

Step 4. Test HDMI IN feature with the hdminin_1920x1080 App.
Contact us
Email: service@thundercomm.com
Address: 1601 McCarthy Blvd Suite R-12 Milpitas CA,95035
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