

# Royole RoKit User Manual

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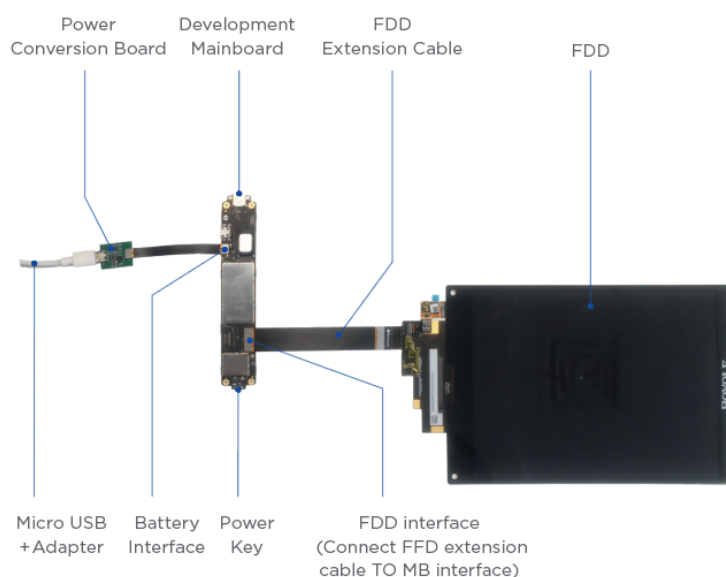
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## 1. User Guidance

### 1.1 Development model

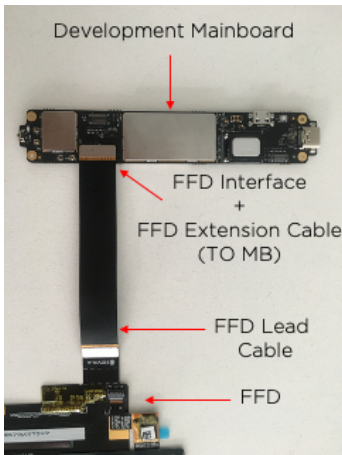
By connecting the fully flexible display (FFD) and the development motherboard to build a basic development kit, users can use the basic development kit to carry out creative development such as building applications or flexible interactions, with sensors included in the system for developers to use.

#### 1.1.1 Connection method

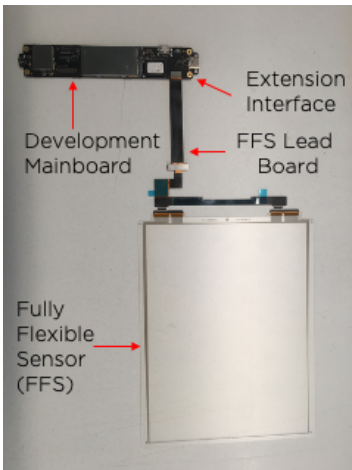
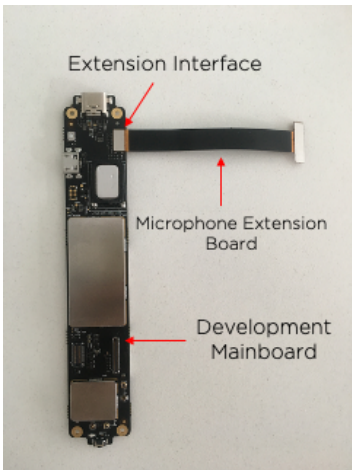
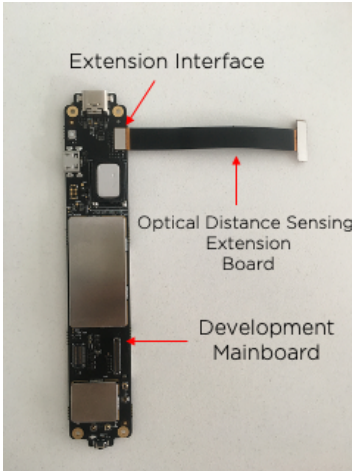


- Connect the components as shown.
- Press and hold for 3 seconds [Power on/off button] to enter boot.
- Type-C connected to the computer for development and debugging
- Please use a matching adapter for power supply (not included), or through the power bank (5V2.0A).
- To enhance Wi-Fi signal reception, please connect a Wi-Fi antenna.

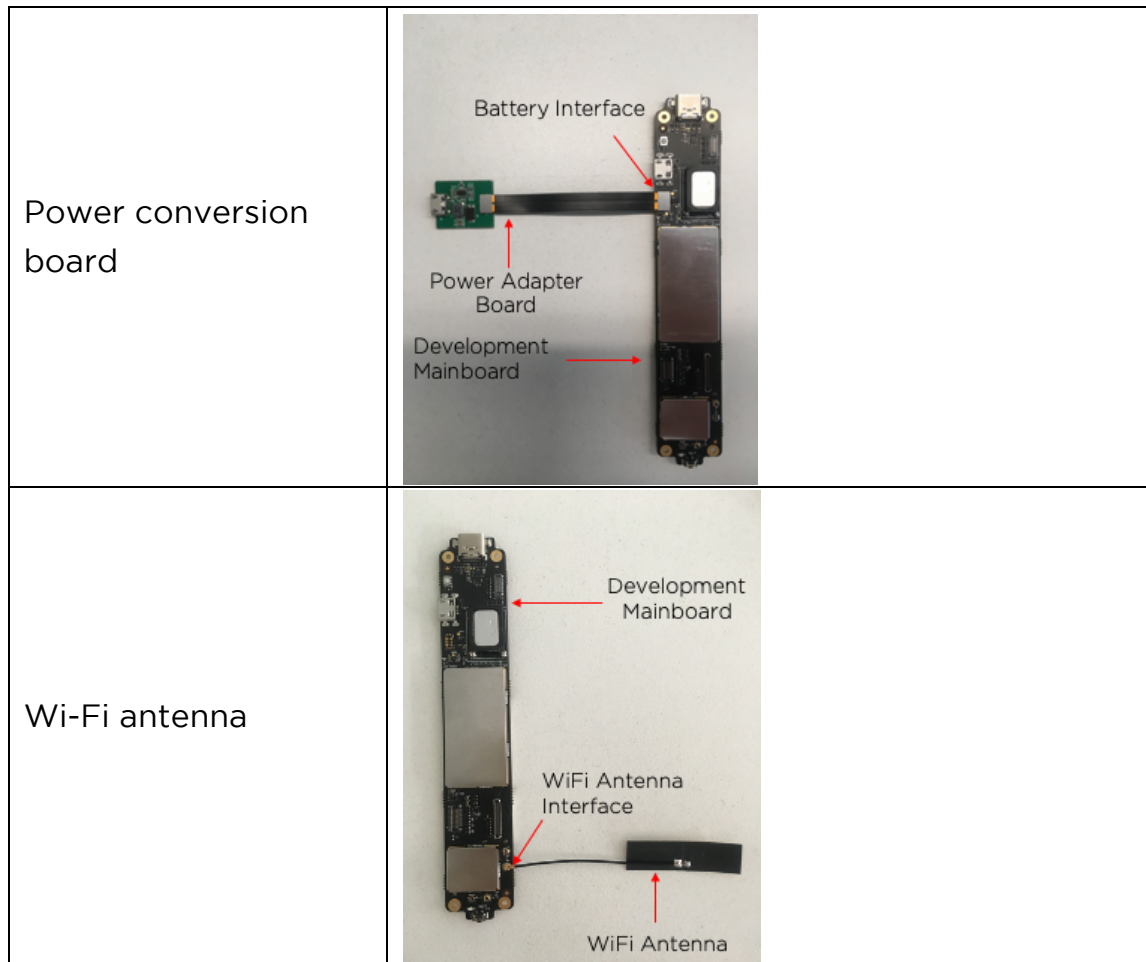
### 1.1.2 Connection method of expansion accessories

| Expansion Accessories | Connection Method                                                                                                                                                                                   |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FFD extension cable   |  <p>Development Mainboard</p> <p>FFD Interface + FFD Extension Cable (TO MB)</p> <p>FFD Lead Cable</p> <p>FFD</p> |
| FFS lead board        |  <p>FFS Lead Board</p> <p>Fully Flexible Sensor (FFS)</p> <p>FFS lead board pin definition</p>                   |



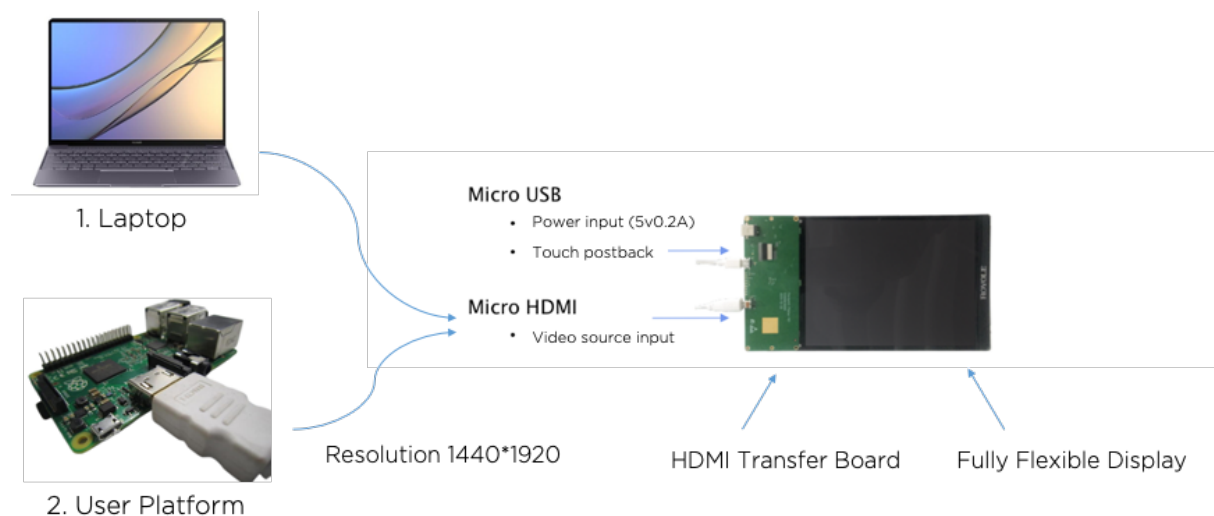
|                                          | <table><tr><th>NO.</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th></tr><tr><td>Assignment</td><td>NC</td><td>NC</td><td>INT 1.8V</td><td>RST 1.8V</td><td>SDA 1.8V</td><td>SCL 1.8V</td><td>NC</td><td>VDD_3.3V</td><td>NC</td><td>GND</td></tr></table>                                           | NO. | 1        | 2        | 3        | 4        | 5  | 6        | 7  | 8   | 9 | 10 | Assignment | NC | NC | INT 1.8V | RST 1.8V | SDA 1.8V | SCL 1.8V | NC | VDD_3.3V | NC | GND |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------|----------|----------|----------|----|----------|----|-----|---|----|------------|----|----|----------|----------|----------|----------|----|----------|----|-----|
| NO.                                      | 1                                                                                                                                                                                                                                                                                                                                                            | 2   | 3        | 4        | 5        | 6        | 7  | 8        | 9  | 10  |   |    |            |    |    |          |          |          |          |    |          |    |     |
| Assignment                               | NC                                                                                                                                                                                                                                                                                                                                                           | NC  | INT 1.8V | RST 1.8V | SDA 1.8V | SCL 1.8V | NC | VDD_3.3V | NC | GND |   |    |            |    |    |          |          |          |          |    |          |    |     |
| FFS expansion board                      |  <p>The diagram shows the FFS expansion board assembly. It includes a Development Mainboard at the top, connected via an Extension Interface to an FFS Lead Board. Below the FFS Lead Board is a Fully Flexible Sensor (FFS) panel. Red arrows point to each component.</p> |     |          |          |          |          |    |          |    |     |   |    |            |    |    |          |          |          |          |    |          |    |     |
| Microphone expansion board               |  <p>The diagram shows the Microphone expansion board assembly. It includes a Development Mainboard at the bottom, connected via an Extension Interface to a Microphone Extension Board. Red arrows point to each component.</p>                                            |     |          |          |          |          |    |          |    |     |   |    |            |    |    |          |          |          |          |    |          |    |     |
| Optical distance sensing expansion board |  <p>The diagram shows the Optical distance sensing expansion board assembly. It includes a Development Mainboard at the bottom, connected via an Extension Interface to an Optical Distance Sensing Extension Board. Red arrows point to each component.</p>              |     |          |          |          |          |    |          |    |     |   |    |            |    |    |          |          |          |          |    |          |    |     |





## 1.2 Flexible display mode

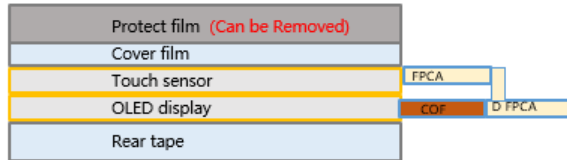
Assemble the flexible display by connecting the FFD and HDMI adapter board, the signal is then provided through the HDMI connection.



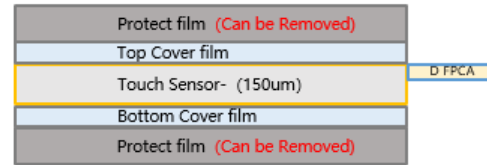
- Connect the components as shown.
- The output resolution of the host must be set as 1440\*1920.

## 2. Precautions

### Structural FFD Lamination



### Structural FFS Lamination



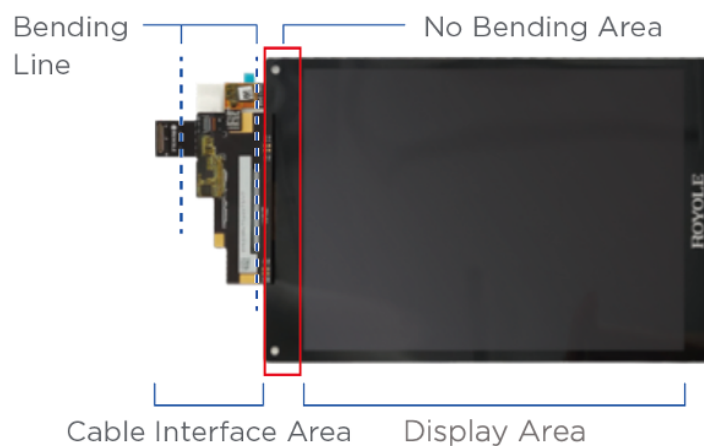
The thickness of the complete flexible display is only about 0.01 mm (10 micrometers).

In order to adapt to the daily use scenarios of developers, the thickening protection treatment is carried out.

Please abide by the following guidance for daily operation of the FF and FFS:

1. Unless you are a professional, do not tear or disassemble any laminated or protective films of the fully flexible display or fully flexible sensor which could result in ineffectiveness.
2. Please use your fingers only for touch operation to avoid any violent touch of sharp objects or other objects.
3. Please use even force to fold the fully flexible display and fully flexible sensor.

- FFD bending zone

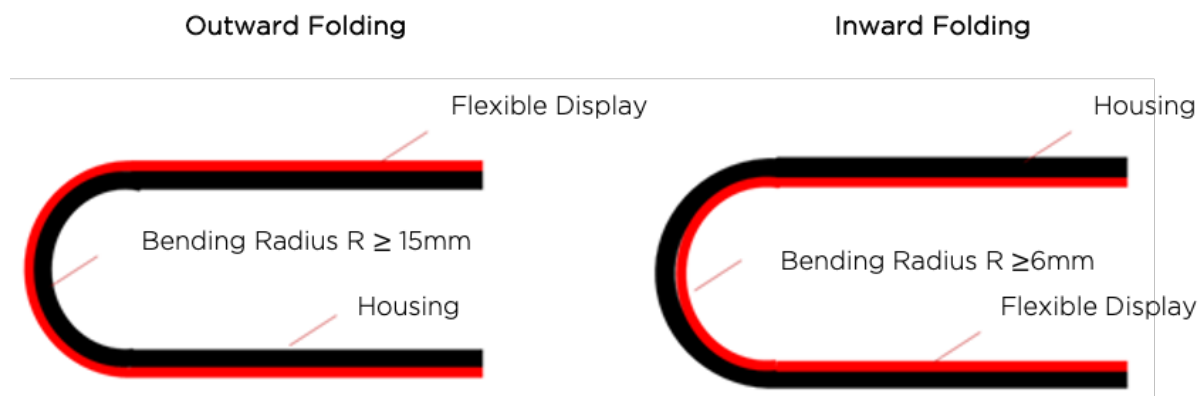


DO NOT bend the line interface area, otherwise it will cause damage to the line/device and cause malfunction.

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line/device and cause malfunction.

- FFD outer/inner bending minimum bending radius

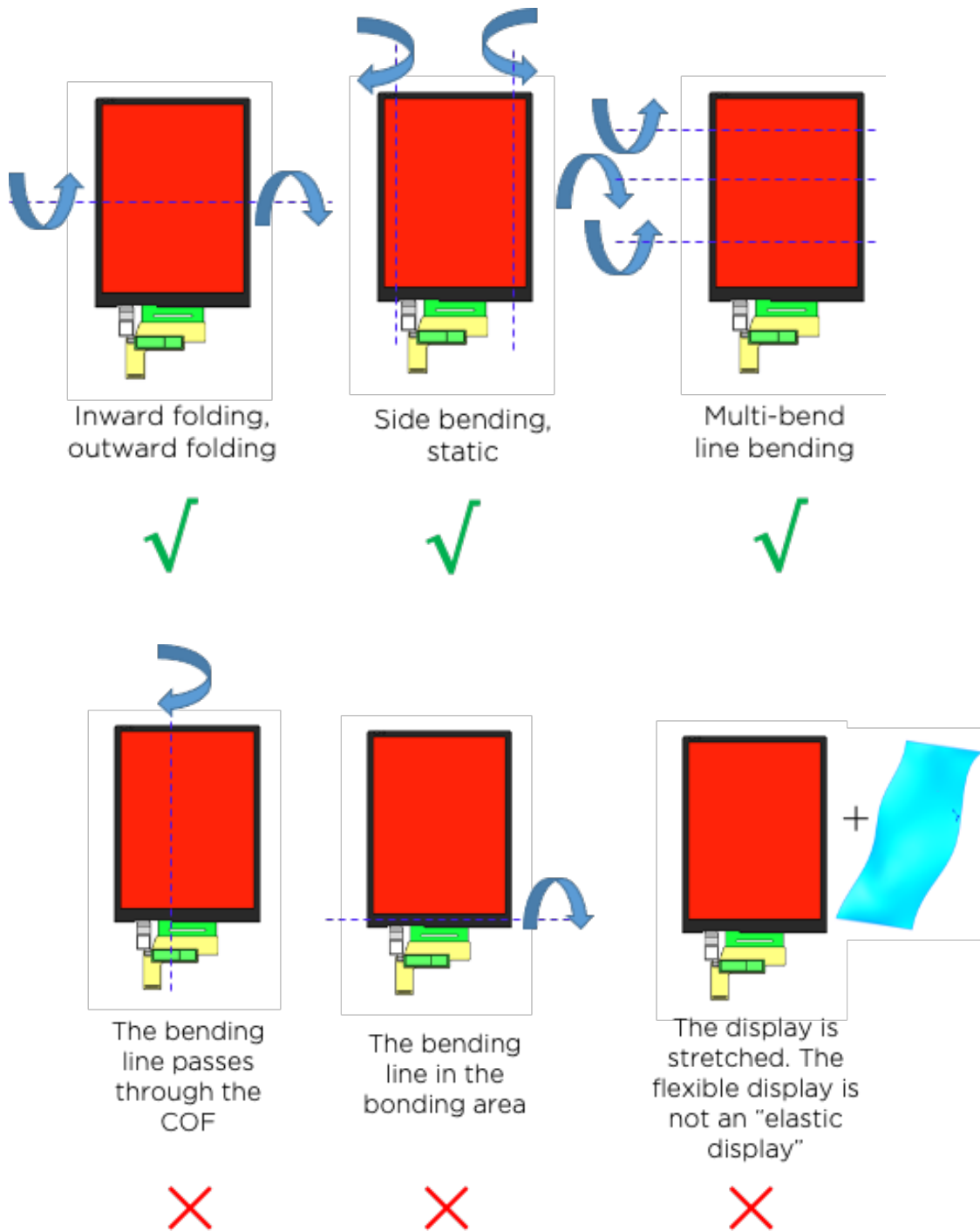


The thickness of the Royole flexible display is only about 0.01 mm, and the bending radius can reach 1 mm. Taking into account the actual use of the development and application, the corresponding cover and laminate have been added to the original flexible display. Therefore, the bending radius of the fully flexible display in the flexible development kit is 15 mm to meet the needs of different usage scenarios.

If you have a customized requirement for a fully flexible display, you can send an email to [Sales.B2B@royole.com](mailto:Sales.B2B@royole.com)



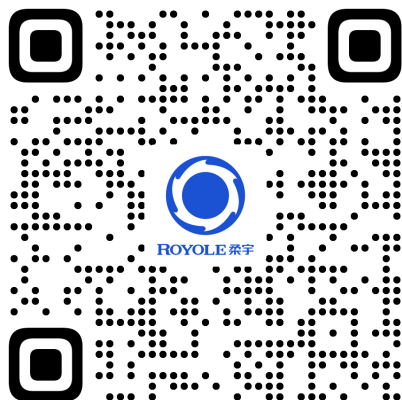
- FFD bending ways and area



### 3. Technical Support

For more development guides and technical support, please visit our official website address:

<https://global.royole.com/us/developer-rokit>



Thank you for your support!

Wishing your flexible ideas can become reality in your hands!

### Legal Disclaimer

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