

| Name                          | Price (£) | Datasheet | Dimensions (cm)       | Weight (g) | Interfaces                            | Drivers | Link  |
|-------------------------------|-----------|-----------|-----------------------|------------|---------------------------------------|---------|---|
| Raspberry Pi Zero 2 W         | 15        |           |                       |            | micro-USB<br><br>CSI-camera connector |         | <a href="https://srs.lt/d=">https://srs.lt/d=</a> |
| Quectel EC25-E                | 28        |           | 3.2cm x 2.9cm x 0.2cm |            |                                       |         | <a href="https://">https://</a>                   |
| Raspberry Pi Camera Module v3 | 23        |           |                       |            |                                       |         | <a href="https://">https://</a>                   |
| USB-OTG adapter               | 2         |           |                       |            |                                       |         | <a href="https://">https://</a>                   |
| Antenna                       |           |           |                       |            |                                       |         |   |
| Micro SIM Card                |           |           |                       |            |                                       |         |   |
|                               |           |           |                       |            |                                       |         |   |
|                               |           |           |                       |            |                                       |         |   |
|                               |           |           |                       |            |                                       |         |   |

## SIM requirements

<https://www.4g.co.uk/4g-frequencies-uk-need-know/>

<https://4grouter.co.uk/4g-and-5g-frequencies-in-the-uk/>

| FREQUENCY | BAND                     | 2G/3G/4G/5G | NETWORK  |
|-----------|--------------------------|-------------|----------|
| 800MHz    | Band 20                  | 4G          | Vodafone |
| 900MHz    | Band 8                   | 2G & 3G     | Vodafone |
| 1400MHz   | Band 32                  | 4G          | Vodafone |
| 1800MHz   | Band 3                   | 2G          | Vodafone |
| 2100MHz   | Band 1                   | 3G          | Vodafone |
| 2600MHz   | Band 7 & Band 38         | 4G          | Vodafone |
| 3500MHz   | Band 42 / 5G NR Band n78 | 5G          | Vodafone |
| 800MHz    | Band 20                  | 4G          | O2       |
| 900MHz    | Band 8                   | 2G & 3G     | O2       |

| FREQUENCY | BAND                     | 2G/3G/4G/5G | NETWORK |
|-----------|--------------------------|-------------|---------|
| 1800MHz   | Band 3                   | 2G & 4G     | O2      |
| 2100MHz   | Band 1                   | 3G & 4G     | O2      |
| 2300Mhz   | Band 40                  | 4G          | O2      |
| 3500MHz   | Band 42 / 5G NR Band n78 | 5G          | O2      |
| 800MHz    | Band 20                  | 4G          | EE      |
| 1800MHz   | Band 3                   | 3G & 4G     | EE      |
| 2100MHz   | Band 1                   | 3G & 4G     | EE      |
| 2600MHz   | Band 7 & Band 38         | 4G          | EE      |
| 3500MHz   | Band 42 / 5G NR Band n78 | 5G          | EE      |
| 800MHz    | Band 20                  | 4G          | Three   |
| 1400MHz   | Band 32                  | 4G          | Three   |
| 1800MHz   | Band 3                   | 4G          | Three   |
| 2100MHz   | Band 1                   | 3G          | Three   |
| 3500MHz   | Band 42 / 5G NR Band n78 | 5G          | Three   |

The Quectel EC25-E modem is compatible with Vodafone, O2, EE and Three networks.

|          | BAND  | NETWORK   |
|----------|---|---|
| LTE-FDD  | Band 1, Band 3, Band 5<br>Band 7, Band 8, Band 20 | Vodafone - 1, 3, 7, 8, 20<br>O2 - 1, 3, 8, 20<br>EE - 1, 3, 7, 20<br>Three - 1, 3, 20 |
| LTE-TDD  | Band 38, Band 40, Band 41                         | Vodafone - 38<br>O2 - 40<br>EE - 38<br>Three -  |
| WCDMA    | Band 1, Band 5, Band 8                            | Vodafone - 1, 8<br>O2 - 1, 8<br>EE - 1<br>Three - 1                                   |
| GSM/EDGE | Band 3, Band 8                                    | Vodafone - 3, 8<br>O2 - 3, 8<br>EE - 3<br>Three - 3                                   |

## Antenna requirements

For optimal performance, the antenna should:

- Support LTE Bands 1, 3, 5, 7, 8, 20, 38, and 40.
- Have wideband LTE coverage (698MHz–2700MHz or higher).
- Be designed for UK 4G networks.