

# Qingdao Yeelink Information Technology Co., Ltd.

## SAR COMPLIANCE REPORT

**Report Type:**  
FCC SAR assessment report

**Model:**  
TH-EFR32-MG21

**REPORT NUMBER:**  
2501B1263SHA-003

**ISSUE DATE:**  
May 16, 2025

**DOCUMENT CONTROL NUMBER:**  
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**TEST REPORT**

Telephone: 86 21 6127 8200  
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Report no.: 2501B1263SHA-003

**Applicant** : Qingdao Yeelink Information Technology Co., Ltd.  
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Province, P.R.China

**Manufacturer** : Qingdao Yeelink Information Technology Co., Ltd.  
10F-B4, Building B, Qingdao International Innovation Park, No.1  
Keyuan Weiyi Road, Laoshan District, Qingdao City, Shandong  
Province, P.R.China

**FCC ID** : 2ABEU-THMG21

**SUMMARY:**

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06  
FCC Part2.1091, FCC Part1.1307(b)

**PREPARED BY:**



Project Engineer  
Erick Liu

**REVIEWED BY:**



Reviewer  
Wakeyou Wang

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## Revision History

| Report No.       | Version | Description             | Issued Date  |
|------------------|---------|-------------------------|--------------|
| 2501B1263SHA-003 | Rev. 01 | Initial issue of report | May 16, 2025 |
|                  |         |                         |              |
|                  |         |                         |              |

## 1 GENERAL INFORMATION

### 1.1 Description of Equipment Under Test (EUT)

|                       |                                                                                       |
|-----------------------|---------------------------------------------------------------------------------------|
| Product name:         | IoT Module With Thread                                                                |
| Type/Model:           | TH-EFR32-MG21                                                                         |
| Description of EUT:   | EUT is a wireless module, it has only one model.                                      |
| Rating:               | DC 3.3±0.3 V                                                                          |
| Category of EUT:      | Class B                                                                               |
| EUT type:             | <input checked="" type="checkbox"/> Table top <input type="checkbox"/> Floor standing |
| Software Version:     | /                                                                                     |
| Hardware Version:     | /                                                                                     |
| Sample received date: | February 23, 2025                                                                     |
| Date of test:         | February 25, 2025 – February 27, 2025                                                 |

## 1.2 Technical Specification

|                      |                         |
|----------------------|-------------------------|
| Frequency Band:      | 2400MHz ~ 2483.5MHz     |
| Bluetooth Version:   | Bluetooth LE            |
| Type of Modulation:  | GFSK                    |
| Channel Number:      | 40                      |
| Data Rate:           | 1 Mbps                  |
| Channel Separation:  | 2 MHz                   |
| Antenna Information: | PCB antenna, 1.0dBi max |

|                      |                         |
|----------------------|-------------------------|
| Frequency Range:     | 2405-2480MHz            |
| Protocol:            | IEEE 802.15.4           |
| Channel Number:      | 16                      |
| Channel Separation:  | 5MHz                    |
| Antenna Information: | PCB antenna, 1.0dBi max |

**Note:**

This information is supplied by the applicant. Any change on this value would result in different test data / conclusion.

### 1.3 Description of Test Facility

|            |                                                                        |
|------------|------------------------------------------------------------------------|
| Name:      | Intertek Testing Services (Shanghai FTZ) Co., Ltd.                     |
| Address:   | Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China |
| Telephone: | 86 21 61278200                                                         |
| Telefax:   | 86 21 54262353                                                         |

|                                                                                   |                                                                               |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| The test facility is recognized, certified, or accredited by these organizations: | CNAS Accreditation Lab<br>Registration No. CNAS L21189                        |
|                                                                                   | FCC Accredited Lab<br>Designation Number: CN0175                              |
|                                                                                   | IC Registration Lab<br>CAB identifier: CN0014                                 |
|                                                                                   | VCCI Registration Lab<br>Registration No.: R-14243, G-10845, C-14723, T-12252 |
|                                                                                   | A2LA Accreditation Lab<br>Certificate Number: 3309.02                         |

## 2 SAR Assessment

Test result: Pass

### 2.1 SAR Test Exclusion Limit

100 MHz – 6 GHz and  $\leq 50$  mm

| MHz  | 5   | 10  | 15  | 20  | 25  | mm                                      |
|------|-----|-----|-----|-----|-----|-----------------------------------------|
| 150  | 39  | 77  | 116 | 155 | 194 | SAR Test<br>Exclusion<br>Threshold (mW) |
| 300  | 27  | 55  | 82  | 110 | 137 |                                         |
| 450  | 22  | 45  | 67  | 89  | 112 |                                         |
| 835  | 16  | 33  | 49  | 66  | 82  |                                         |
| 900  | 16  | 32  | 47  | 63  | 79  |                                         |
| 1500 | 12  | 24  | 37  | 49  | 61  |                                         |
| 1900 | 11  | 22  | 33  | 44  | 54  |                                         |
| 2450 | 10  | 19  | 29  | 38  | 48  |                                         |
| 3600 | 8   | 16  | 24  | 32  | 40  |                                         |
| 5200 | 7   | 13  | 20  | 26  | 33  |                                         |
| 5400 | 6   | 13  | 19  | 26  | 32  |                                         |
| 5800 | 6   | 12  | 19  | 25  | 31  |                                         |
|      |     |     |     |     |     |                                         |
| MHz  | 30  | 35  | 40  | 45  | 50  | mm                                      |
| 150  | 232 | 271 | 310 | 349 | 387 | SAR Test<br>Exclusion<br>Threshold (mW) |
| 300  | 164 | 192 | 219 | 246 | 274 |                                         |
| 450  | 134 | 157 | 179 | 201 | 224 |                                         |
| 835  | 98  | 115 | 131 | 148 | 164 |                                         |
| 900  | 95  | 111 | 126 | 142 | 158 |                                         |
| 1500 | 73  | 86  | 98  | 110 | 122 |                                         |
| 1900 | 65  | 76  | 87  | 98  | 109 |                                         |
| 2450 | 57  | 67  | 77  | 86  | 96  |                                         |
| 3600 | 47  | 55  | 63  | 71  | 79  |                                         |
| 5200 | 39  | 46  | 53  | 59  | 66  |                                         |
| 5400 | 39  | 45  | 52  | 58  | 65  |                                         |
| 5800 | 37  | 44  | 50  | 56  | 62  |                                         |

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100 MHz – 6 GHz and > 50 mm

| MHz  | 50  | 60  | 70  | 80  | 90  | 100 | 110 | 120 | 130 | 140  | 150  | 160  | 170  | 180  | 190  | mm |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|----|
| 100  | 474 | 481 | 487 | 494 | 501 | 507 | 514 | 521 | 527 | 534  | 541  | 547  | 554  | 561  | 567  | mW |
| 150  | 387 | 397 | 407 | 417 | 427 | 437 | 447 | 457 | 467 | 477  | 487  | 497  | 507  | 517  | 527  |    |
| 300  | 274 | 294 | 314 | 334 | 354 | 374 | 394 | 414 | 434 | 454  | 474  | 494  | 514  | 534  | 554  |    |
| 450  | 224 | 254 | 284 | 314 | 344 | 374 | 404 | 434 | 464 | 494  | 524  | 554  | 584  | 614  | 644  |    |
| 835  | 164 | 220 | 275 | 331 | 387 | 442 | 498 | 554 | 609 | 665  | 721  | 776  | 832  | 888  | 943  |    |
| 900  | 158 | 218 | 278 | 338 | 398 | 458 | 518 | 578 | 638 | 698  | 758  | 818  | 878  | 938  | 998  |    |
| 1500 | 122 | 222 | 322 | 422 | 522 | 622 | 722 | 822 | 922 | 1022 | 1122 | 1222 | 1322 | 1422 | 1522 |    |
| 1900 | 109 | 209 | 309 | 409 | 509 | 609 | 709 | 809 | 909 | 1009 | 1109 | 1209 | 1309 | 1409 | 1509 |    |
| 2450 | 96  | 196 | 296 | 396 | 496 | 596 | 696 | 796 | 896 | 996  | 1096 | 1196 | 1296 | 1396 | 1496 |    |
| 3600 | 79  | 179 | 279 | 379 | 479 | 579 | 679 | 779 | 879 | 979  | 1079 | 1179 | 1279 | 1379 | 1479 |    |
| 5200 | 66  | 166 | 266 | 366 | 466 | 566 | 666 | 766 | 866 | 966  | 1066 | 1166 | 1266 | 1366 | 1466 |    |
| 5400 | 65  | 165 | 265 | 365 | 465 | 565 | 665 | 765 | 865 | 965  | 1065 | 1165 | 1265 | 1365 | 1465 |    |
| 5800 | 62  | 162 | 262 | 362 | 462 | 562 | 662 | 762 | 862 | 962  | 1062 | 1162 | 1262 | 1362 | 1462 |    |

< 100 MHz and < 200 mm

| MHz  | < 50 | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  | 130  | 140  | 150  | 160  | 170  | 180  | 190  | mm |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|
| 100  | 237  | 474  | 481  | 487  | 494  | 501  | 507  | 514  | 521  | 527  | 534  | 541  | 547  | 554  | 561  | 567  | mW |
| 50   | 308  | 617  | 625  | 634  | 643  | 651  | 660  | 669  | 677  | 686  | 695  | 703  | 712  | 721  | 729  | 738  |    |
| 10   | 474  | 948  | 961  | 975  | 988  | 1001 | 1015 | 1028 | 1041 | 1055 | 1068 | 1081 | 1095 | 1108 | 1121 | 1135 |    |
| 1    | 711  | 1422 | 1442 | 1462 | 1482 | 1502 | 1522 | 1542 | 1562 | 1582 | 1602 | 1622 | 1642 | 1662 | 1682 | 1702 |    |
| 0.1  | 948  | 1896 | 1923 | 1949 | 1976 | 2003 | 2029 | 2056 | 2083 | 2109 | 2136 | 2163 | 2189 | 2216 | 2243 | 2269 |    |
| 0.05 | 1019 | 2039 | 2067 | 2096 | 2125 | 2153 | 2182 | 2211 | 2239 | 2268 | 2297 | 2325 | 2354 | 2383 | 2411 | 2440 |    |
| 0.01 | 1185 | 2370 | 2403 | 2437 | 2470 | 2503 | 2537 | 2570 | 2603 | 2637 | 2670 | 2703 | 2737 | 2770 | 2803 | 2837 |    |

## TEST REPORT

### 2.2 Assessment Results

Seen from the original test report 2501B1263SHA-001 and 2501B1263SHA-002:

The highest EIRP adjusted with tune-up tolerance is 9.98dBm =  
9.95mW < 10mW (Test Exclusion Thresholds of 2450MHz at 5mm).

The BLE and Thread cannot support Simultaneous transmission,

Therefore, the SAR requirement is deemed to be satisfied without test.

\*\*\*\*\* END \*\*\*\*\*