

# BOM

|    |                     |                                                                   |    |                                                                                                                                                                                                |  |
|----|---------------------|-------------------------------------------------------------------|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1  | PCB                 | BND-MTK8176-F55P V1.2-2/8 laminate /OSP+/blue oil white silkprint | 1  |                                                                                                                                                                                                |  |
| 2  | IC                  | master control MT8176V/A VFBGA825                                 | 1  | UM1                                                                                                                                                                                            |  |
| 3  | IC                  | PMIC MT6391A/B TFBGA266                                           | 1  | PU1704                                                                                                                                                                                         |  |
| 4  | IC                  | NCEMAD9D-16G                                                      | 1  | U3002                                                                                                                                                                                          |  |
| 5  | IC                  | LPDDR3/2G/BGA178/SU512M32V01MD2LPF-107BT                          | 1  | U1                                                                                                                                                                                             |  |
| 6  | IC                  | LPDDR3/1G/BGA178/NCLD3B1256M32/2256M32                            | 1  | U2                                                                                                                                                                                             |  |
| 7  | IC                  | HL7026 VQFN24 3A                                                  | 1  | U5                                                                                                                                                                                             |  |
| 8  | IC                  | MXDLN16G uDFN6P                                                   | 1  | U5103                                                                                                                                                                                          |  |
| 9  | gyroscope IC        | MPU6880/MPU6881 (MP688)                                           | 1  | U1609/U7                                                                                                                                                                                       |  |
| 10 | WIFI/BT/GPS         | WIFI/BT/GPS MT6630QP WLCSP113                                     | 1  | U19                                                                                                                                                                                            |  |
| 11 | depressurization IC | TCS2915-E18 SOT23-5 1.8V 500mA                                    | 1  | U3                                                                                                                                                                                             |  |
| 12 | depressurization IC | TT8315RE SOT23-5 1.5A                                             | 1  | U20                                                                                                                                                                                            |  |
| 13 | IC                  | TCS4150-E SOT23-5 FB0.6 1.5A                                      | 1  | U901                                                                                                                                                                                           |  |
| 14 | back light IC       | TCS5530 SOT23-6 FB0.3V                                            | 1  | U15                                                                                                                                                                                            |  |
| 15 | back light IC       | TCS9708(9607) SOT23-5 800mA                                       | 1  | U4                                                                                                                                                                                             |  |
| 16 | IC                  | DA9212-AKU2 WLCSP42 4.4A                                          | 1  | PU2401                                                                                                                                                                                         |  |
| 17 | IC                  | HXD019D DFN8                                                      | 1  | U13                                                                                                                                                                                            |  |
| 18 | IC                  | TPS61280AYEER CSP16 4A                                            | 1  | PU1706                                                                                                                                                                                         |  |
| 19 | IC                  | TCS9228 High-Speed USB 2.0 Switch                                 | 1  | U6                                                                                                                                                                                             |  |
| 20 | Chip Resistor       | 0R/0201±5%                                                        | 35 | R6 R37 R62 R67 R85 R150 R152 R153 R290 R292 R521 R914 R915 R916 R917 R918 R919 R920 R921 R922 R1415 R1416 R2037 R5120 PR1519 PR1535 PR1536 PR1541 PR1543 PR1548 PR1549 PR1554 PR2413 RD17 RD18 |  |
| 21 | SMD Resistor        | 0R/0402±5%                                                        | 12 | R1 R36 R43 R136 R137 R139 R163 R285 R300 R1022 R3004 R3005                                                                                                                                     |  |
| 22 | SMD Resistor        | 0R/0603±5%                                                        | 2  | R140 PR1547                                                                                                                                                                                    |  |
| 23 | SMD Resistor        | 0R/0805±5%                                                        | 1  | R6671                                                                                                                                                                                          |  |
| 24 | SMD Resistor        | 10R/0402±5%                                                       | 1  | R40                                                                                                                                                                                            |  |
| 25 | SMD Resistor        | 22R/0201±5%                                                       | 1  | R1007                                                                                                                                                                                          |  |
| 27 | SMD Resistor        | 100R/0201±5%                                                      | 2  | R2232 R3006                                                                                                                                                                                    |  |
| 28 | SMD Resistor        | 1K/0201±5%                                                        | 5  | R30 R34 R2233 PR1504 PR1555                                                                                                                                                                    |  |
| 29 | SMD Resistor        | 10K/0201±5%                                                       | 9  | R2 R35 R51 R64 R160 R1401 R1402 R1901 R5110                                                                                                                                                    |  |
| 30 | SMD Resistor        | 4.7K/0201±5%                                                      | 15 | R50 R501 R502 R506 R507 R508 R509 R510 R511 R512 R513 PR1556 PR2411 PR1501 PR1509                                                                                                              |  |
| 31 | SMD Resistor        | 47K/0201±5%                                                       | 1  | R120                                                                                                                                                                                           |  |
| 32 | SMD Resistor        | 100K/0201±5%                                                      | 8  | R27 R28 R31 R32 R109 R171 R901 PR1510                                                                                                                                                          |  |

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|----|----------------------|--------------------------------|---|-------------------------------|--|
| 33 | SMD Resistor         | 100R/0402 $\pm$ 5%             | 1 | R13                           |  |
| 34 | SMD Resistor         | 510R/0402 $\pm$ 5%             | 2 | R17 R18                       |  |
| 35 | SMD Resistor         | 2K/0402 $\pm$ 5%               | 3 | R3 R22 R24                    |  |
| 37 | SMD Resistor         | 4.7K/0402 $\pm$ 5%             | 3 | R9 R19 R21                    |  |
| 38 | SMD Resistor         | 6.8K/0402 $\pm$ 5%             | 1 | R45                           |  |
| 39 | SMD Resistor         | 10K/0402 $\pm$ 5%              | 6 | R5 R10 R29 R46 R47 R48        |  |
| 40 | SMD Resistor         | 20K/0402 $\pm$ 5%              | 1 | R12                           |  |
| 41 | SMD Resistor         | 27K/0402 $\pm$ 5%              | 1 | R41                           |  |
| 42 | SMD Resistor         | 47K/0402 $\pm$ 5%              | 3 | R4 R26 R39                    |  |
| 43 | SMD precise Resistor | 68K/0402 $\pm$ 1%              | 1 | R108                          |  |
| 44 | SMD precise Resistor | 0.01R/1206 $\pm$ 1%            | 1 | R2235                         |  |
| 45 | SMD precise Resistor | 6.8R/0603 $\pm$ 1%             | 1 | R117                          |  |
| 46 | SMD precise Resistor | 240R/0201 $\pm$ 1%             | 3 | R401 RD7 RD15                 |  |
| 47 | SMD precise Resistor | 1K/0201 $\pm$ 1%               | 5 | R20 R402 R403 R1410 R1413     |  |
| 48 | SMD precise Resistor | 1.5K/0201 $\pm$ 1%             | 4 | R503 R504 R1411 R1412         |  |
| 50 | SMD precise Resistor | 3.3K/0201 $\pm$ 1%             | 4 | R73 R903 R2214 PR1550         |  |
| 51 | SMD precise Resistor | 5.1K/0201 $\pm$ 1%             | 2 | R518 R519                     |  |
| 52 | SMD precise Resistor | 10K/0201 $\pm$ 1%              | 6 | R7 R8 R2030 R2036 R2038 R2039 |  |
| 53 | SMD precise Resistor | 12K/0201 $\pm$ 1%              | 3 | R72 R520 R902                 |  |
| 55 | SMD precise Resistor | 24K/0201 $\pm$ 1%              | 2 | R2213 R2236                   |  |
| 57 | SMD precise Resistor | 330K/0201 $\pm$ 1%             | 1 | R2212                         |  |
| 58 | SMD precise Resistor | 1M/0201 $\pm$ 1%               | 2 | R138 R517                     |  |
| 59 | SMD precise Resistor | 5.1M/0201 $\pm$ 1%             | 1 | R15                           |  |
| 60 | SMD capacitor        | 1pF/0201/ $\pm$ 5%50V COG      | 3 | C231 C234 C313                |  |
| 62 | SMD capacitor        | 2pF/0402/ $\pm$ 5%/50V COG     | 1 | C212                          |  |
| 63 | SMD capacitor        | 4pF/0201/ $\pm$ 5%/50V COG     | 2 | C216 C218                     |  |
| 65 | SMD capacitor        | 10pF/0201/ $\pm$ 5%50V COG     | 4 | C211 C213 C220 C237           |  |
| 67 | SMD capacitor        | 18pF/0201/ $\pm$ 5%50V COG     | 2 | C301 C302                     |  |
| 68 | SMD capacitor        | 33pF/0201/ $\pm$ 5%50V COG     | 4 | C229 C902 C1405 C1406         |  |
| 70 | SMD capacitor        | 68pF/0402/ $\pm$ 5%/50V COG    | 1 | C352                          |  |
| 71 | SMD capacitor        | 100pF/0201/ $\pm$ 5%/50V COG   | 3 | C19 C224 C227                 |  |
| 72 | SMD capacitor        | 1000pF/0201/ $\pm$ 10%/50V X5R | 1 | C225                          |  |
| 73 | SMD capacitor        | 10nF/0201/ $\pm$ 10%/16V X5R   | 1 | C222                          |  |
| 74 | SMD capacitor        | 47nF/0402/ $\pm$ 10%/25V X5R   | 1 | C2060                         |  |

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|----|---------------|------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 75 | SMD capacitor | 100nF/0201/±20%/16V X5R            | 82  | C2 C3 C4 C15 C16 C22 C64 C195 C201 C202<br>C205 C208 C253 C502 C904 C1003 C1006 C1008<br>C1010 C1408 C1414 C1606 C1611 C1614 C1616<br>C3013 C6683 C6694 C6695 C6707 C6715 C6717<br>C6728 C9126 C9210 C9211 C9213 C9214 CD8 CD10<br>CD19 CD24 PC1514 PC1528 PC1529 PC1530 PC1531<br>PC1533 PC1535 PC2410 C401 C402 C403 C3012<br>C3015 C3017 C3018 C6611 C6612 C6662 C6679<br>C6681 C6687 C6926 C9209 C9212 CD12 CD13 CD14<br>CD17 CD18 CD23 CD27 CD28 CD36 CD37 CD38 CD39<br>CD55 CD57 CD58                                                                                                                                                                                                                    |  |
| 76 | SMD capacitor | 100nF/0402/±20%/16V X5R            | 1   | C250                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| 77 | SMD capacitor | 1uF/0201/±20%/10V X5R              | 106 | C14 C196 C197 C203 C204 C221 C223 C226 C228<br>C245 C295 C297 C298 C300 C1415 C1416 C1615<br>C1902 C6708 C6716 C6722 C6723 C6725 C6726<br>C6727 C10153 C10154 PC1532 PC1534 PC1 PC1502<br>PC1505 PC1513 PC1541 PC1545 PC1546 PC1547 C13<br>C501 C3011 C6656 C6660 C6664 C6667 C6669<br>C6671 C6674 C6675 C6677 C6680 C6682 C6686<br>C6688 C6689 C6690 C6691 C6692 C6693 C6696<br>C6705 C6706 C6713 C6714 C6724 C10160 C10161<br>C10162 C10163 C10165 C10166 C10167 C10168<br>C10169 C10170 C10171 C10172 C10173 C10178<br>C10179 C10180 C10181 C10208 C10209 C10210<br>C10211 C10212 C10213 C10214 C10215 C10216<br>C10217 C10218 CD29 CD30 CD31 CD33 CD34 CD35<br>CD40 CD41 CD42 CD43 CD44 CD45 PC1536 PC1538 |  |
| 78 | SMD capacitor | 1uF/0402/±10%/10V X5R              | 2   | C142 C2208                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| 79 | SMD capacitor | 2.2uF/0402/±20%/10V X5R            | 25  | C236 C299 C901 C1007 C1009 C3014 PC2 PC1517<br>PC1518 PC1521 PC1522 PC1523 PC1524 PC1526<br>PC1527 PC1537 PC1540 PC1544 PC1548 C3016<br>C6684 C6685 C10219 C10220 C26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |
| 80 | SMD capacitor | 2.2uF/0603/±20%/10V X5R            | 2   | C24 C2028                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
| 81 | SMD capacitor | 2.2uF/0603/±20%/25V X5R            | 1   | C114                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| 82 | SMD capacitor | 4.7uF/0402/±20%/10V X5R            | 17  | C193 C194 C200 C209 C219 C294 C296 C1002<br>C1005 C1012 C2019 PC1501 PC1504 PC1507 PC1508<br>PC1509 PC1510                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| 83 | SMD capacitor | 10uF/0603/±20%/6.3V X5R            | 31  | C112 C115 C198 C199 C903 C1417 C2020 C2058<br>C2059 C6661 C6663 C6670 C6672 C6676 C6699<br>C6711 C6712 C6719 C6720 C10177 C10206 C10207<br>PC1515 PC1516 PC1519 PC1520 PC1525 PC2401<br>PC2402 PC2405 PC2406                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
| 84 | SMD capacitor | 22uF/0603/±20%/6.3V X5R            | 12  | C17 C44 C62 C10150 C10152 C10205 PC1511<br>PC1539 PC2403 PC2404 PC2407 PC2408                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
| 85 | SMD capacitor | 47uF/0805/±20%/6.3V X5R H≤1mm      | 4   | C6697 C6698 C6709 C6710                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| 86 | SMD capacitor | 100uF/B/6.3V B Tantalum Capacitors | 1   | C612                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |

|     |                              |                                                                          |   |                                    |  |
|-----|------------------------------|--------------------------------------------------------------------------|---|------------------------------------|--|
| 87  | Power inductor               | 2. 2uH/3015 ±20% IDC≥1. 6A                                               | 1 | L8                                 |  |
| 88  | inductance                   | 4. 7uH/252012 ±20% IDC≥1. 5A                                             | 1 | L901                               |  |
| 89  | inductance                   | 10uH/3015 ±20% IDC≥0. 72A                                                | 1 | L28                                |  |
| 90  | inductance                   | 0. 47uH/252012 ±20% IDC≥4A                                               | 5 | PL2103 PL2401 PL2402 PL2403 PL2404 |  |
| 91  | inductance                   | 0. 68uH/252012 ±20% IDC≥4A                                               | 4 | PL1501 PL1503 PL1505 PL1508        |  |
| 92  | inductance                   | 0. 8nH/0201±0. 3                                                         | 2 | L11 L12                            |  |
| 93  | inductance                   | 1uH/252012 ±20% IDC≥2. 9A                                                | 2 | PL1506 PL1507                      |  |
| 94  | inductance                   | 2. 2uH/252012 ±20% IDC≥2A                                                | 1 | PL1509                             |  |
| 95  | inductance                   | 5. 6nH/0201±0. 3                                                         | 1 | L15                                |  |
| 96  | SMD inductance               | 3. 3nH/0201±0. 1                                                         | 1 | L17                                |  |
| 97  | inductance                   | 1. 2nH/0201±0. 3                                                         | 1 | L14                                |  |
| 98  | inductance                   | 2. 2uH/201610 ±20% IDC≥2. 1A                                             | 1 | L21                                |  |
| 99  | Power inductor               | 1uH/4018 ±30% IDC≥4. 8A                                                  | 1 | L2006                              |  |
| 100 | SMD magnetic bead            | 1. 8K/0402±25% ≥100mA                                                    | 4 | L1405 L1406 L1407 L1408            |  |
| 101 | Filters                      | BALANCED RFBPB2012090AM1T59/201209                                       | 1 | L18                                |  |
| 102 | triplexer                    | MULTILAYER CERAMIC TRIPLEXER 1. 5G/2. 4G/5G<br>RFTIP2109ATM0T63/210209   | 1 | L20                                |  |
| 103 | diode                        | 1N5819W SOD123 ≥1A                                                       | 1 | D8                                 |  |
| 104 | diode                        | K34 SOD123 ≥3A                                                           | 1 | D5                                 |  |
| 105 | diode                        | 5. 1V BZT52C5V1S SOD-323 300mW                                           | 1 | D2000                              |  |
| 106 | diode                        | RB521S30/SOD523 200mW                                                    | 1 | D23001                             |  |
| 107 | audion                       | NPN S8050M SOT-23 800mA                                                  | 4 | Q1 Q8 Q9 Q18                       |  |
| 108 | FAMOS                        | NMOS WNM2016-3/TR SOT-23 3. 6A                                           | 3 | Q4 Q5 Q6                           |  |
| 109 | FAMOS                        | PMOS TCS1305 SOT-23 4. 2A                                                | 1 | Q7                                 |  |
| 110 | FAMOS                        | NMOS HR8020GS9 SOT-723 1. 2A                                             | 1 | Q2                                 |  |
| 111 | crystal                      | 26. 000MHZ CL=12PF;RR≤50 Ω ±10PPM 3225                                   | 1 | X4                                 |  |
| 112 | SITIME                       | 26MHZ ±0. 5PPM 7L26002009 2. 8V 2520                                     | 1 | X1(direction)                      |  |
| 113 | crystal oscillator           | 32. 768KHZ CL=12. 5PF;±20PPM MC-146                                      | 1 | X2000                              |  |
| 114 | connector                    | TF card Clamshell H=1. 9 TF_XG_12(ALPS) inner<br>weldL16. 8*W12. 4*H1. 9 | 1 | J9                                 |  |
| 115 | connector                    | FPC0. 5mm 14PIN Lower flap with lock H=2. 0mm                            | 1 | J13                                |  |
| 116 | connector                    | FPC0. 3mm 31PIN Bottom flap double row H=1. 0mm                          | 1 | J4                                 |  |
| 117 | Board to Board<br>Connectors | BTB OK-23GF030-04 PCB JACK PH=0. 4mm H=0. 8mm                            | 1 | J7                                 |  |
| 118 | Connectors                   | FPC0. 5mm 6PIN Lower flap with lock H=1. 0mm                             | 1 | J10                                |  |
| 119 | Connectors                   | Antenna Socekt (third generation)<br>L1. 7*W1. 7*H0. 85mm CD-ARF003-P01A | 1 | J17(direction)                     |  |
| 120 | Connectors                   | CONNL070701(solid pin) L27*W7*H3. 2mm                                    | 1 | J5                                 |  |
| 121 | Connectors                   | FPC0. 3mm 25PIN Bottom flap double rowH=1. 0mm                           | 1 | J12                                |  |
| 122 | button                       | 2*4*3. 5 With stents 250g Two pins 4PIN                                  | 1 | SW1                                |  |
| 123 | switch                       | 3*4 250g CZ3320S 2PIN                                                    | 2 | SW2 SW3                            |  |

|                 |                       |                                                 |    |                                                                        |  |
|-----------------|-----------------------|-------------------------------------------------|----|------------------------------------------------------------------------|--|
| 124             | Infrared receiver     | HXD2085B T092ECB                                | 1  | IR1                                                                    |  |
| 125             | Infrared diode        | HXD3038-90-12 LED-DIP2                          | 1  | D9                                                                     |  |
| 126             | Infrared diode        | Stainless steel tin L6.5*W0.8*1.28mm            | 8  | J1 J2 J3 J14 J16 J11 J15 J1308                                         |  |
| 127             | shielding case        | BND-MTK8176-F55P V1.0                           | 1  |                                                                        |  |
| 128             | shielding case        | F55P-GPS-V1.2 (14*17*1.8mm)                     | 1  |                                                                        |  |
| 129             | TVS                   | TVS (ESD) ST0561D4 DFN1006-2 ≤5pF               | 6  | ED1 ED2 ED3 ED4 ED6 ED18                                               |  |
| 130             | Thermal Dissipation s | 15*15*0.7mm                                     | 1  |                                                                        |  |
| <b>sub pcba</b> |                       |                                                 |    |                                                                        |  |
| 132             | sub PCB               | BND-F55P-V2 V1.2-2, FR4 1mm 4 laminate OSP      | 1  |                                                                        |  |
| 133             | SMD Resistor          | 0R/0402±5%                                      | 1  | C5                                                                     |  |
| 134             | SMD capacitor         | 33pF/0402/±5%/50V COG                           | 3  | C3 C4 C6                                                               |  |
| 135             | SMD capacitor         | 100pF/0402/±5%/50V COG                          | 2  | C7 C8                                                                  |  |
| 136             | SMD capacitor         | 100nF/0402/±20%/16V X5R                         | 2  | C1 C2                                                                  |  |
| 137             | SMD capacitor         | 10uF/0603/±20%/6.3V X5R                         | 2  | C9 C10                                                                 |  |
| 138             | SMD Resistor          | 1K/0402±1%                                      | 1  | R1                                                                     |  |
| 139             | SMD Resistor          | 1.5K/0402±1%                                    | 1  | R2                                                                     |  |
| 140             | common mode choke     | 90R/100M/2012                                   | 1  | L1                                                                     |  |
| 141             | luminous diode        | 1615-0.6T L1.6×W1.5×H0.6 mm                     | 1  | D1                                                                     |  |
| 142             | FPCconnector          | FPC0.5mm 30PIN H=2.0mm                          | 1  | J3                                                                     |  |
| 143             | earphonejack          | PJ-3540-6D/6P                                   | 2  | J1 J2                                                                  |  |
| 144             | USB socket            | USB3.1 1.25(Type.C-8.65mm)24pin MC1R-190224-22G | 1  | J4                                                                     |  |
| 145             | TVS                   | TVS (ESD) ST0561D4 DFN1006-2 ≤5pF               | 16 | ED1 ED2 ED3 ED4 ED5 ED6 ED7 ED8 ED9 ED11 ED12 ED13 ED14 ED15 ED17 ED18 |  |