

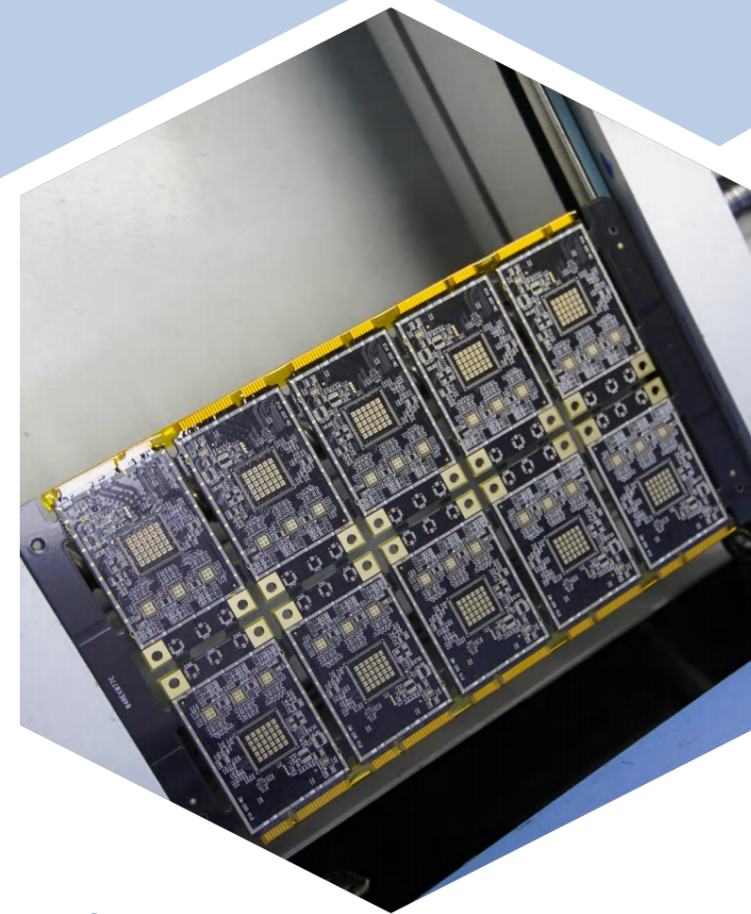
**MAXON**  
Link Of Your Think

Low Power  
Consumption

New  
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Tech

High  
Throughput  
Low  
Latency

Wide  
Operation  
Temp.

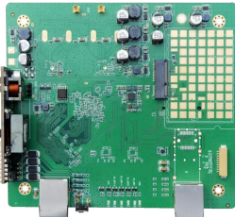
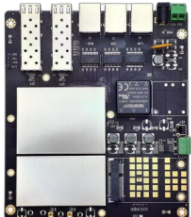
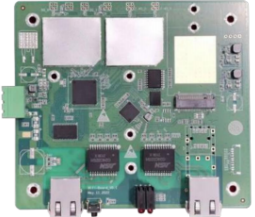


# Maxon Wi-Fi Motherboard & Module Series

IoT | Robots | Drones | Small & Medium Enterprise | Smart Education

Nanjing Maxon O.E. Tech. Co., LTD

## Maxon WiFi Embedded Motherboard Series

| item#                        | MX6022                                                                                                               | MX6012-IS                                                                                                            | MX-AB160-H1<br>2×2 Core Module                                                                                       | MX5012                                                                                                         |
|------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Photo                        |                                   |                                   |                                   |                             |
| Chipset                      | IPQ6010+QCA8081<br>+QCN5052+QCN5022                                                                                  | IPQ6010+QCA8075<br>+QCN5052+QCN5022                                                                                  | IPQ6000                                                                                                              | IPQ4028                                                                                                        |
| Protocol                     | WiFi6 / 802.11ax                                                                                                     | WiFi6 / 802.11ax                                                                                                     | WiFi6 / 802.11ax                                                                                                     | WiFi5 / 802.11ac                                                                                               |
| Memory                       | 2*512MB DDR3<br>16MB Nor Flash<br>128MB Nand Flash                                                                   | 2*512MB DDR3<br>16MB Nor Flash<br>128MB Nand Flash                                                                   | 2*512MB DDR3<br>16MB Nor Flash<br>128MB Nand Flash                                                                   | 256MB DDR3<br>32MB Flash                                                                                       |
| Mode                         | Access Point, Client,<br>WDS Access Point, WDS Client                                                                | Access Point, Client,<br>WDS Access Point, WDS Client                                                                | -                                                                                                                    | Access Point, Client,<br>WDS Access Point, WDS Client                                                          |
| Frequency Range              | 2.4G: 2412MHz~2472MHz;<br>5.8G: 5180MHz~5320MHz,<br>5745MHz~5825MHz                                                  | 2.4G: 2412MHz~2472MHz;<br>5.8G: 5180MHz~5320MHz,<br>5745MHz~5825MHz                                                  | 2.4G: 2412MHz~2472MHz;<br>5.8G: 5180MHz~5320MHz,<br>5745MHz~5825MHz                                                  | 2.4G: 2412MHz~2472MHz;<br>5.8G: 5180MHz~5320MHz,<br>5745MHz~5825MHz                                            |
| Wireless Rate                | 2.4G: 573.5Mbps;<br>5.8G: 1200Mbps                                                                                   | 2.4G: 573.5Mbps;<br>5.8G: 1200Mbps                                                                                   | 2.4G: 573.5Mbps;<br>5.8G: 1200Mbps                                                                                   | 2.4G: 300Mbps;<br>5.8G: 867Mbps                                                                                |
| Data Modulation              | 11n: 64-QAM MCS7<br>11ac: 256-QAM MCS9<br>11ax: 1024-QAM MCS11                                                       | 11n: 64-QAM MCS7<br>11ac: 256-QAM MCS9<br>11ax: 1024-QAM MCS11                                                       | 11n: 64-QAM MCS7<br>11ac: 256-QAM MCS9<br>11ax: 1024-QAM MCS11                                                       | 11n: 64-QAM MCS7<br>11ac: 256-QAM MCS9                                                                         |
| Transmit Power               | 2.4G (11ax): HT40: 24dBm@ MCS0<br>5.8G (11ax): HT80: 24dBm @ MCS0                                                    | 2.4G (11ax): HT40: 24dBm@ MCS0<br>5.8G (11ax): HT80: 24dBm @ MCS0                                                    | 2.4G (11ax): HT40: 24dBm@ MCS0<br>5.8G (11ax): HT80: 24dBm @ MCS0                                                    | 2.4G: 25dBm,<br>5.8G: 24dBm                                                                                    |
| Receiving Sensitivity        | 11ax:<br>HE20 MCS0 <-82dBm / MCS11 <-52dBm<br>HE40 MCS0 <-79dBm / MCS11 <-49dBm<br>HE80 MCS0 <-76dBm / MCS11 <-46dBm | 11ax:<br>HE20 MCS0 <-82dBm / MCS11 <-52dBm<br>HE40 MCS0 <-79dBm / MCS11 <-49dBm<br>HE80 MCS0 <-76dBm / MCS11 <-46dBm | 11ax:<br>HE20 MCS0 <-94dBm / MCS11 <-62dBm<br>HE40 MCS0 <-89dBm / MCS11 <-60dBm<br>HE80 MCS0 <-86dBm / MCS11 <-56dBm | 11ac:<br>VHT20 MCS0 <-88dBm/MCS8 <-64dBm<br>VHT40 MCS0 <-84dBm/MCS9 <-61dBm<br>VHT80 MCS0 <-82dBm/MCS9 <-57dBm |
| Network Port                 | 2x2.5Gbps+RJ45/SFP                                                                                                   | 3x1Gbps RJ45+2x1Gbps SFP                                                                                             | -                                                                                                                    | 1x1Gbps RJ45+1x1Gbps RJ45/SFP                                                                                  |
| POE                          | 802.3af/at/bt 48-56V                                                                                                 | \                                                                                                                    | -                                                                                                                    | 802.3af/at 48V                                                                                                 |
| DC Power                     | 1x 5.08 3 Pins terminal DC24V                                                                                        | 1x 5.08 3 Pins terminal DC9-36V                                                                                      | -                                                                                                                    | 1x 5.08 3 Pins terminal DC24V                                                                                  |
| Power Consumption            | WiFi: ≤ 15W,<br>extended 5G Internet: ≤ 18W                                                                          | WiFi: ≤ 15W,<br>extended 5G Internet: ≤ 18W                                                                          | -                                                                                                                    | WiFi: ≤ 9W                                                                                                     |
| Antenna Connector            | 2xMMCX, dual frequency combination                                                                                   | 2xMMCX, dual frequency combination                                                                                   | -                                                                                                                    | 2xMMCX, dual frequency combination                                                                             |
| UART                         | 2.54mm 4pins                                                                                                         | Uart interface 3Pin                                                                                                  | -                                                                                                                    | \                                                                                                              |
| RS-485                       | 3.8mm 3pins                                                                                                          | RS-485 3Pin                                                                                                          | -                                                                                                                    | \                                                                                                              |
| LTE                          | 4G/5G LTE Slot M.2 B key (USB3.0 bus)                                                                                | 4G/5G LTE Slot Mini-PCIe (USB3.0 bus)                                                                                | -                                                                                                                    | M.2 B key                                                                                                      |
| SIM Card Slot                | Micro SIM                                                                                                            | Micro SIM                                                                                                            | -                                                                                                                    | Micro SIM                                                                                                      |
| Indicator                    | 1x2.4G, 1x5.8G1, x5.8G2,<br>1xPower, 1x SFP, 1x4G/5G                                                                 | Bicolor Status                                                                                                       | -                                                                                                                    | 6 LEDs                                                                                                         |
| Button                       | Reset                                                                                                                | Reset                                                                                                                | -                                                                                                                    | Reset                                                                                                          |
| Dimensions                   | 130 x 115 x 10 mm                                                                                                    | 160 x 136 x 21.5mm                                                                                                   | 100x110mm                                                                                                            | 120x115mm                                                                                                      |
| Temperature                  | Operating: -20°C~+70°C, Storage: -40°C~+90°C                                                                         |                                                                                                                      |                                                                                                                      |                                                                                                                |
| Humidity<br>(Non-condensing) | Operating: 10% ~ 95%,<br>Storage: 5% ~ 90%                                                                           | Operating: 10% ~ 95%,<br>Storage: 5% ~ 90%                                                                           | Operating & Storage: 5% ~ 95%                                                                                        | Operating: 10% ~ 95%,<br>Storage: 5% ~ 90%                                                                     |
| Certification                | RoHS/REACH                                                                                                           | RoHS/REACH                                                                                                           | RoHS/REACH                                                                                                           | RoHS/REACH                                                                                                     |

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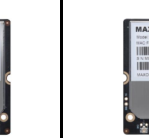
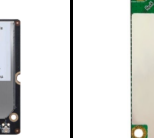
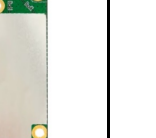
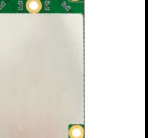
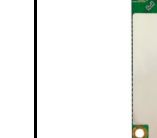
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## Maxon WiFi5 & WiFi6/6e communication Module Series

| Type                                | 802.11ac Wireless module                                                          |                                                                                   | M.2 WIFI6 module                                                                  |                                                                                    |                                                                                     |                                                                                     | MINI PCIE WIFI 6 MODULE NEW RELEASE                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|-------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Photo                               |  |  |  |  |  |  |  |  |  |  |  |  |
| Mode                                | MX520VX                                                                           | MX530VX                                                                           | MX6974 F5                                                                         | MX6974 F6 (6E)                                                                     | MX6924 F5                                                                           | MX6624 F5                                                                           | ME6974 F5                                                                           | ME6924 F5                                                                           | ME6624 F5                                                                           | ME6622 F5                                                                           | ME6924 FD dual-band 4x4                                                             | ME6624 FD dual-band 2x2                                                             |
| Chipset                             | QCA9880                                                                           | QCA9880                                                                           | QCN9074                                                                           | QCN9074                                                                            | QCN9024                                                                             | QCN6024                                                                             | QCN9074                                                                             | QCN9024                                                                             | QCN6024                                                                             | QCN6024                                                                             | QCN9024                                                                             | QCN6024                                                                             |
| Standard                            | IEEE 802.11ac                                                                     | IEEE 802.11ac                                                                     | IEEE 802.11ax                                                                     | IEEE 802.11ax                                                                      | IEEE 802.11ax                                                                       | IEEE 802.11ax                                                                       | IEEE 802.11ax                                                                       | IEEE 802.11ax                                                                       | IEEE 802.11ax                                                                       | IEEE 802.11ax                                                                       | IEEE 802.11ax                                                                       | IEEE 802.11ax                                                                       |
| Modulation Technology               | OFDM (BPSK, QPSK, DBPSK, DQPSK, CCK, 16-QAM, 64-QAM, 256-QAM)                     | OFDM (BPSK, QPSK, DBPSK, DQPSK, CCK, 16-QAM, 64-QAM, 256-QAM)                     | OFDMA (BPSK , QPSK, DBPSK, DQPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, 4096-QAM)    | OFDMA (BPSK , QPSK, DBPSK, DQPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, 4096-QAM)     | OFDMA (BPSK , QPSK, DBPSK, DQPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, 4096-QAM)      | OFDMA (BPSK , QPSK, DBPSK, DQPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, 4096-QAM)      | OFDMA (BPSK , QPSK, DBPSK, DQPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, 4096-QAM)      | OFDMA (BPSK , QPSK, DBPSK, DQPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, 4096-QAM)      | OFDMA (BPSK , QPSK, DBPSK, DQPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, 4096-QAM)      | OFDMA (BPSK , QPSK, DBPSK, DQPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, 4096-QAM)      | OFDMA (BPSK , QPSK, DBPSK, DQPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, 4096-QAM)      | OFDMA (BPSK , QPSK, DBPSK, DQPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, 4096-QAM)      |
| MU-MIMO                             | 2x2                                                                               | 3x3                                                                               | 4x4                                                                               | 4x4                                                                                | 4x4                                                                                 | 4x4                                                                                 | 4x4                                                                                 | 4x4                                                                                 | 4x4                                                                                 | 2x2                                                                                 | 4x4                                                                                 | 2x2                                                                                 |
| Output (Per chain)                  | 21dBm                                                                             | 21dBm                                                                             | 24dBm                                                                             | 24dBm                                                                              | 24dBm                                                                               | 24dBm                                                                               | 20dBm                                                                               | 20dBm                                                                               | 20dBm                                                                               | 20dBm                                                                               | 20dBm                                                                               | 20dBm                                                                               |
| Bandwidth                           | 20/40/80MHz                                                                       | 20/40/80MHz                                                                       | 20/40/80/160MHz                                                                   | 20/40/80/160MHz                                                                    | 20/40/80/160MHz                                                                     | 20/40/80/160MHz                                                                     | 20/40/80/160MHz                                                                     | 20/40/80/160MHz                                                                     | 20/40/80/160MHz                                                                     | 20/40/80/160MHz                                                                     | 2.4GHz: 20/40MHz<br>5GHz: 20/40/80/160MHz                                           | 2.4GHz: 20/40MHz<br>5GHz: 20/40/80/160MHz                                           |
| Frequency Range                     | 2412~2472MHz, 5180~5825MHz                                                        | 2412~2472MHz, 5180~5825MHz                                                        | 5180~5320MHz, 5745~5825MHz (CN)                                                   | 5180~5320MHz, 5745~5825MHz, 5.925GHz-7.125GHz                                      | 5180~5320MHz, 5745~5825MHz (CN)                                                     | 5180~5320MHz, 5745~5825MHz (CN)                                                     | 5180~5320MHz, 5745~5825MHz (CN)                                                     | 5180~5320MHz, 5745~5825MHz (CN)                                                     | 5180~5320MHz, 5745~5825MHz (CN)                                                     | 5180~5320MHz, 5745~5825MHz (CN)                                                     | 2412-2472MHz; 5180~5320MHz, 5745~5825MHz (CN)                                       | 2412-2472MHz; 5180~5320MHz, 5745~5825MHz (CN)                                       |
| Throughput                          | 867Mbps                                                                           | 1300Mbps                                                                          | 4800Mbps                                                                          | 4800Mbps                                                                           | 4800Mbps                                                                            | 4800Mbps                                                                            | 4800Mbps                                                                            | 4800Mbps                                                                            | 4800Mbps                                                                            | 2400Mbps                                                                            | 2.4GHz: 1376Mbps<br>5GHz: 4800Mbps                                                  | 2.4GHz: 573Mbps<br>5GHz: 2400Mbps                                                   |
| Interface                           | 1x Mini PCIe 1.1                                                                  | 1x Mini PCIe 1.1                                                                  | M.2 E Key PCIe3.0                                                                 | M.2 E Key PCIe3.0                                                                  | M.2 E Key PCIe3.0                                                                   | M.2 E Key PCIe3.0                                                                   | Mini PCIe 3.0                                                                       | Mini PCIe 3.0                                                                       | Mini PCIe 3.0                                                                       | Mini PCIe 3.0                                                                       | Mini PCIe 3.0                                                                       | Mini PCIe 3.0                                                                       |
| Antenna Connector                   | 2x U.FL                                                                           | 3x U.FL                                                                           | 4x U.FL                                                                           | 4x U.FL                                                                            | 4x U.FL                                                                             | 4x U.FL                                                                             | 4x U.FL                                                                             | 4x U.FL                                                                             | 4x U.FL                                                                             | 2x U.FL                                                                             | 4x U.FL                                                                             | 2x U.FL                                                                             |
| Operating Voltage                   | 3.3V                                                                              | 3.3V                                                                              | 5V                                                                                | 5V                                                                                 | 5V                                                                                  | 5V                                                                                  | 3.3V                                                                                | 3.3V                                                                                | 3.3V                                                                                | 3.3V                                                                                | 3.3V                                                                                | 3.3V                                                                                |
| Power Consumption                   | ≤3.5W                                                                             | ≤3.5W                                                                             | ≤15W                                                                              | ≤15W                                                                               | ≤15W                                                                                | ≤15W                                                                                | ≤9W                                                                                 | ≤9W                                                                                 | ≤9W                                                                                 | ≤7W                                                                                 | ≤9W                                                                                 | ≤7W                                                                                 |
| Operating Temp.                     | -20~70℃/-4~158℉                                                                   | -20~70℃/-4~158℉                                                                   | -20~70℃/-4~158℉                                                                   | -20~70℃/-4~158℉                                                                    | -20~70℃/-4~158℉                                                                     | -20~70℃/-4~158℉                                                                     | -20~70℃/-4~158℉                                                                     | -20~70℃/-4~158℉                                                                     | -20~70℃/-4~158℉                                                                     | -20~70℃/-4~158℉                                                                     | -20~70℃/-4~158℉                                                                     | -20~70℃/-4~158℉                                                                     |
| Storage Temp.                       | -40~90℃/-40~194℉                                                                  | -40~90℃/-40~194℉                                                                  | -40~90℃/-40~194℉                                                                  | -40~90℃/-40~194℉                                                                   | -40~90℃/-40~194℉                                                                    | -40~90℃/-40~194℉                                                                    | -40~90℃/-40~194℉                                                                    | -40~90℃/-40~194℉                                                                    | -40~90℃/-40~194℉                                                                    | -40~90℃/-40~194℉                                                                    | -40~90℃/-40~194℉                                                                    | -40~90℃/-40~194℉                                                                    |
| Operating Humidity (non-condensing) | 5%~95%                                                                            | 5%~95%                                                                            | 5%~95%                                                                            | 5%~95%                                                                             | 5%~95%                                                                              | 5%~95%                                                                              | 5%~95%                                                                              | 5%~95%                                                                              | 5%~95%                                                                              | 5%~95%                                                                              | 5%~95%                                                                              | 5%~95%                                                                              |
| Certifications                      | CE/FCC/RoHS                                                                       | CE/FCC/RoHS                                                                       | RoHS/REACH                                                                        | RoHS/REACH                                                                         | RoHS/REACH                                                                          | RoHS/REACH                                                                          | RoHS/REACH                                                                          | RoHS/REACH                                                                          | RoHS/REACH                                                                          | RoHS/REACH                                                                          | RoHS/REACH                                                                          | RoHS/REACH                                                                          |
| Dimensions                          | 51x30x3.2mm                                                                       | 51x30x3.2mm                                                                       | 55.9x52.8x8.5mm                                                                   | 55.9x52.8x8.5mm                                                                    | 55.9x52.8x8.5mm                                                                     | 55.9x52.8x8.5mm                                                                     | 50.8x30x8.5mm                                                                       | 50.8x30x8.5mm                                                                       | 50.8x30x8.5mm                                                                       | 50.8x30x8.5mm                                                                       | 50.8x30x8.5mm                                                                       | 50.8x30x8.5mm                                                                       |