

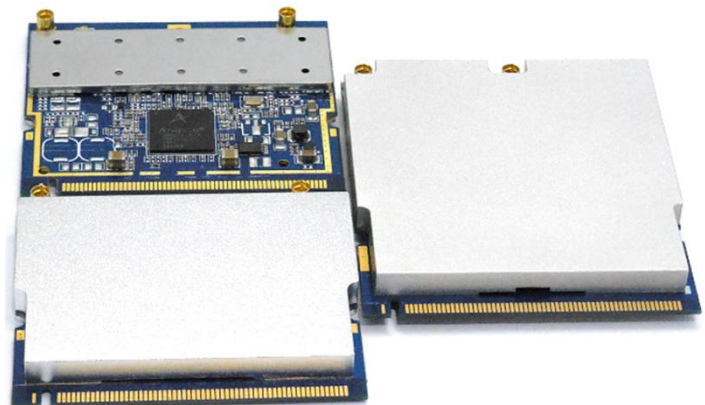


nM2-Series Product Brochure

Dual Stream MIMO, 2x2, 11 a/b/g/n, Mini PCI Radio Modules

Vizmonet offers wide range of **Carrier-Class-Customized** wireless communication modules tailored made to suit OEM requirements. Under this MIMO 802.11n portfolio, High-performance wireless communication radio modules based on Qualcomm Atheros base Band Chipset are available for OEM's choice.

These modules, built with design concepts focussed on customization requirements are engineered with fine precision to meet stringent performance metrics set by Vizmonet Quality Standards.



STANDARD FEATURES

- IEEE 802.11b/g/n standards compliant with Base band chip AR9223-AC1A
- IEEE 802.11a/n standards compliant with Base band chip AR9220-AC1A
- 5MHz/10MHz/20MHz/40MHz Channel Bandwidth
- 2xMMCX Antenna connector
- High TX Power of up to +29 dBm for lower data rates
- Mini PCI Type IIIA form factor

CUSTOM FEATURES

- Custom channel Plan & Jumper support optional two alternate Channel Plan
- Custom form-factor
- Custom heat sink, shield cover & metal bracket
- Custom MAC ID , PCI device Id & other OEM specific PCI data
- Support for Regulatory Certification Approvals in OEM's name

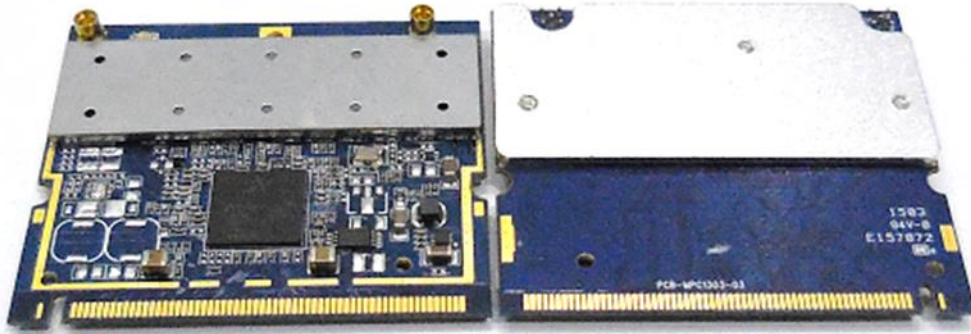
MODEL MATRIX

| MODEL | FREQUENCY (MHz) | STANDARD | BAND | CHIPSET |
|----------|------------------------|----------|----------------------------|-------------|
| nM2-300 | 300MHz to 400MHz | 11 b/g/n | License Band | AR9223-AC1A |
| nM2-400 | 400MHz to 500MHz | 11 b/g/n | License Band | AR9223-AC1A |
| nM2-420 | 420 MHz to 450 MHz | 11 b/g/n | 70 cm, HAM Band | AR9223-AC1A |
| nM2-500 | 500 MHz to 600 MHz | 11 b/g/n | TVWS Band | AR9223-AC1A |
| nM2-600 | 600MHz to 700MHz | 11 b/g/n | TVWS Band | AR9223-AC1A |
| nM2-700 | 700MHz to 800MHz | 11 b/g/n | TVWS Band | AR9223-AC1A |
| nM2-800 | 800MHz to 900MHz | 11 b/g/n | License Band | AR9223-AC1A |
| nM2-900 | 900MHz to 1000 MHz | 11 b/g/n | License Band | AR9223-AC1A |
| nM2-902 | 902 MHz to 928 MHz | 11 b/g/n | ISM Band | AR9223-AC1A |
| nM2-1000 | 1000 MHz to 1500 MHz | 11 b/g/n | License Band | AR9223-AC1A |
| nM2-2400 | 2400 MHz to 2483.5 MHz | 11 b/g/n | ISM Band | AR9223-AC1A |
| nM2-2300 | 2300 MHz to 2500 MHz | 11 b/g/n | License Band | AR9223-AC1A |
| nM2-4800 | 4800 MHz to 5000 MHz | 11 a/n | Public Safety License Band | AR9220-AC1A |
| nM2-4940 | 4940 MHz to 4990 MHz | 11 a/n | Public Safety Band | AR9220-AC1A |
| nM2-5150 | 5150 MHz to 5850 MHz | 11 a/n | ISM Band | AR9220-AC1A |
| nM2-5850 | 5850 MHz to 5925 MHz | 11 a/n | ITS Band | AR9220-AC1A |
| nM2-5925 | 5925 MHz to 6100 MHz | 11 a/n | License Band | AR9220-AC1A |



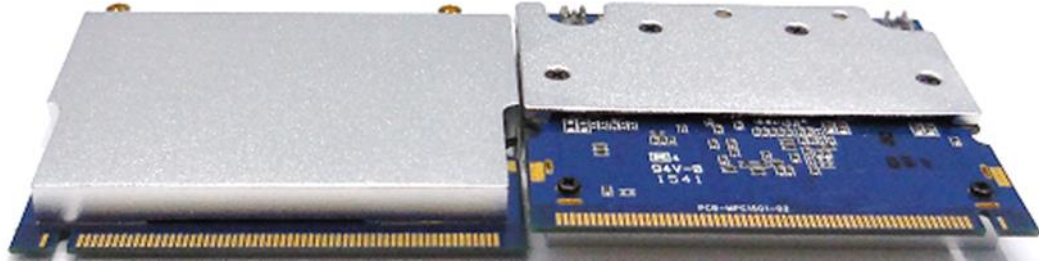
RADIO SPECIFICATION (300 MHz to 1500 MHz)

| RADIO TX/RX PERFORMANCE, 20 MHz BW, 2 STREAMS | | | | | | |
|---|-----------|------------|---------------------|-------------------------------------|---------------------------|------------------------------------|
| | DATA RATE | MODULATION | TX POWER ± 1 dBm | TX CURRENT (A) AT 3.3V ± 0.1A | RX SENSITIVITY ± 2 dBm | RX CURRENT(A) AT 3.3V ± 0.1A |
| 11 g | 6 Mbps | BPSK | 28 | 1.3 | -93 | 0.15 |
| | 9 Mbps | BPSK | 28 | 1.3 | -93 | 0.15 |
| | 12 Mbps | QPSK | 28 | 1.3 | -92 | 0.15 |
| | 18 Mbps | QPSK | 28 | 1.3 | -91 | 0.15 |
| | 24 Mbps | 16QAM | 28 | 1.3 | -87 | 0.15 |
| | 36 Mbps | 16QAM | 26 | 1.2 | -83 | 0.15 |
| | 48 Mbps | 64QAM | 23 | 1.1 | -78 | 0.15 |
| | 54 Mbps | 64QAM | 22 | 1.0 | -75 | 0.15 |
| 11 b | 1 Mbps | BPSK | 29 | 1.4 | -95 | 0.15 |
| | 2 Mbps | QPSK | 29 | 1.4 | -93 | 0.15 |
| | 5.5 Mbps | CCK | 29 | 1.4 | -91 | 0.15 |
| | 11 Mbps | CCK | 29 | 1.4 | -90 | 0.15 |
| 11 n HT20 | MCS0/8 | BPSK | 28 | 1.3 | -92 | 0.15 |
| | MCS1/9 | QPSK | 28 | 1.3 | -91 | 0.15 |
| | MCS2/10 | QPSK | 28 | 1.3 | -90 | 0.15 |
| | MCS3/11 | 16QAM | 28 | 1.3 | -86 | 0.15 |
| | MCS4/12 | 16QAM | 26 | 1.2 | -83 | 0.15 |
| | MCS5/13 | 64QAM | 23 | 1.1 | -76 | 0.15 |
| | MCS6/14 | 64QAM | 21 | 0.9 | -75 | 0.15 |
| | MCS7/15 | 64QAM | 19 | 0.9 | -74 | 0.15 |



RADIO SPECIFICATION (2.3 GHz to 2.5 GHz)

| RADIO TX/RX PERFORMANCE, 20 MHz CHANNEL BW, 2 STREAMS | | | | | | |
|---|-----------|------------|------------------|-------------------------------|------------------------|------------------------------|
| | DATA RATE | MODULATION | TX POWER ± 1 dBm | TX CURRENT (A) AT 3.3V ± 0.1A | RX SENSITIVITY ± 2 dBm | RX CURRENT(A) AT 3.3V ± 0.1A |
| 11 g | 6 Mbps | BPSK | 29 | 1.2 | -95 | 0.15 |
| | 9 Mbps | BPSK | 29 | 1.2 | -95 | 0.15 |
| | 12 Mbps | QPSK | 29 | 1.2 | -94 | 0.15 |
| | 18 Mbps | QPSK | 29 | 1.2 | -93 | 0.15 |
| | 24 Mbps | 16QAM | 29 | 1.2 | -89 | 0.15 |
| | 36 Mbps | 16QAM | 27 | 1.1 | -86 | 0.15 |
| | 48 Mbps | 64QAM | 25 | 0.8 | -82 | 0.15 |
| | 54 Mbps | 64QAM | 24 | 0.7 | -80 | 0.15 |
| 11 b | 1 Mbps | BPSK | 29 | 1.2 | -97 | 0.15 |
| | 2 Mbps | QPSK | 29 | 1.2 | -94 | 0.15 |
| | 5.5 Mbps | CCK | 29 | 1.2 | -93 | 0.15 |
| | 11 Mbps | CCK | 29 | 1.2 | -92 | 0.15 |
| 11 n HT 20 | MCS0/8 | BPSK | 29 | 1.3 | -85 | 0.15 |
| | MCS1/9 | QPSK | 29 | 1.3 | -84 | 0.15 |
| | MCS2/10 | QPSK | 29 | 1.3 | -81 | 0.15 |
| | MCS3/11 | 16QAM | 29 | 1.3 | -78 | 0.15 |
| | MCS4/12 | 16QAM | 27 | 1.2 | -74 | 0.15 |
| | MCS5/13 | 64QAM | 24 | 1.1 | -69 | 0.15 |
| | MCS6/14 | 64QAM | 22 | 0.9 | -68 | 0.15 |
| | MCS7/15 | 64QAM | 21 | 0.9 | -67 | 0.15 |
| 11 n HT40 | MCS0/8 | BPSK | 27 | 1.0 | -91 | 0.15 |
| | MCS1/9 | QPSK | 27 | 1.0 | -90 | 0.15 |
| | MCS2/10 | QPSK | 27 | 1.0 | -88 | 0.15 |
| | MCS3/11 | 16QAM | 27 | 1.0 | -85 | 0.15 |
| | MCS4/12 | 16QAM | 26 | 0.9 | -82 | 0.15 |
| | MCS5/13 | 64QAM | 25 | 0.8 | -78 | 0.15 |
| | MCS6/14 | 64QAM | 23 | 0.7 | -77 | 0.15 |
| | MCS7/15 | 64QAM | 22 | 0.6 | -74 | 0.15 |

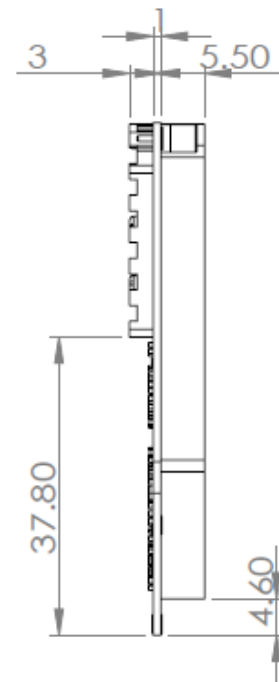
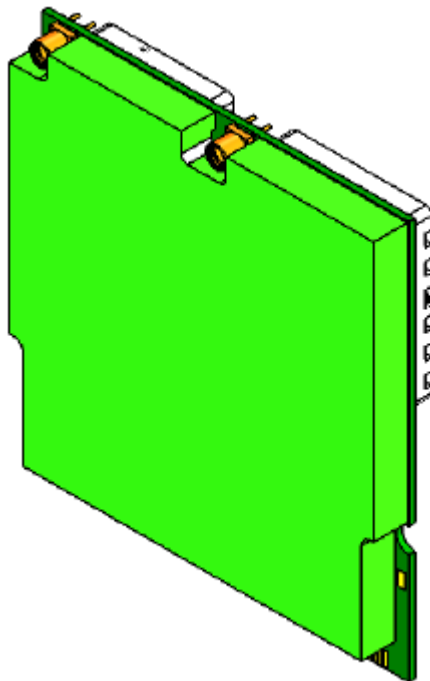
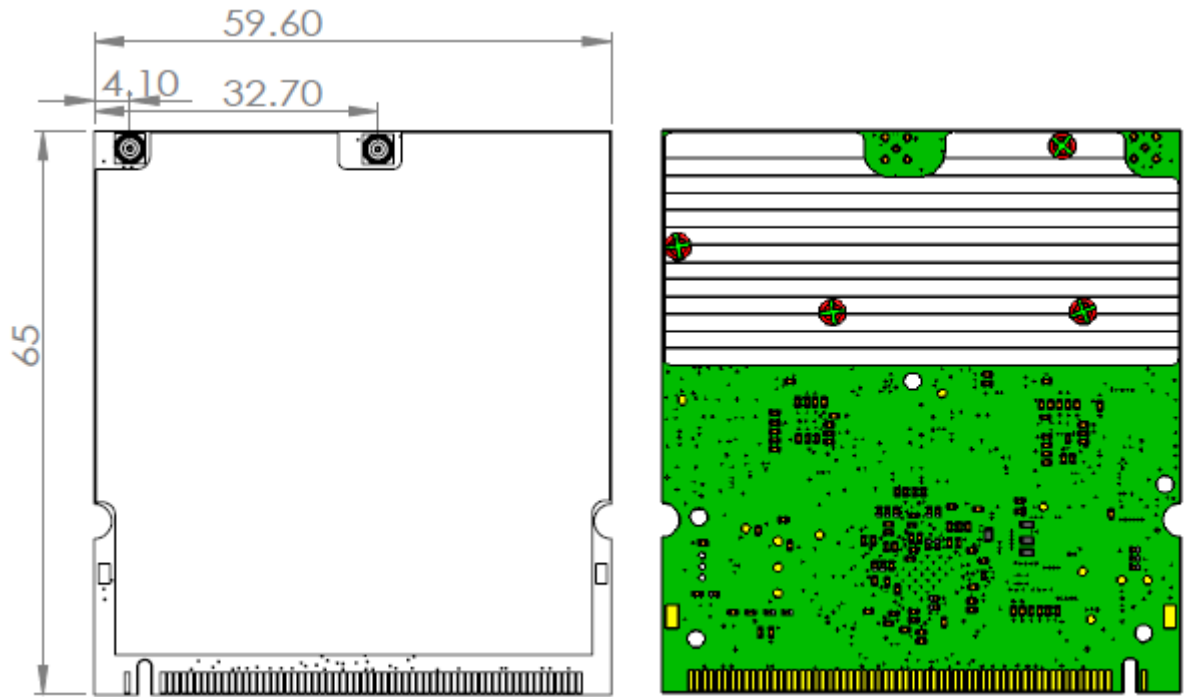


RADIO SPECIFICATION (5.1 GHz to 6.1 GHz)

| RADIO TX/RX PERFORMANCE, FOR 2 CHAINS, 20 MHz BW, 2 STREAMS | | | | | | |
|---|-----------|------------|------------------|-------------------------------|------------------------|------------------------------|
| | DATA RATE | MODULATION | TX POWER ± 1 dBm | TX CURRENT (A) AT 3.3V ± 0.1A | RX SENSITIVITY ± 2 dBm | RX CURRENT(A) AT 3.3V ± 0.1A |
| 11 a | 6 Mbps | BPSK | 29 | 1.2 | -95 | 0.15 |
| | 9 Mbps | BPSK | 29 | 1.2 | -95 | 0.15 |
| | 12 Mbps | QPSK | 29 | 1.2 | -94 | 0.15 |
| | 18 Mbps | QPSK | 29 | 1.2 | -93 | 0.15 |
| | 24 Mbps | 16QAM | 29 | 1.2 | -89 | 0.15 |
| | 36 Mbps | 16QAM | 26 | 1.0 | -86 | 0.15 |
| | 48 Mbps | 64QAM | 24 | 0.8 | -82 | 0.15 |
| | 54 Mbps | 64QAM | 23 | 0.7 | -80 | 0.15 |
| 11 n HT 20 | MCS0/8 | BPSK | 28 | 1.1 | -94 | 0.15 |
| | MCS1/9 | QPSK | 28 | 1.1 | -93 | 0.15 |
| | MCS2/10 | QPSK | 28 | 1.1 | -91 | 0.15 |
| | MCS3/11 | 16QAM | 28 | 1.1 | -88 | 0.15 |
| | MCS4/12 | 16QAM | 27 | 1.0 | -85 | 0.15 |
| | MCS5/13 | 64QAM | 25 | 0.8 | -81 | 0.15 |
| | MCS6/14 | 64QAM | 23 | 0.7 | -79 | 0.15 |
| | MCS7/15 | 64QAM | 22 | 0.6 | -77 | 0.15 |
| 11 n HT40 | MCS0/8 | BPSK | 27 | 1.0 | -91 | 0.15 |
| | MCS1/9 | QPSK | 27 | 1.0 | -90 | 0.15 |
| | MCS2/10 | QPSK | 27 | 1.0 | -88 | 0.15 |
| | MCS3/11 | 16QAM | 27 | 1.0 | -85 | 0.15 |
| | MCS4/12 | 16QAM | 26 | 0.9 | -82 | 0.15 |
| | MCS5/13 | 64QAM | 25 | 0.8 | -78 | 0.15 |
| | MCS6/14 | 64QAM | 23 | 0.7 | -77 | 0.15 |
| | MCS7/15 | 64QAM | 22 | 0.6 | -74 | 0.15 |

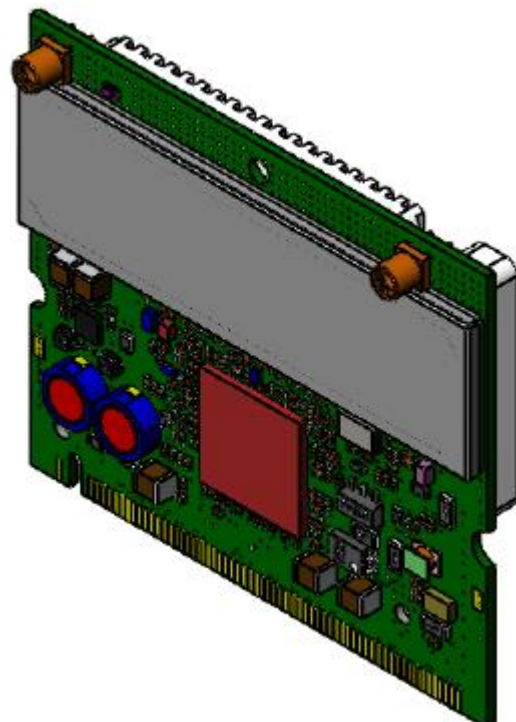
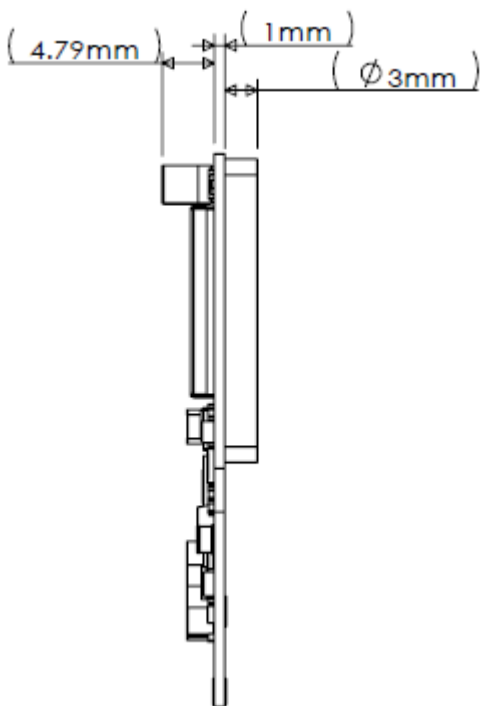
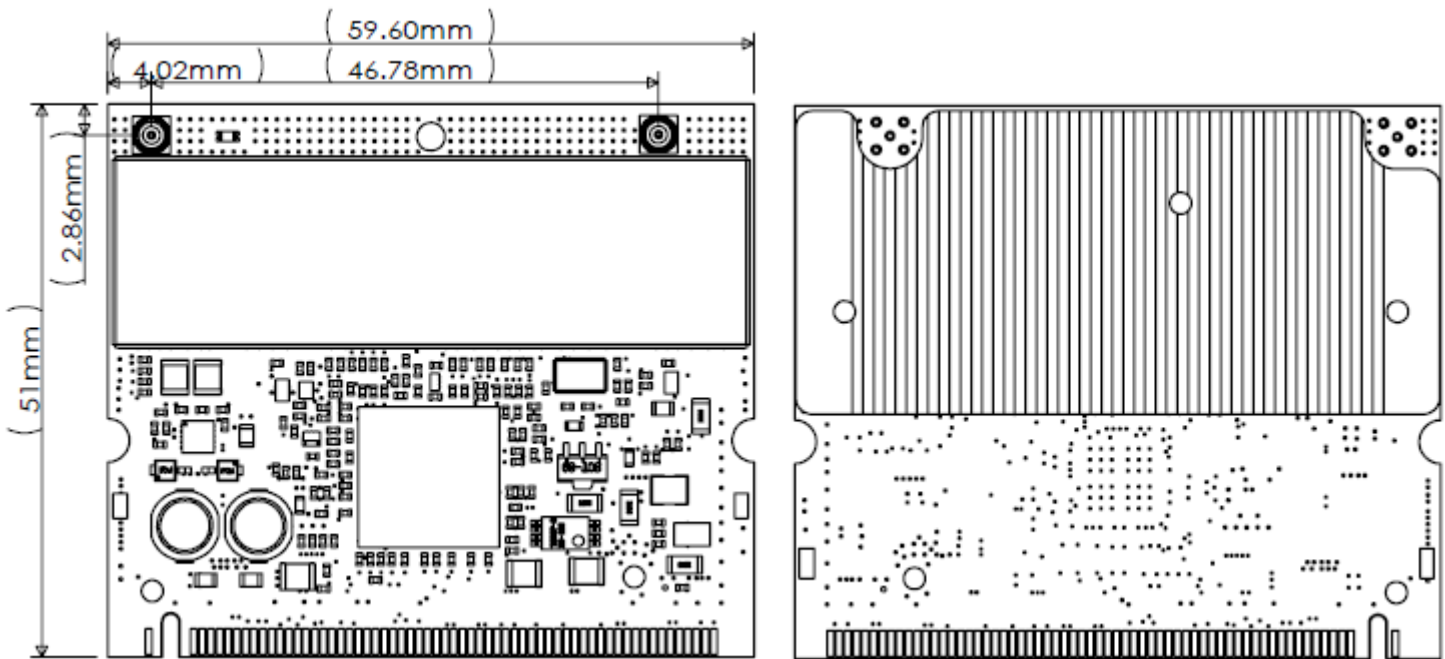
MECHANICAL DIMENSIONS

300 MHz to 1000 MHz



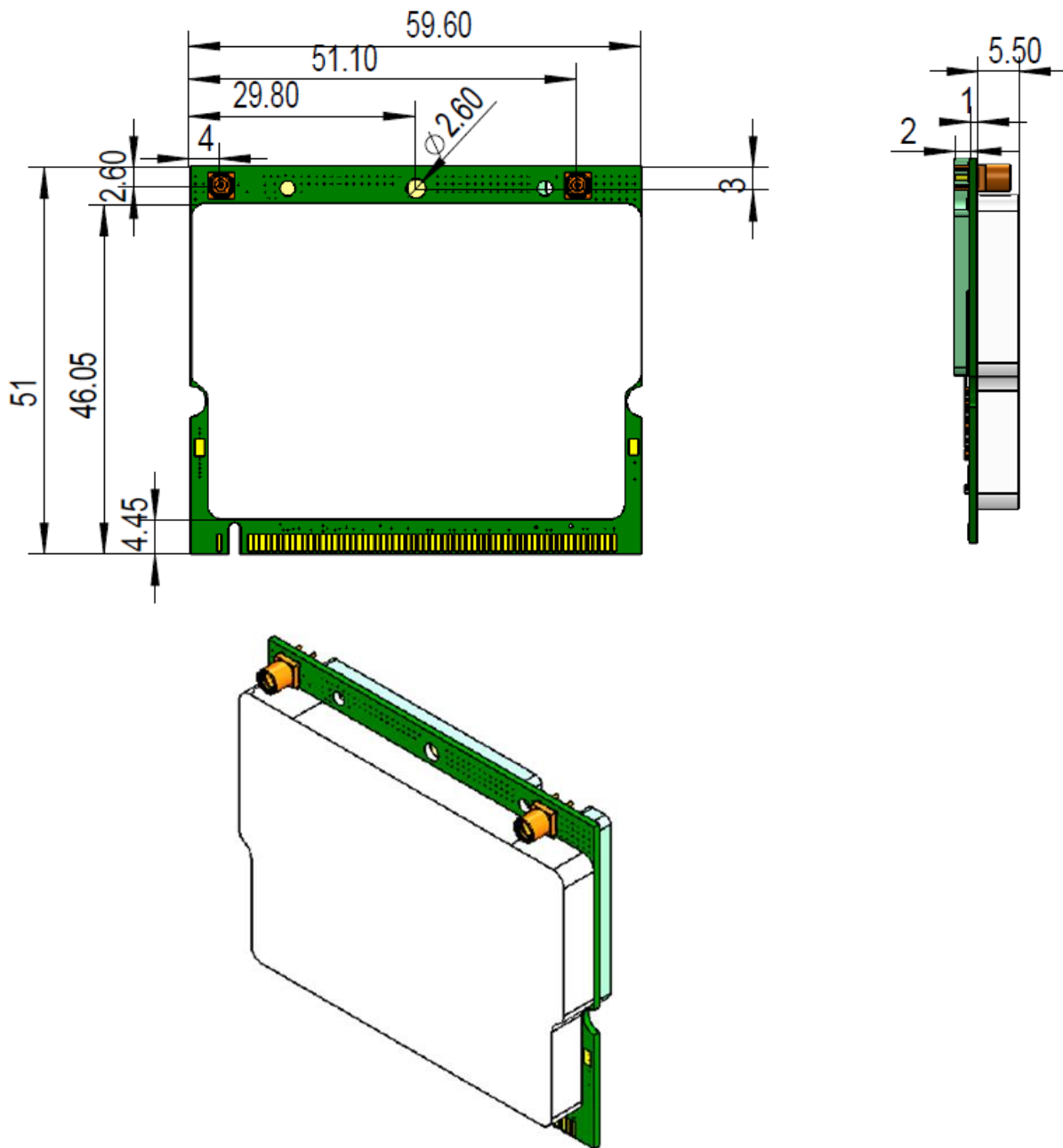
MECHANICAL DIMENSIONS

2.3 GHz to 2.5 GHz



MECHANICAL DIMENSIONS

4.8 GHz to 6.1 GHz



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