# ZMI 2400 Measurement Board

<table>
<thead>
<tr>
<th>P/N</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>8020-0104-11</td>
<td>1 axis, VME 6U board</td>
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<tr>
<td>8020-0104-15</td>
<td>1 axis, VME 6U board with Ethernet</td>
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<tr>
<td>8020-0104-12</td>
<td>2 axes, VME 6U board</td>
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<tr>
<td>8020-0104-16</td>
<td>2 axes, VME 6U board with Ethernet</td>
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## GENERAL
- **Maximum Number of Boards in a System:** 7; there may also be limits due to VME or P2 population
- **Reference Inputs (1 per board):** ST fiber optic or HSSDC2 electrical
- **Reference Outputs:** HSSDC2 electrical
- **Measure Inputs (1 per axis):** ST fiber optic
- **Signal Strength Test Points (1 per axis):** RJ-11 connector
- **Status Indicators (LEDs):**
  - Green – meas present (1 per axis), ref present, User LED
  - Amber – meas error (1 per axis), ref error, Config.
- **Minimum Input Optical Power:** > 1.9 µW AC
- **Minimum Reference Optical Power:** > 8 µW AC

## POWER REQUIREMENTS
- **2401:** 5 VDC +0.25V/-0.125V @ 3.5A (max)
- **2402:** 5 VDC +0.25V/-0.125V @ 5A (max)

## COOLING REQUIREMENTS
- **10 to 40° C:** 60 linear fpm
- **40 to 55° C:** 120 linear fpm

## COMPLIANCE
- **VME:** VMEbus specification ANSI/VITA 1-1994
  - Addressing: A16 or A24
  - Data Transfer: D16 or D32
  - D08 (O) Interrupt Acknowledge Cycle
- **Other:** UL94V0, CE Mark (Emissions EN 55011A, Immunity EN 50082-1, Low Voltage Directive EN 61010-1, tested inside CE Mark compliant chassis)

## PERFORMANCE
- **Position Resolution:** \( \lambda/2048 \) (0.31 nm)
- **Position Range:** ± 10.6 m
- **Position Format:** 36 bit - 2’s complement
- **Time Stamp Resolution:** 25 nanoseconds
- **Maximum Velocity:** 2.1 m/s
- **Maximum Acceleration:** 100 g (10 g max. during reset)
- **Data Age (P2 output):** 1 µs typical
- **Data Age Uncertainty, Compensated:** ± 1.2 ns (3 boards)
- **Electronic Accuracy:**
  - \( \leq 1.2 \) LSB at ± 0.1 m/sec
  - \( \leq 1.4 \) LSB at ± 1.0 m/sec
  - \( \leq 1.6 \) LSB at ± 2.1 m/sec

## ENVIRONMENTAL
- **Operating Temperature:** 10 to 55°C
- **Operating Humidity:** 0 to 90%, noncondensing
- **Operating Pressure:** Standard 1 atmosphere (700-800 mmHg)

(1) Based on double pass interferometer.