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Find the *Zygo ZMI-4004* at our website: *Click HERE*

ZMI 4004 Measurement Board

P/N	DESCRIPTION
8020-0102-09	4 axes, VME 6U board
GENERAL	
Maximum Number of Boards in a System	16 (64 axes); there may also be limits due to VME or P2 population
Reference Inputs	ST fiber optic or HSSDC electrical, 20.0 MHz
Reference Outputs (2 per board)	HSSDC electrical, 20.0 MHz
Measure Inputs (1 per axis)	ST fiber optic, 20.0 ± 16.1 MHz
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 Optical Power at measurement board receiver	> 1.0 µW AC (per axis)
Maximum Optical Power at measurement board receiver	~76 µW AC (per axis)
POWER REQUIREMENTS	
4004	5 VDC +0.25V/-0.125V @ 6A (max)
COOLING REQUIREMENTS (TYPICAL)	
30° C	250 linear fpm
40° C	400 linear fpm
50° C	600 linear fpm
COMPLIANCE	
VME	VMEbus specification ANSI/VITA 1-1994 Type: VME64X Addressing: A24 Data Transfer: D16 or D32 P1 and P2 connectors: 160-pin DIN
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(1)	λ/4096 (0.15 nm)
Position Range(1)	± 10.6 m
Position Format	37 bit - 2's complement
Time Resolution	25 nanoseconds
Time Range	107.4 seconds
Time Format	32 bit - positive integer
Velocity Resolution	18 to 22 bits (function of the digital filter gains Kp and Kv)
Velocity Range(1)	± 2.55 m/sec @ λ/2048
Velocity Format	32 bit - 2's complement
Maximum Acceleration	100 g (0.1 g max. during reset)
Data Age (P2 output)	1 µs typical
Data Age Uncertainty, Uncompensated	± 6 ns (axes on any one board) ± 30 ns (15 boards, any axis to axis)
Data Age Uncertainty, Factory Compensated	± 0.2 ns (axes on any one board) ± 1.0 ns (any axes including maximum of 3 calibrated reference jumpers)
Accuracy (1) (2)	σ ≤1.0 LSB at 0 m/sec σ ≤1.2 LSB at ± 1.27 m/sec σ ≤1.4 LSB at ± 2.55 m/sec
Noise (2)	± 3 LSB (3σ)
Temperature Coefficient	< 1 LSB per ° C
ENVIRONMENTAL	
Operating Temperature	10 to 50°C
Operating Humidity	0 to 90%, noncondensing
Operating Pressure	Standard 1 atmosphere (700-800 mmHg), non-vacuum applications

(1) Based on double pass interferometer.

(2) 1.0 µW into measurement board receiver, specified at filter settings of Kp = -6, Kv = -15.

zygo®

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