

All specifications are typical at 23 °C ± 2 °C unless otherwise specified.

TECHNICAL SPECIFICATIONS

Module Analyzer

| | |
|--|--|
| Number of channels | 8 |
| Data rate per lane (GBd) | 25.78125, 26.5625, 27.95, 28.05, 28.125, 28.9 (PAM4/NRZ) 9.95328, 10, 10.3125, 10.709, 11.3176, 12.5, 14.025, 21, 24.33024, 25 (NRZ only) |
| Data rate adjustment (ppm) | 0 to ±300 |
| Modulation | NRZ/PAM4 |
| Pattern | PRBS 7/9/11/13/15/23/31, PRBS7Q-31Q (PPG and ED) PRBS16, SSPRQ, user-defined pattern (PPG only) |
| Maximum amplitude (mV _{ppd}) | 1500 |
| Rise time / Fall time (ps) | 15/15 (20% to 80%) |
| PAM4 eye width (ps) | 17 (zero hit) |
| Jitter rms (fs) | 500 |
| Sensitivity (mV _{ppd}) | 200 (PAM4 26.5625 GBd) 150 (NRZ 25.78125 GBd) |

Clock out

| | |
|---|---------------------------|
| Clock output amplitude (mV _{ppd}) | 400 |
| Clock output ratio | /2, /4, /8, /16, /32, /64 |

Power supply

| | |
|----------------------|------------|
| Output voltage (V) | 3.1 to 3.5 |
| Adjustable step (mV) | 25 |
| Max power (W) | 15 |
| Current monitoring | Supported |

Daughter card (MCB)

Built-in I²C and I/O control

GENERAL SPECIFICATIONS

| | |
|--------------------------------|--|
| Size (H x W x D) | 114 mm x 220 mm x 517 mm (4.5 in x 8.7 in x 20.4 in) |
| Weight | ≤10 kg (22 lb) |
| Temperature | Operating: 5 °C to 40 °C (41 °F to 104 °F) Storage: -20 °C to 70 °C (-4 °F to 158 °F) |
| Relative humidity | 20% to 80% |
| Diameter of tube fitting joint | 6 mm |
| Tube operating pressure | up to 1.0 MPa |
| Power ^a | 100/120 Vac (50/60/400 Hz) 220/240 Vac (50/60 Hz) 60 W typical/80 W max. |
| Access interface | Gigabit Ethernet (RJ45 port) |

ACCESSORIES

| | |
|-------------|------------------------|
| LB-QSDD | QSFP-DD loopback board |
| LB-OSFP | OSFP loopback board |
| LB-QS28 | QSFP28 loopback board |
| LB-SFDD | SFP-DD loopback board |
| LB-SF28 | SFP28 loopback board |
| MA-9000-ESD | Electrical screwdriver |

a. Operate with supply voltage fluctuations up to ±10 % of the nominal voltage.

ORDERING INFORMATION

MA-4000-XX-XX

Model

8-28-PAM = 8x28 GBd PAM4 module analyzer (10G - 28G)

Daughter card (MCB)^a

MA-QSFPDD = QSFP-DD module test board

MA-OSFP = OSFP module test board

MA-QSFP28 = QSFP28 module test board

MA-SFPDD = SFP-DD module test board

MA-SFP28 = SFP28 module test board

Options

FEC = 26G PAM4 FEC simulator software

Example: MA-4000-8-28-PAM-MA-QSFP28-FEC

a. Loopback board included

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