

Logic16 Technical Specifications

Geometry and Weight

- Length & Width: 3.12 inch (79.2mm)
- Thickness: .39 in (9.8mm)
- Volume: 3.8 in³ (62.2 cm³)
- Weight: 2.6 oz (73.7 gm)

Input Voltages and Thresholds

- Input voltage range: -0.9V to 6V
- Works with 1.8V, 2.5V, 3.3V, and 5V systems
- Threshold Setting 1 (for 1.8V to 3.6V)
 - Input Low Voltage: $\leq .7V$
 - Input High Voltage: $\geq 1.4V$
- Threshold Setting 2 (for 5V)
 - Input Low Voltage: $\leq 1.4V$
 - Input High Voltage: $\geq 3.6V$
- Over-voltage protection to +/- 50V. Not meant for continuous operation outside -0.9V to 6V.
- ESD protected per CE requirements

Input Impedance

- 180Kohm || 7pF (typical, approximate)

Maximum Input Bandwidth

- 25MHz square wave

Crosstalk Immunity

- Tolerant of simultaneous switching on up to 8 channels at all voltages.
- Note that unused inputs may exhibit crosstalk if left floating. If desired, unused inputs can be disabled.

Error/Accuracy

- Pulse-width measurement: +/- 10ns @ 100MHz, +/- 20ns @ 50MHz, +/- 40ns @ 25MHz, +/- 80ns @ 12.5MHz

Maximum Sample Rates

- 100MHz when using 2 channels, 50MHz when using 4 channels, 25MHz when using 8 channels, and 12.5MHz when using 16 channels. Note that achieving the highest sample rates requires low USB latency; this may not be achievable on all computers. Performance may improve with the removal of other USB devices, using a different USB host controller, or increasing the software's process priority.

Available Sampling Rates

- 100MHz, 80MHz, 50MHz, 40MHz, 32MHz, 25MHz, 16MHz, 12.5MHz, 10MHz, 8MHz, 6MHz, 5MHz, 4MHz, 2MHz, 1MHz, 500KHz, 250KHz

Sample Depth

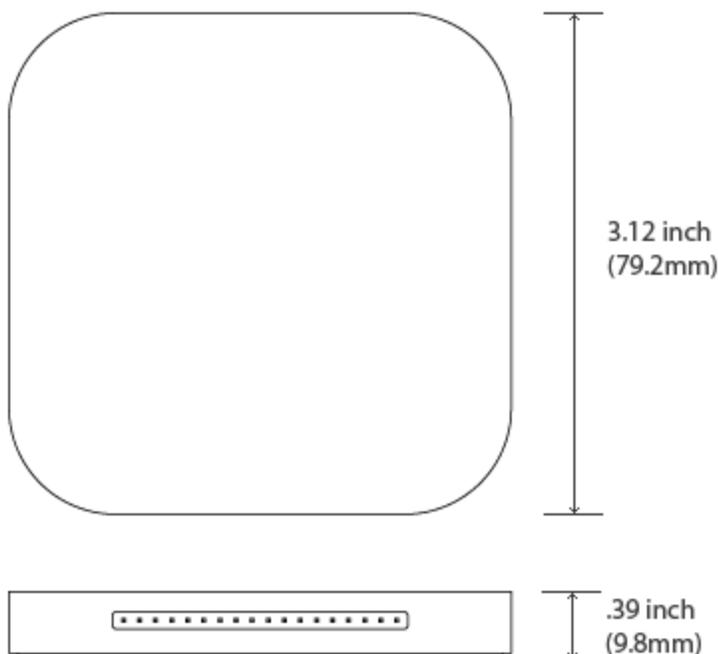
- Up to 10B samples. Absolute maximum depends on data compressibility, available RAM and operating system. 10B samples assumes reasonably high compressibility.

Pre-ship Testing

- Automated testing against long pseudo-random waveforms at 1MHz and 25MHz, run at 1.8V, 2.5V, 3.3V and 5V.

System Requirements

- Windows XP (32-bit)
- Windows Vista (32-bit or 64-bit)
- Windows 7 (32-bit or 64-bit)
- Mac OS X 10.4 Tiger or higher
- Linux: recent Ubuntu, Fedora, or openSUSE. Other distributions are likely to work but not specifically supported.
- USB 2.0



What's in the Box

- Logic16 (fully tested)
- x2 1x9 Ultra-Flexible Test Lead Set
- x18 Micro Hook Clips
- USB Cable (1.8M length, A to mini-B)
- Custom Carrying Case
- Software not included —[download here](#)

Construction

- Custom CNC machined aluminum enclosure
- 2-part elastomer injection molded bottom cover
- 4-layer PCB, professionally designed, laid out, and design reviewed

Connectors

- 1x18 male IDE .1 in pitch (aperture size: .110 in x 1.840 in; .030in radiused corners)
- USB Mini-B

Power

- 95 mA Idle (from USB, typical)
- 115 mA Sampling (from USB, typical)

Regulatory

- RoHS Compliant
- CE Certified

Available Accessories

- Extra 1x9 wire bundles
- Extra x9 pack of test clips
- 1x9 to 1x9 IDE cable
- 1x9 IDE to individual wires cable

Safety & Equipment Protection

- For more detail, please see the section Safety & Equipment Protection near the end of the [User's Guide](#)
- Logic16 may not be used with DUTs (devices under test) which are not electrically isolated from MAINS (i.e. wall power).
- DUTs which are battery powered, or USB powered (from the same computer as Logic16) are acceptable.
- DUTs powered by AC adapters which have only 2 prongs, and do not have an earth ground connection (such as most "wall warts"), usually provide MAINS isolated power and are acceptable.
- When using USB powered DUTs, special care should be taken to avoid connecting USB sourced power to Logic16's ground, as this provides a short-circuit return path. While both Logic16 and USB ports are designed to survive a short circuit event, care should be taken to minimize its likelihood.