

ZIF-Clip® Direct Digital Headstages

ZCD Innovation

ZIF-Clip® Digital (ZCD) line of direct digital headstages offer the industry's smallest and highest channel count digitizing headstages. They utilize Intan's highly integrated amplifier chip and TDT's patented ZIF-Clip technology to yield a low noise electrode recording interface with low wire count and zero insertion force connection.

Low Wire Count

Fewer wires means reduced wiring complexity, lower manufacturing costs, and increased reliability. Our ZCD-96 is a 96 channel device that can pass all 96 full bandwidth signals using just 13 wired connections. This means the 96 channel headstage can be passed through a low cost 16 channel commutator.

Compact Structure

The ZCD headstages are extremely small and light, allowing high channel count recordings from rats and other small rodent subjects. The miniature electronics contained within the headstage allow for high channel densities while maintaining an extremely compact structure.

Zero Insertion Force

ZIF-Clip headstages are designed for zero insertion force transition when connecting to electrodes or adapters. The patented ZIF-Clip® system features an innovative, hinged headstage design that automatically aligns the high density connectors on the headstage and probe and ensures quick, easy headstage connection with almost no insertion force applied to the subject.

Battery Powered Isolation

ZCD headstages connect to TDT's powerful recording systems via the new PZ4 connection manifold. This battery powered device maintains TDT's exclusive battery powered isolation while maintaining an all digital signal path. The PZ4-4 supports connection of up to four ZCD headstages with any channel count for a maximum of 256 channels. The device is powered by a built in rechargeable Li-Poly battery pack and offers 40 hours of operation between charges. The PZ4 passes signals back to the RZ based processing system via our standard noise immune isolating optical fibers.



Specifications

Number of channels:	up to 256
Maximum sampling rate:	~25KHz
Maximum input voltage:	5 mv
Input inered noise:	~2uv (typical)
Channel cross talk:	-75dB
Suported electrode impedances:	1 to 2000KOhms
Frequency response:	0.3Hz to 7.5Kz (3dB)
Battery life:	40 Hrs. (typical)



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