

The ZIF-Clip® ZD Digital Headstages

System 3

Overview. ZD ZIF-Clip® digital headstages use Intan RHD2000 amplifier chips to digitize physiological recordings directly inside the headstage. Digitized signals are routed to a PZ5 with a digital input board for transfer to an RZ base station. A single PZ5 digital input board can support up to 96 channels via a direct connection to any of the ZD headstage form factors [32, 64, or 96 channels]. The headstage cable is detachable for easy, low-cost replacement.

The ZIF-Clip® headstage [Patent No. 7540752] features an innovative, hinged headstage design that ensures quick, easy headstage connection with almost no insertion force applied to the subject. ZIF-Clip® headstage contacts seat inside the probe array and snap in place, firmly locking the headstage and probe with very little applied pressure. These self-aligning headstages provide long lasting low insertion performance for a variety of channel number and electrode configurations. An aluminum finish provides increased durability.

Probe Compatibility. ZIF-Clip® digital headstages are recommended for use with probes that have an impedance in the range of 20 Kohm to 5 Mohm. By default, ground and reference are separate on all ZIF-Clip® headstages yielding a differential configuration. Reference and ground may be tied together on the headstage adapter or ZIF-Clip® microwire array for single-ended configurations. A variety of adapters are available for both chronic and acute applications.



ZD32 and ZD-CBL

ZIF-Clip® Headstage Part Numbers:

ZD32 32 – channel Digital ZIF-Clip® headstage

ZD64 64 – channel Digital ZIF-Clip® headstage

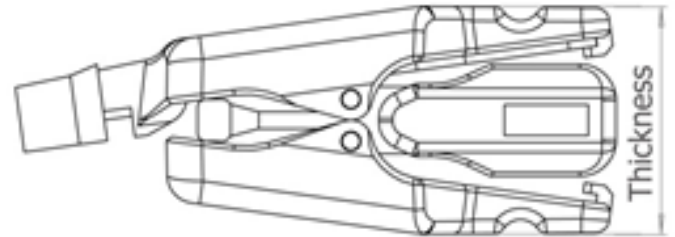
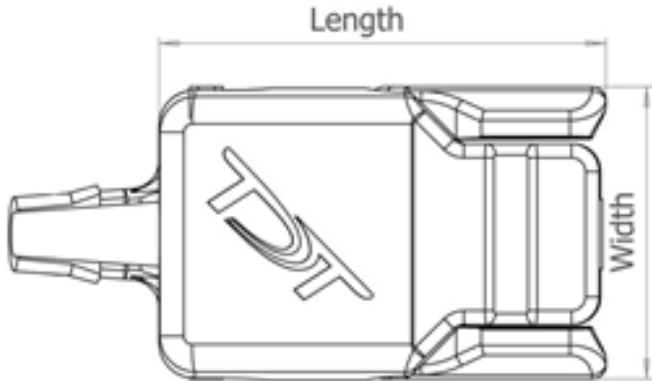
ZD96 96 – channel Digital ZIF-Clip® headstage

ZD-CBL – channel Digital ZIF-Clip® headstage cable

Technical Specifications:

A/D Channels:	32, 64, or 96, 16-bit successive-approximation
Maximum Sampling Rate:	~25 KHz
Maximum Input Voltage:	5 mv
Input Referred Noise	2.4 μ VRMS Typical. Varies slightly [< 15%] with amplifier bandwidth
Frequency Response:	0.1 Hz to 10 kHz [3dB]
Anti-Aliasing Filter	3rd order lowpass [18dB per octave]
Input Impedance	1300 Mohm, 10Hz, 13 Mohm, 1kHz TDT recommends using less than 2 Mohm electrodes

The ZIF-Clip® ZD Headstages



Headstage	Length		Width	Thickness	
	Open	Closed		Open	Closed
ZD32	16.107 mm	16.050 mm	10.500 mm	8.137 mm	7.400 mm
ZD64	16.446 mm	16.497 mm	15.500 mm	12.760 mm	10.400 mm
ZD96	17.469 mm	17.562 mm	19.000 mm	12.577 mm	10.499 mm

