

The Electrode Interface Board (EIB-24TT) is mounted to microdrive hardware and provides the electronic signal connection between electrode wires and four 27 channel Neuralynx Headstage Pre-amplifier (HS-27 or HS-27M). The EIB-24TT also provides mechanical connection between microdrive hardware and the HS-27 or HS-27M.

The EIB-24TT does not contain any active electronics, and can pass signals in either direction. The HS-27 or HS-27M will define the signal direction via its buffer amplifiers.

HS-27/HS-27M Connection

The HS-27 and HS-27M are connected to the EIB-24TT with double row header pins. Both headstages have a power LED on one face of the headstage. The headstage connections labeled *J2* and *J3* should have their LEDs facing the top of the EIB-24TT. The connections labeled *J1* and *J4* should have their LEDs facing the bottom of the EIB-24TT. **NOTE: The HS-27 should have pins 1→4 extending past the headstage connector to the side of the *J#* label.**

EIB-24TT Mounting

The EIB-24TT is designed for mounting on a Harlan 28 microdrive. Use the screw holes (top and bottom) to mount the EIB-24TT securely to a microdrive.

Electrode Connection

Electrode wires will be inserted from the bottom of the board. Insulation does not need to be removed from the wire if using Neuralynx EIB Pins. See the *Electrode Attachment Guide* for more information on using EIB Pins. The EIB-24TT uses the Small EIB Pins (0.03cm/0.012").

WARNING: If stimulus lines are connected to electrodes, ensure they are not shorted to +5V before turning on headstage power. Failure to check this may result in paralysis or death of the test subject.

EIB Reuse

Reuse of the EIB-24TT is not recommended, but is possible. If reuse of the EIB-24TT is required, please contact Neuralynx for assistance.

Pin Mapping

The *J#* next to each headstage connector represents the headstage number for the connected headstage (i.e. *J1* = HS1). (Diagram on page 2)

Headstage 1 (*J1*)

EIB Signal	HS Signal
A1→A12	A1→A12
B1→B12	B1→B12
E1	E1
E2	E2
S1+	S2+
S1-	S2-
R1	R

Headstage 2 (*J2*)

EIB Signal	HS Signal
C1→C12	A1→A12
D1→D12	B1→B12
E3	E1
E4	E2
S2+	S2+
S2-	S2-
R2	R

Headstage 3 (*J3*)

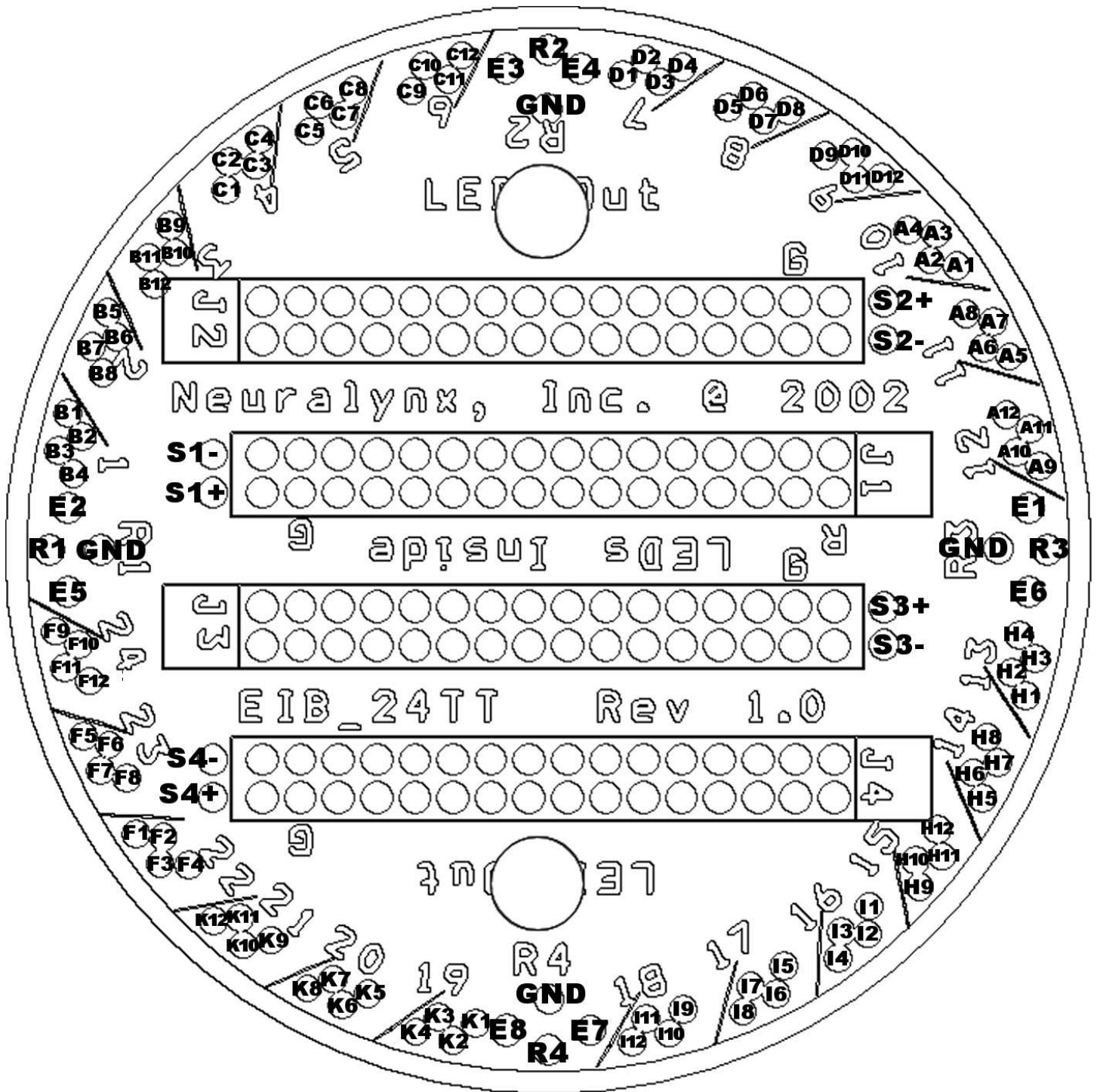
EIB Signal	HS Signal
F1→F12	A1→A12
H1→H12	B1→B12
E5	E1
E6	E2
S3+	S2+
S3-	S2-
R3	R

Headstage 4 (*J4*)

EIB Signal	HS Signal
I1→I12	A1→A12
K1→K12	B1→B12
E7	E1
E8	E2
S4+	S2+
S4-	S2-
R4	R

Technical Specifications:

Size (Dia x H)	3.6cm x 0.7cm
Weight	4.3g
Signals	<ul style="list-style-type: none"> • 96 electrodes (A1→A12, B1→B12, C1→C12, D1→D12, F1→F12, H1→H12, I1→I12, K1→K12) • 4 Ground (GND) • 8 Extra EEG channels (E1, E2, E3, E4, E5, E6, E7, E8) • 4 References (R1→R4) • 4 Differential Stimulus channels (S1-, S1+, S2-, S2+, S3-, S3+, S4-, S4+)
Connections	<ul style="list-style-type: none"> • 96 0.03cm Vias • 24 0.04cm Vias • 4 Milmax 32 pin
Mounting Screw Diameter	0.13cm



EIB-24TT: Pin Layout (Top View)