

Connecting to SpikeLog128 single board logger

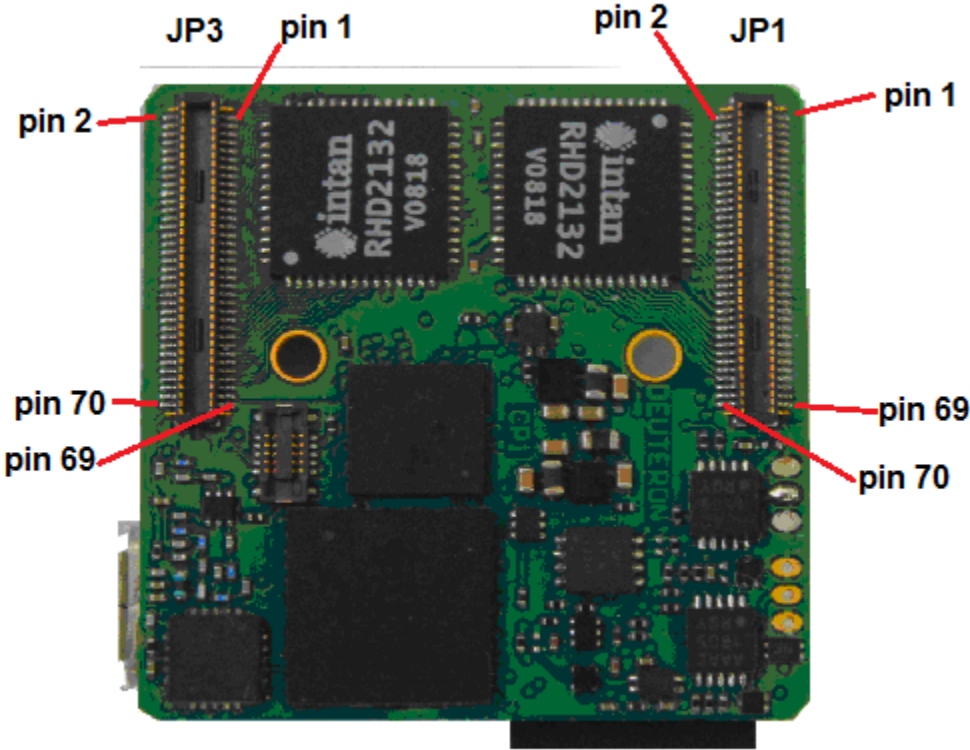


SpikeLog128 Front view

This document is for users of SpikeLog128 who wish to construct their own adapters for connecting to electrode assemblies. Neural inputs to the logger are made to the two 70-pin connectors on the rear of the board. The connectors on the logger board are Hirose part number DF40C-70DP-0.4V(51) or DF40GB-70DP-0.4V(58) . This connector has the advantage of being able to mate with different connectors depending on the desired spacing between the logger and the adapter board. Deuteron's own adapters use DF40HC(3.0)-70DS-0.4V(58) which provide 3mm spacing between the adapter board and the logger board. The highest components on the rear of the logger board are about 1.2mm high. If 2mm spacing, use the DF40C(2.0)-70DS-0.4V(58) receptacle.

It is critical that the two 70-pin connectors on the adapter are mounted exactly parallel and exactly 25mm between center lines. Misalignments of greater than 0.07mm will prevent both connectors from mating reliably. Care must therefore be taken when mounting these connectors on the circuit board that they are soldered very precisely on the center of their footprint.

Connector and pin numbering on the logger



Note that this pin numbering ensures that the top left pin on the adapter is pin #1

Pinout of logger

JP3 pin	Function or channel	JP3 pin	Function or channel	JP1 pin	Function or channel	JP1 pin	Function or channel
2	2	1	127	2	0	1	125
4	6	3	123	4	4	3	121
6	10	5	119	6	8	5	117
8	14	7	115	8	12	7	113
10	18	9	111	10	16	9	109
12	22	11	107	12	20	11	105
14	26	13	103	14	24	13	101
16	30	15	99	16	28	15	97
18	34	17	97	18	32	17	93
20	38	19	91	20	36	19	89
22	42	21	87	22	40	21	85
24	46	23	83	24	44	23	81
26	50	25	79	26	48	25	77
28	54	27	75	28	52	27	73
30	58	29	71	30	56	29	69
32	62	31	67	32	60	31	65
34	66	33	63	34	64	33	61
36	70	35	59	36	68	35	57
38	74	37	55	38	72	37	53
40	78	39	51	40	76	39	49
42	82	41	47	42	80	41	45
44	86	43	43	44	84	43	41
46	90	45	39	46	88	45	37
48	94	47	35	48	92	47	33
50	98	49	31	50	96	49	29
52	102	51	27	52	100	51	25
54	106	53	23	54	104	53	21
56	110	55	19	56	108	55	17
58	114	57	15	58	112	57	13
60	118	59	11	60	116	59	9
62	122	61	7	62	120	61	5
64	126	63	3	64	124	63	1
66	CONTACT	65	HGND	66	NC	65	NC
68	ANTC	67	CREF	68	VBAT	67	NC
70	V18	69	GND	70	GND	69	HGND

Non-channel pins:

NC: No connection

HGND: Analog signal ground

ANTC: Connection for alternative route for antenna

GND Power ground

V18. 1.83V DC supply for accessories

VBAT Connection to battery for alternative route for charger

CONTACT. Detect continuity. LED flashes green when connected to ground

Co-ordinates of connectors

Co-ordinates are as viewed from top of logger board or top of adapter board

Center of logger: $x=0, y=0$

Center of JP1: $x = -12.5, y=6.5$

Center of JP3 $x= 12.5, y=6.5$

Center of mounting holes: $x=-8, y=2; x=8, y=2$