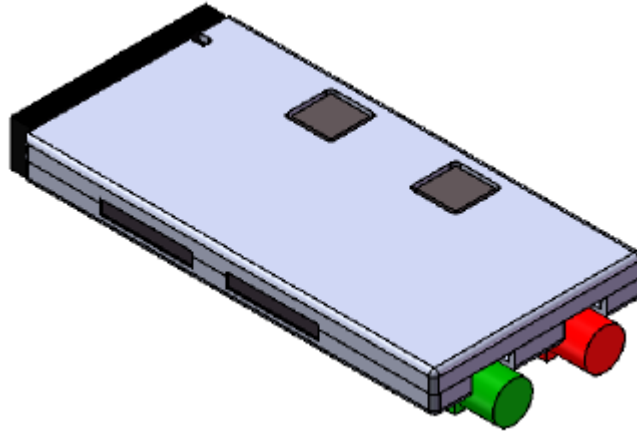


Blackrock Dual Omnetics 10-pin Adapter

PN-7164, PN-7015



Blackrock Microsystems, Inc.

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Dual Omnetics 10-pins Adaptor Instruction for Use

1 System Overview

The Blackrock Dual Omnetics 10-pins Adaptor provides an interface between Blackrock's Neuroport Neural Signal Processor (NSP) and microelectrode arrays for high fidelity transmission and recording of extracellular spikes and local field potentials from the brain. Each set-up provides connection to two 16-Channel adaptors. This allows a total of 4 set-ups (eight adaptors) to be connected (128 channels). The combination of the Amplifier Manifold, Shielded Cable, and the Adaptor provides an ultra-low noise transmission across a desirable distance. Figure 1-1 below shows an application overview of how the Dual Omnetics 10-pins Adaptor fits into a complete neural recording system.

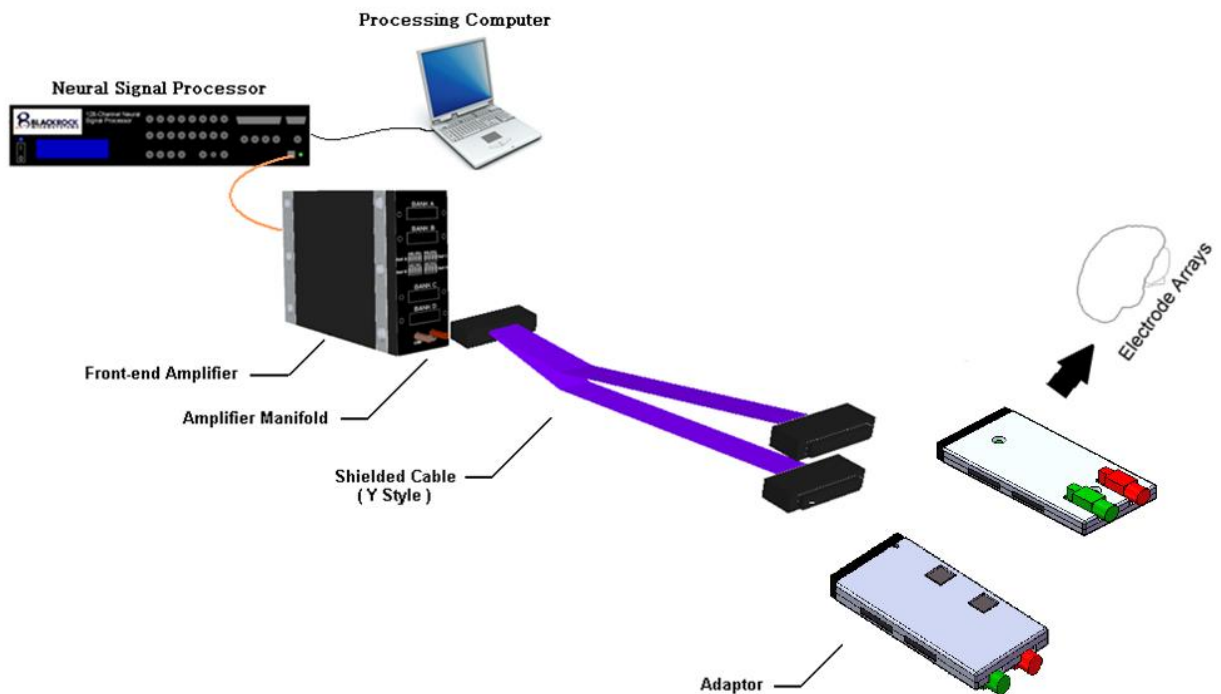


Figure 1-1: Application Overview

* Blackrock Amplifier Manifold and Neuroport Acquisition System (Neural Signal Processor, Front End Amplifier) are each purchased separately.

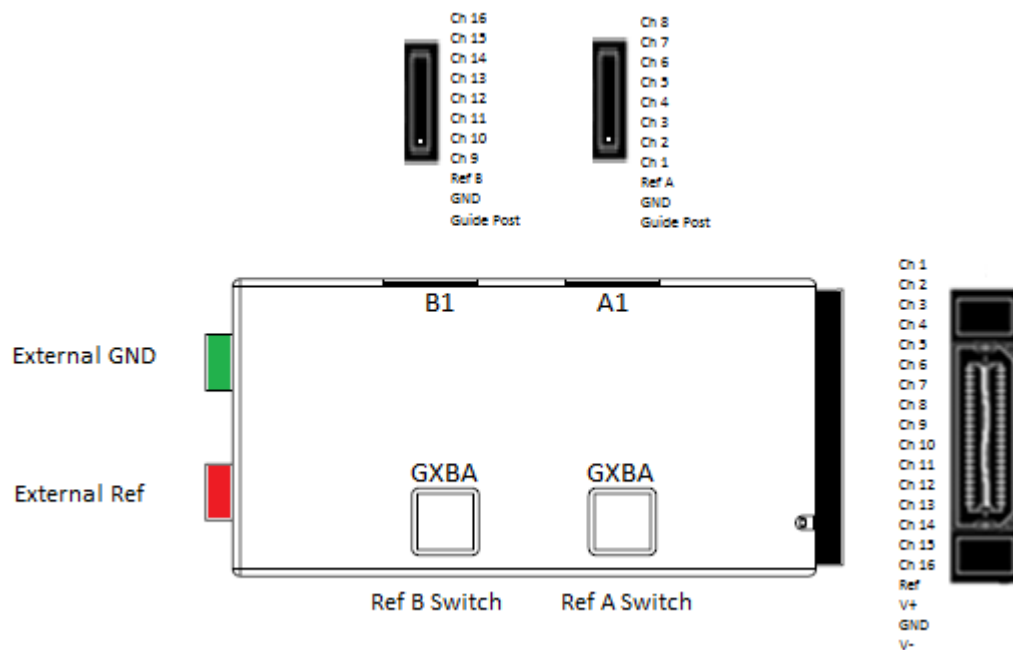
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2 Hardware

2.1 Blackrock Dual Omnetics 10-pins Adaptor Pin-out

The connectors on the adaptor are two Omnetics micro connectors. Each channel has a built in unity gain headstage. The green and red touch-proof jacks coming out from the adaptor are ground and external reference, respectively. Different references can be selected with dip switches as shown in Figure 2-1.

The Y-Cable pin-out is the first cable is channels 1-16, and the second cable is channels 17-32.



*As in this figure, the reference selection switch A is for channel 1 through 8 and switch B is for channel 9 through 16. Switch Reference, G = External GND, X = External Ref, B = Ref B, A = Ref A

Figure 2-2: Dual Omnetics 10-pins Adaptor Pin-Out

2.2 Instruction for Assembly

- 2.2.1 Turn off the power supply of the Front-end amplifier before connecting.
- 2.2.2 Connect the Amplifier Manifold and shielded cable to the Front-end Amplifier (Refer to the Amplifier Manifold User Manual for instructions on assembly).

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- 2.2.3 Set the reference jumper on the Dual Omnetics 10-pin Adaptor.
- 2.2.4 Plug in the ground connector(s) from the patient before any other connections are made on the side connectors of the Dual Omnetics 10-pin Adaptor.
- 2.2.5 To insert the Ad-Tech Cable to the Dual Omnetics 10-pin Adaptor, follow the illustrations shown in Figure 2-2.
- 2.2.6 Turn on the power supply for recording

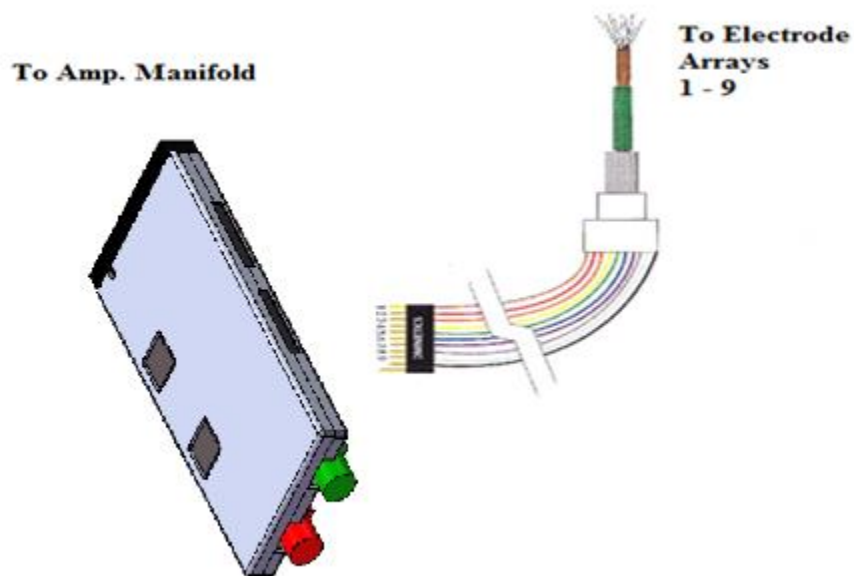


Figure 2-2: Connecting the Ad-Tech cable to the Omnetics connector.

Dual Omnetics 10-pins Adaptor

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3 Warranty

Blackrock Microsystems, Inc. warrants that its products are free from defects in materials and manufacturing for a period of one year from the date of shipment. Blackrock will, at its option, repair or replace any product that does not comply with this warranty. This warranty is voided by:

1. Any modification or attempted modification to the product done by anyone other than an authorized Blackrock employee
2. Any abuse, negligent handling or misapplication of the product.

This constitutes the sole warranty made by Blackrock, Inc. There are no other warranties, expressed or implied, which extend beyond those described herein or to anyone other than the original purchaser, including the implied warranties of merchantability and fitness for a particular purpose. In no event shall Blackrock Microsystems, Inc. be liable for any incidental or consequential damages, or for the infringement of any patent rights or third party rights due to the use of its products.

3.1 Return Merchandise Authorization (RMA)

In the unlikely event that your adaptor needs to be returned to Blackrock for repair or maintenance, do not send any equipment back without a Return Merchandise Authorization Number. An RMA number will be issued to you by a Blackrock representative. If you need to obtain an RMA number, you may contact a product support representative at (801) 582-5533 or toll free at (866) 806-3692.

Once an RMA number has been issued, it is important to safely pack the returned item for shipping back to Blackrock. It is preferred that you save the original boxes and packing materials that your system arrived in for return shipment. Please address the package as follows:

Blackrock Microsystems, Inc.
ATTN: RMA#
391 Chipeta Way, Suite G
Salt Lake City, UT 84108 USA
Tel: (801) 582-5533