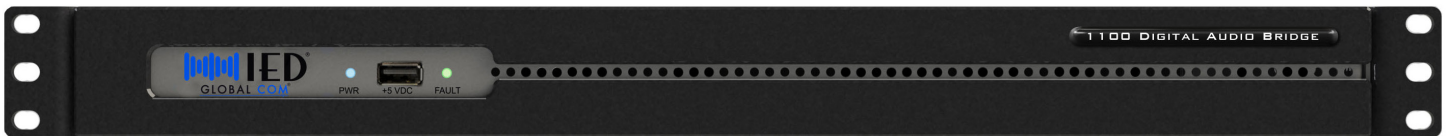


INNOVATIVE IED[®] electronic designs



IED1100DAB

Installation Instructions

Document Number: 1220B

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Version History

Date	Version	Description	Revised By	Comments
03/13/2014	1	Original	KAC	N/A
10/23/14	1.1	Added network Configuration Section	KAT	

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Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain, moisture, dripping, splashing, or place objects filled with liquids on the equipment.

WARNING: If apparatus is equipped with Class I grounding plugs for safety purposes, it must be connected to MAINS that employ a protective earth ground connection.

WARNING: The MAINS plug on this device may be used as the DISCONNECT DEVICE for MAINS power and must remain readily operable.

WARNING: Installation and maintenance of IED equipment is to be made by trained/qualified personnel and must conform to all applicable local codes.

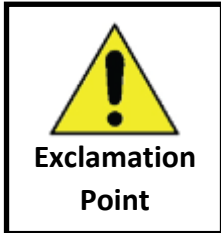
WARNING: If unit contains a lithium battery, there is a danger of explosion. Replace only with the same or equivalent type.

Safety Symbols

Labeling on products and the Installation Instructions & User Manual may use safety related graphical symbols as shown below to note safety requirements.



Lightning Bolt: The lightning flash with arrowhead symbol, within an equilateral triangle, WARNING symbol, is intended to alert the user to the presence of un-insulated dangerous **voltage** within the product's enclosure that may be sufficient in magnitude to constitute a risk of electric shock to persons or domestic animals.



Exclamation Point: The exclamation point within an equilateral triangle, CAUTION symbol, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions, or a hazard that can damage equipment.



Do not proceed beyond a WARNING or CAUTION notice until you have understood the hazardous condition and have taken appropriate steps.

Description

The 1100DAB Digital Audio Bridge is an expansion unit that is used in the GLOBALCOM system to provide a way to bridge CobraNet audio across local networks or VLANs. It is used to send and receive audio to GLOBALCOM systems or Legacy ACS systems that reside on multiple networks. Each network connection is dual redundant, allowing the maximum possible reliability in network connectivity. The 1100DAB can coexist with data traffic over existing Ethernet networks saving money and by eliminating additional infrastructure costs. The support of the 1100DAB allows up to 8 channels of CobraNet being bridged between two networks in each direction (8x8).

The device is added to the system and configured through the GLOBALCOM System Management Center on the 1100/1200ACS that manages the 1100DAB. By using a network-based bridge, announcement management will be linked and routed resulting in announcement distribution.

Connections

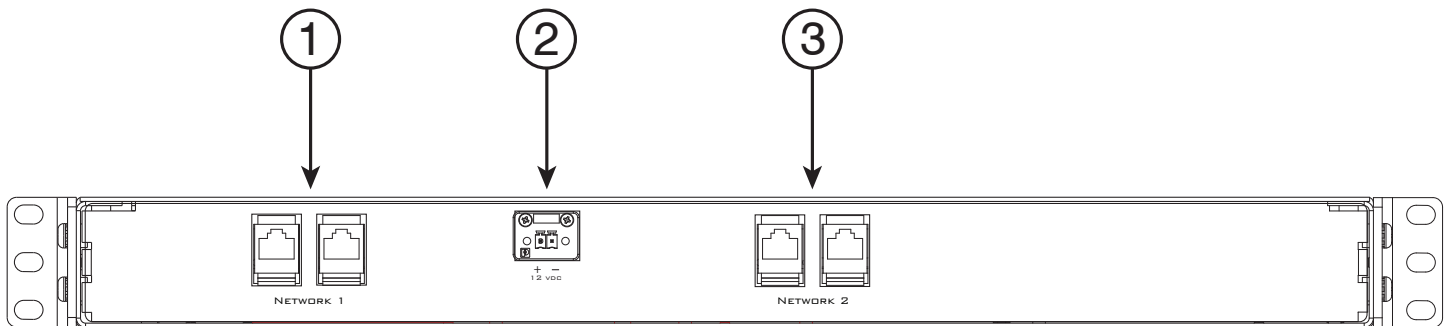


Figure 1 – Rear View 1100DAB Connections

1. Network 1 Dual Redundant Ethernet Connections
2. +12VDC Power Supply Input
3. Network 2 Dual Redundant Ethernet Connections

1100DAB Connections

+12VDC Connection

Insert the power supply plug as shown in Figure 2. To ensure the plug does not become disconnected or loose, tighten the screws on each side of the connector.

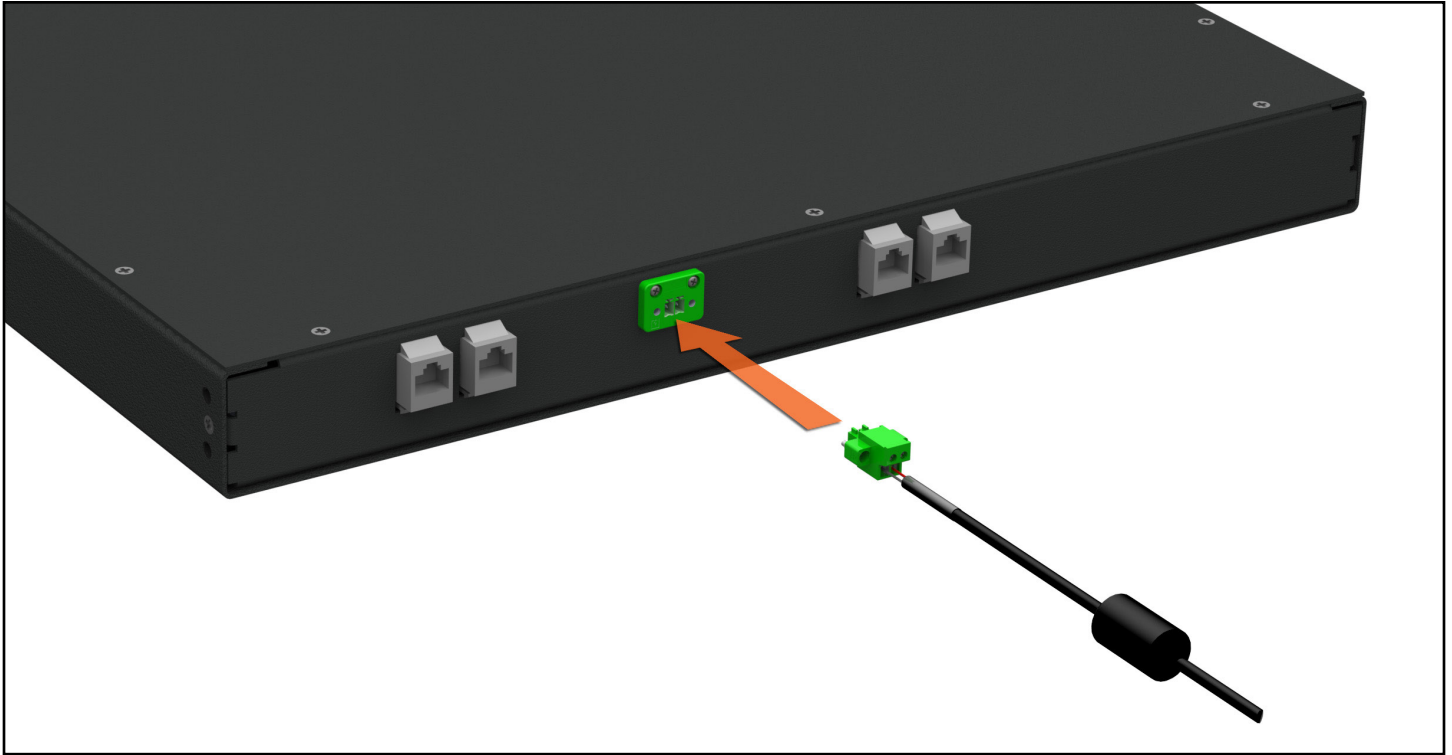


Figure 2 – 1100DAB Power Connection

Dual Redundant Ethernet Connections

At a minimum, one connection from the Network 1 side and one connection from the Network 2 side should be connected to the two local-area networks or VLANs. If redundant network switches are available, then both connections on each side may be used, as shown in Figure 3.

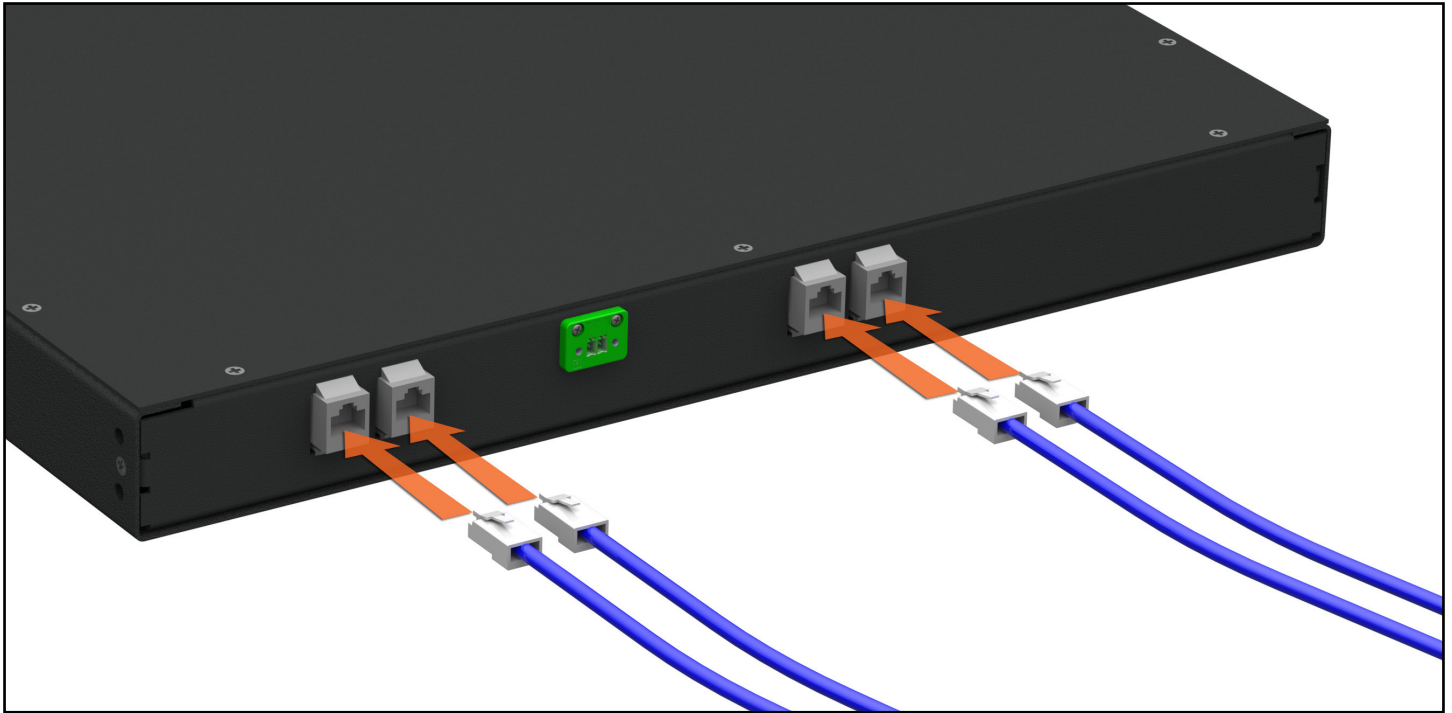


Figure 3 – 1100DAB Network Connections

System Usage Example

The 1100DAB is used to connect CobraNet audio between two different networks, such as between local networks and cross-system or global networks, as shown in the example in Figure 4. Figure 4 also shows that if desired, it is possible to install a second 1100DAB to act as a hot backup or “lifeline” unit for an 1100DAB. This unit can be used as a backup should the primary unit spanning two networks go down.

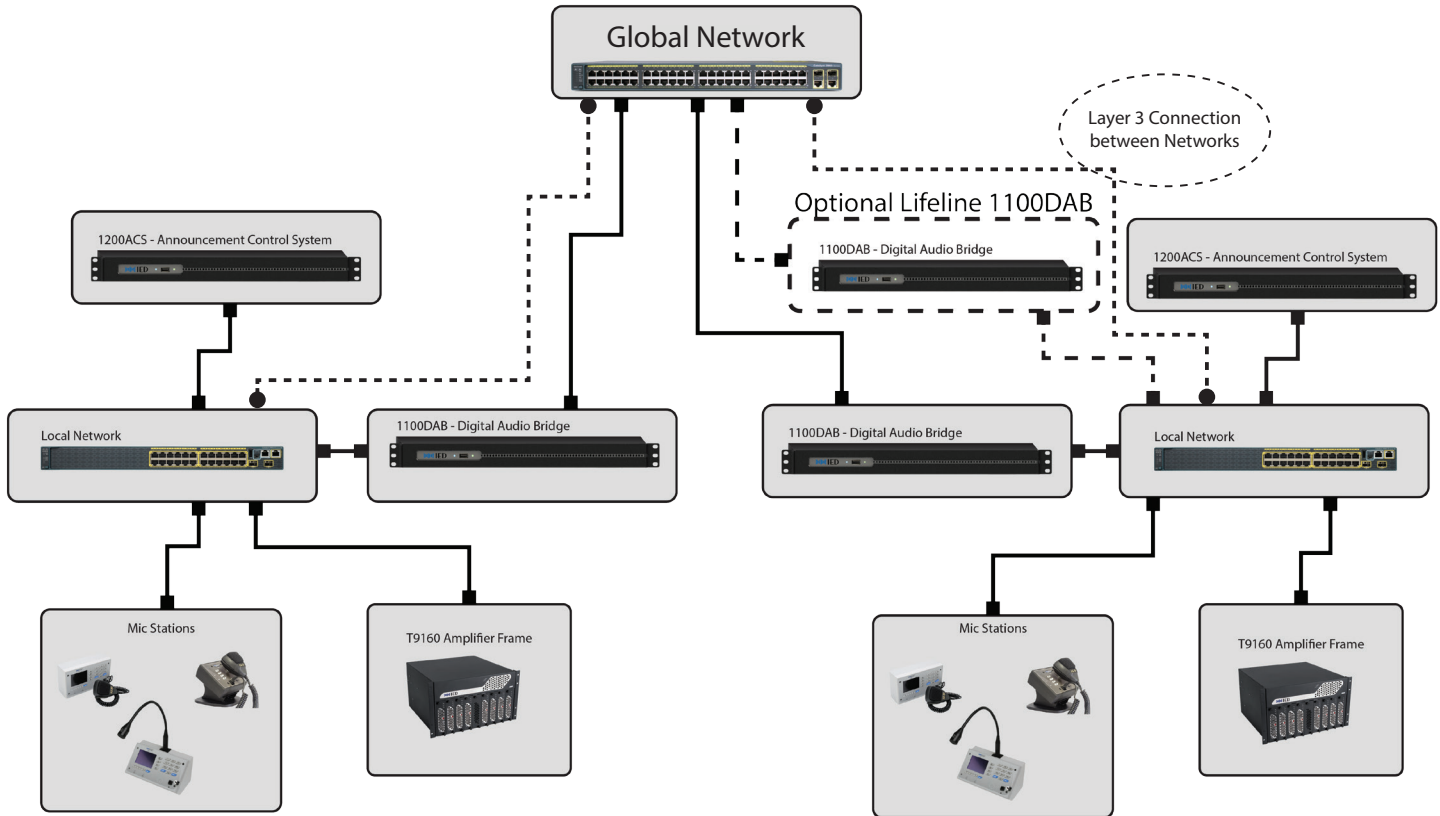


Figure 4 – Example Usage for 1100DABs

Network Configuration

Each 1100/1200ACS must be able to communicate with both the local and global (inter-system) network ports of its own 1100DAB. A smart (layer 3 capable) switch or router would work for bridging these two networks. If the network provider instead wants to restrict this interconnection, e.g., via a firewall, at a minimum, the ACS must be able to send and receive SNMP protocol (destination port 161) packets to both sets of ports of the 1100DAB. This requirement implies that other lower level protocols like ARP must also function across this interface. Optionally, other protocols like PING are recommended to be enabled as well, to allow technicians to verify connectivity to both sets of ports. For more details on network ports used by IED GLOBALCOM systems, refer to the white paper IED005041, “IED GLOBALCOM/500ACS Network Protocol/Port Utilization” available via the help desk system.

Configuration

Setting up the IP Address

Each 1100DAB will need its IP addresses to be set up for the two CM-1 modules it contains. The steps to for setup are as follows:

1. Install the stand-alone Device Discovery Utility. (Location: K:\Install\Device Discovery Utility).
2. Plug both network ports on the 1100DAB on the same LAN (or VLAN) as each other and the configuration computer/laptop, or directly connect one at a time to the configuration computer/laptop via a crossover cable.
3. Run the Device Discovery Utility.
4. It should find the attached halves of the 1100DAB as two 510N cards (what the CM-1 modules inside the 1100DAB report themselves as). These will be at IP addresses 10.2.150.151 and 10.2.150.152 for networks 1 and 2, respectively. (That is how they were configured leaving the factory).
5. Select one of the two halves and click in the IP address cell and enter a new value that will be used on this project, followed by the <Enter> key.
6. Select the other half and enter the IP address in the same way.
7. If network connections are going through a router, be sure to put the correct default Gateways into each side of the 1100DAB to allow communication through the gateway/router.
8. Route the Network 1 and Network 2 cables to their final locations in this installation on two different LANs/VLANs

