AEQ

# TITAN-BC 2000 D Router

## TITAN
**BC 2000 D Router Concentrator**
**5120 x 5120 Audio Channels**

## BC 2213
**BC 2000 D Router Linking Module**
**1024 Audio Channels**

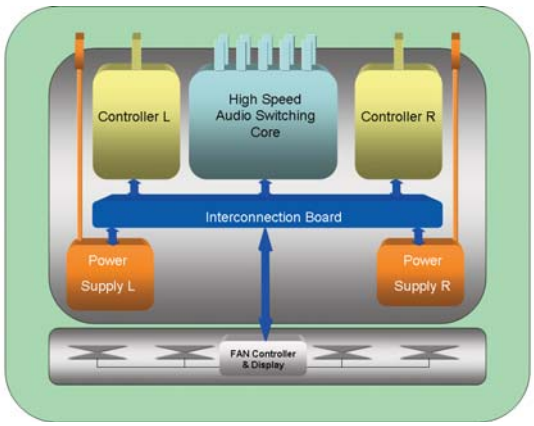

## Digital Audio Router
**Up To 5120 X 5120 Audio Channels**

# TITAN HIGH SPEED DIGITAL AUDIO ROUTER

## BC 2000 D Router / Concentrator - Up To 5120 x 5120 Audio Channels

### DESCRIPTION

The TITAN router / concentrator is a high capacity (5120 x 5120 audio channels) digital audio router/concentrator equipped with five, bi-directional optical fiber ports. By using a non-blocking architecture, each port is capable of connecting up to 1024 channels.

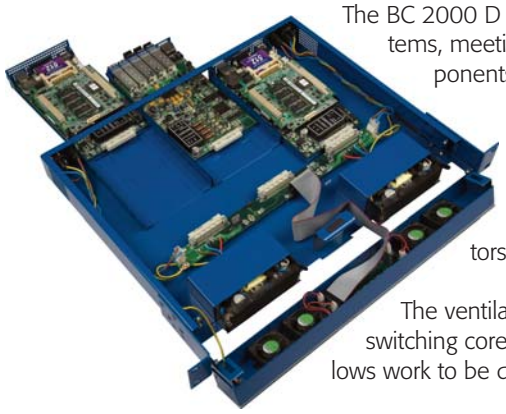

### HOW IT WORKS

The block diagram (to the left) illustrates the main elements of the router/concentrator. Note the redundant architecture. In order to maintain reliability, the interconnection bus is designed to be passive.

As with the rest of the BC 2000 D, the control system is based on a TCP/IP architecture, with two controller boards working in a cluster mode, giving the control interface access via a single virtual IP.

Audio connections are made within the BC 2000 D system by means of five, bi-directional optical fiber ports, which are directly compatible with the internal BC 2213 board. By using this design, the 1024 x1024 audio channel sub-routers can be connected to create a higher audio channel concentration (up to 5120 x 5120), while still maintaining the non-blocking characteristics.

### SECURITY



The BC 2000 D Router / Concentrator - TITAN is designed to act as the audio switching "core" in critical systems, meeting even the most demanding reliability and availability requirements - as do all of the components of the BC 2000 D Router system.

All elements of the concentrator are hot-swappable.

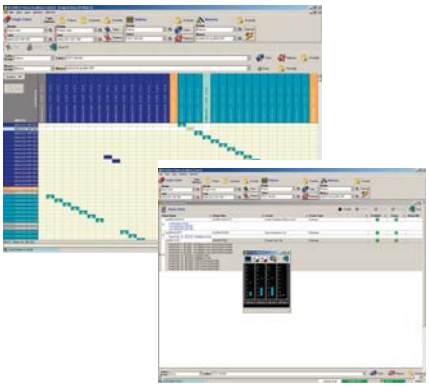
The hinged front panel is removable. This allows access to the two redundant, auto-ranging, switching power supplies. The power supplies have independent line AC connectors so they can be fed from two distinct electrical power distribution sources.

The ventilation fans are accessed from the front panel, while the two controlling modules and audio switching core modules are accessed from the back panel. This facilitates ease of maintenance, and allows work to be done in a timely and efficient manner without removing the equipment from the rack.

### CONTROL

The BC 2000 D management and operating software allows complete configuration, monitor, control, and operation of the router.

In addition to having real-time control of the system, you can also program the switching schedule, automatic alarms, actions, salvos, etc. All of these features create a high degree of reliability and redundancy, and form the basis of the BC 2000 D Router system.



### APPLICATIONS

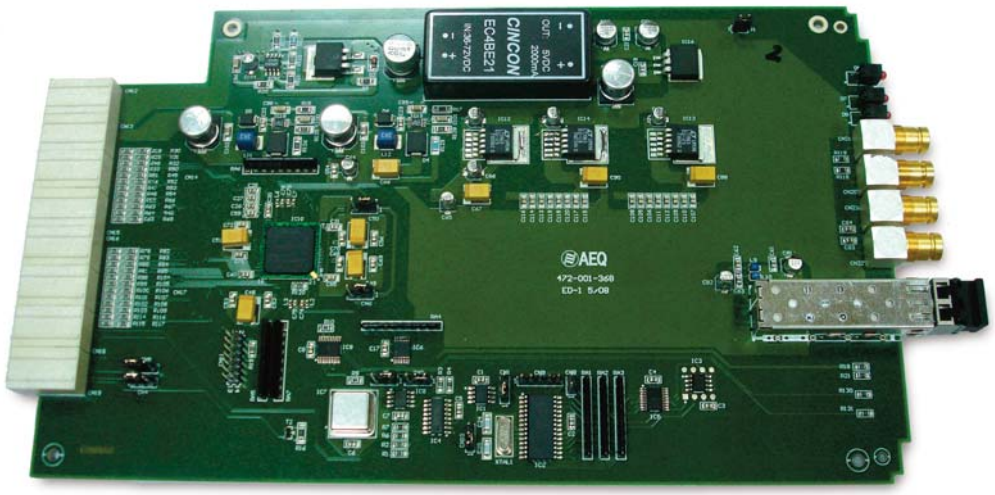
The TITAN - BC 2000 D router / concentrator is ideal for use at high profile broadcast installations such as centralized audio control rooms at radio and TV stations, management and coordination of commentator and reporter circuits during major events, and for audio contribution / distribution networks at large facilities.

# BC 2213 HIGH SPEED ROUTER LINKING MODULE

## Up to 1024 channels of digital audio over fiber optic

### DESCRIPTION

The BC 2213 module is a multi-channel, audio input / output board for bi-directional transmission of up to 1024 channels of digital audio over optical fiber, and is an integral part of the BC 2000 D Router system.




### HOW IT WORKS

The linking module is capable of managing up to 1024 linear audio circuits (24 bits @ 48 Khz Fs), 1024 input channels and 1024 output channels (full duplex). It does this by using an optical fiber interface configured with a transmission speed of 1.96 Gbps.

The board's main function is to serialize multiple audio output channels (up to 1024) and transmit them using a high speed optical fiber transceiver. It simultaneously receives multiple audio input channels (up to 1024), de-serializing and integrating them into the audio system so they can be properly managed and routed.

The audio channels are then handed off to the BC 2000 D router's TDM bus by means of an LVDS interface.

In the standard configuration, multi-mode (MMF) fiber optic cable is used. Achievable distances using this MMF are:

FO MMF (62.5 um/125): 150 meters.
FO MMF (50 um/125): 300 meters.

Since the fiber optic transceiver is an easily changeable encapsulated part, AEQ can optionally supply the BC 2213 linking module with a single mode (SM) optical fiber transceiver. Achievable distance using the SM transceiver increases the linking distance up to 10 kilometers.

### SECURITY

The BC 2213 board is designed to act as the primary link between mission critical audio switching router systems, meeting even the most demanding reliability and availability requirements - as do all of the components of the BC 2000 D Router system.

### CONTROL

The BC 2000 D management and operating software allows complete configuration, monitor, control, and operation of all aspects of the router.

The BC 2213 board allows the associated management and control software access to and control of each and every input and output - providing totally independent gain adjustment of each channel.

### APPLICATIONS

- Interconnection of two BC 2000 D frames, each equipped with as many as 16 MADI circuits (16 x 64 = 1024 audio channels @ 24 bits, 48 KHz.)
- Distributed router / concentrator systems.
- Interconnection of 1024 channel BC 2000 D Router sub-systems with the AEQ TITAN router / concentrator, to create systems of up to 5120 x 5120 circuits, all with non-blocking architecture.

TECHNICAL SPECIFICATIONS

## BC 2000 D - TITAN Router / Concentrator

### Main characteristics:

**Audio ports (5):**

Capacity per port: 1024 audio channels @ 24 bits, 48 KHz.
Connector: LC Duplex type, compliant with the ANSI TIA/EIA 604-10 standard.

**TITAN with standard fiber transceivers**

Fiber type: multimode (MMF), 62.5 um/125 or 50 um/125.
Transmission speed: 2 Gbps, full duplex.
Maximum distances depend upon fiber type:
FO MMF (62.5 um/125): 150 meters.
FO MMF (50 um/125): 300 meters.

**TITAN LP with high power optical fiber**

Fiber type: single mode (SF), 1310 nm.
Transmission speed: 2 Gbps, full duplex.
Maximum distance: Up to 10 km.

**Control ports (2):**

Connector: RJ45.
Type: Ethernet 10/100.

**Ventilation:**

Forced air ventilation. Four fans in front panel. Independent speed control of and failure alarm from each.

**Power supply:**

Two redundant power supplies in parallel mode, with independent inputs.
Input: 90-240 VAC, 50/60 Hz.
Output: 48 VDC.
Power: 40 W per module.

**Approximate dimensions and weights: (width x height x depth; weight)**

482.6 x 44.5 x 450.0 mm; 4 kg. (9 lb.). 1 RU x 19".

## BC 2213 – High Speed Router Linking Module (1024 Audio Channels)

### Main characteristics:

Equipped with LVDS interface for access to the BC 2000 D Router TDM bus.

The symbol coding is 8B/10Be standard, proprietary frame with CRC.

Optical fiber transceiver: 850 nm wavelength with LC Duplex type connector, compliant with ANSI standard TIA/EIA 604-10.

**BC 2213 with standard fiber transceivers**

Fiber type: multi-mode (MMF), 62.5 um/125 or 50 um/125.
Transmission speed: 2 Gbps, full duplex.
Maximum distance depends upon fiber type:
FO MMF (62.5 um/125): 150 meters.
FO MMF (50 um/125): 300 meters.

**BC 2213 LP with high power fiber transceivers**

Fiber type: single mode (SF), 1310 nm.
Transmission speed: 2 Gbps, full duplex.
Maximum distance: Up to 10 km.

**Dimensions and power supply**

Compatible with BC 2000 DF and BC 2000 DF3 racks, occupying a single slot.

*Specifications subject to change without notice.*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