PESA
Switching
Systems

CHEETAH SERIES
FIBER I/O OPTION MODULES
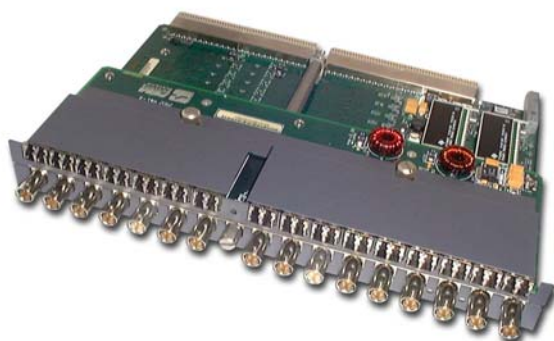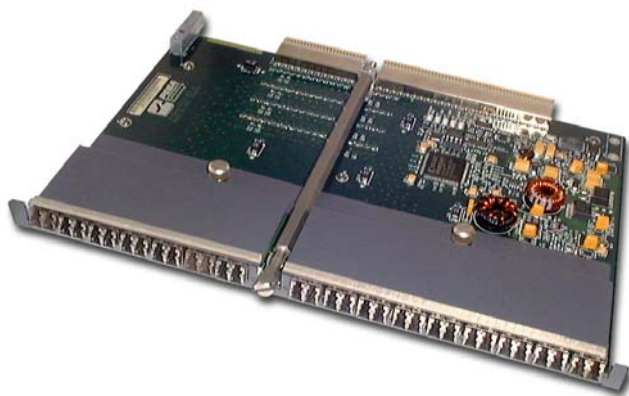
Cheetah

ENGINEERING PRODUCT ADDENDUM

This Engineering Product Addendum will address the Cheetah Series fiber-optic input and output modules (see Figure 1), which provide a fiber input interface and an interface for fiber outputs that includes copper, BNC-type outputs for the various Cheetah Series chassis configurations.
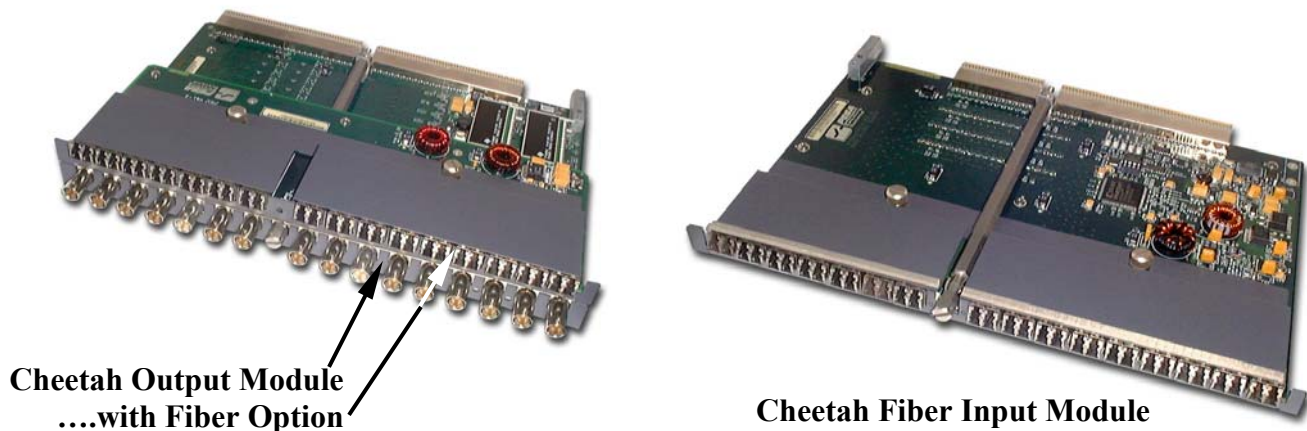

Cheetah Output Module
….with Fiber Option

Cheetah Fiber Input Module

FIGURE 1:   Cheetah Series Fiber Optic Modules

☞ **NOTE:**   *PESA option modules include BNC, DAC, Fiber, and HD to SD Down-converter, which are interchangeable with the output modules as follows:*

- *HD Output Modules can include the BNC Option, the Fiber Option, or the HD to SD Down Converter Option*

- *SD Output Modules can include the BNC Option, the Fiber Option, or the DAC Option.*

Cheetah Series Fiber Optic Modules (Cards) Features

- 16 Input or Output signals per card

- 3Mb/s up to 1.5Gb/s transport

- 1310 nm (nanometers) Transmitter optical wavelength

- Accepts either 1310nm or 1550nm Receiver optical wavelengths

- Can be used with third party digital transmission TX/RX modules

- I/O cards are designed for single-mode operation, which use SFF modules that accept standard fibers terminated with LC-type connectors

- Fiber modules fit all Cheetah frames 64X up to 512X

Cheetah Series Fiber Input Module (P/N 81-9065-2319-0) Overview

This Cheetah Series Fiber Input Module (see Figure 2) was designed for single-mode applications of fiber-optic receiving technology, which provides a transparent transition from optical signals to electrical signals. All inputs can accept optical signals up to, and including, High Definition (HD) as per the SMPTE 292 Standard.

These modules are plug-in, stand-alone type cards that fit Cheetah Series chassis configurations. They include 16 EMI-shielded input port connectors (see Figure 3) and a specially designed shaft for precise card insertion and withdrawal.
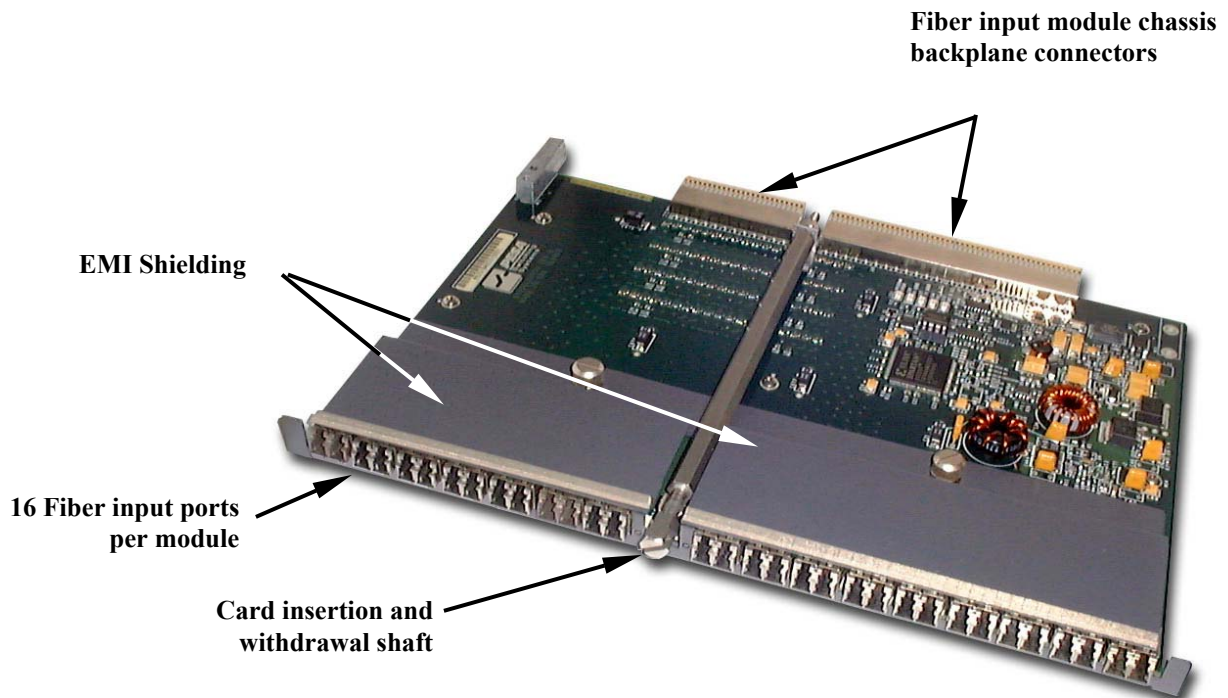

Fiber input module chassis backplane connectors

EMI Shielding

16 Fiber input ports per module

Card insertion and withdrawal shaft

FIGURE 2:   Cheetah Series Fiber Input Module (full view)

The Cheetah Series Fiber Input Module's connection ports are depicted in Figure 3.
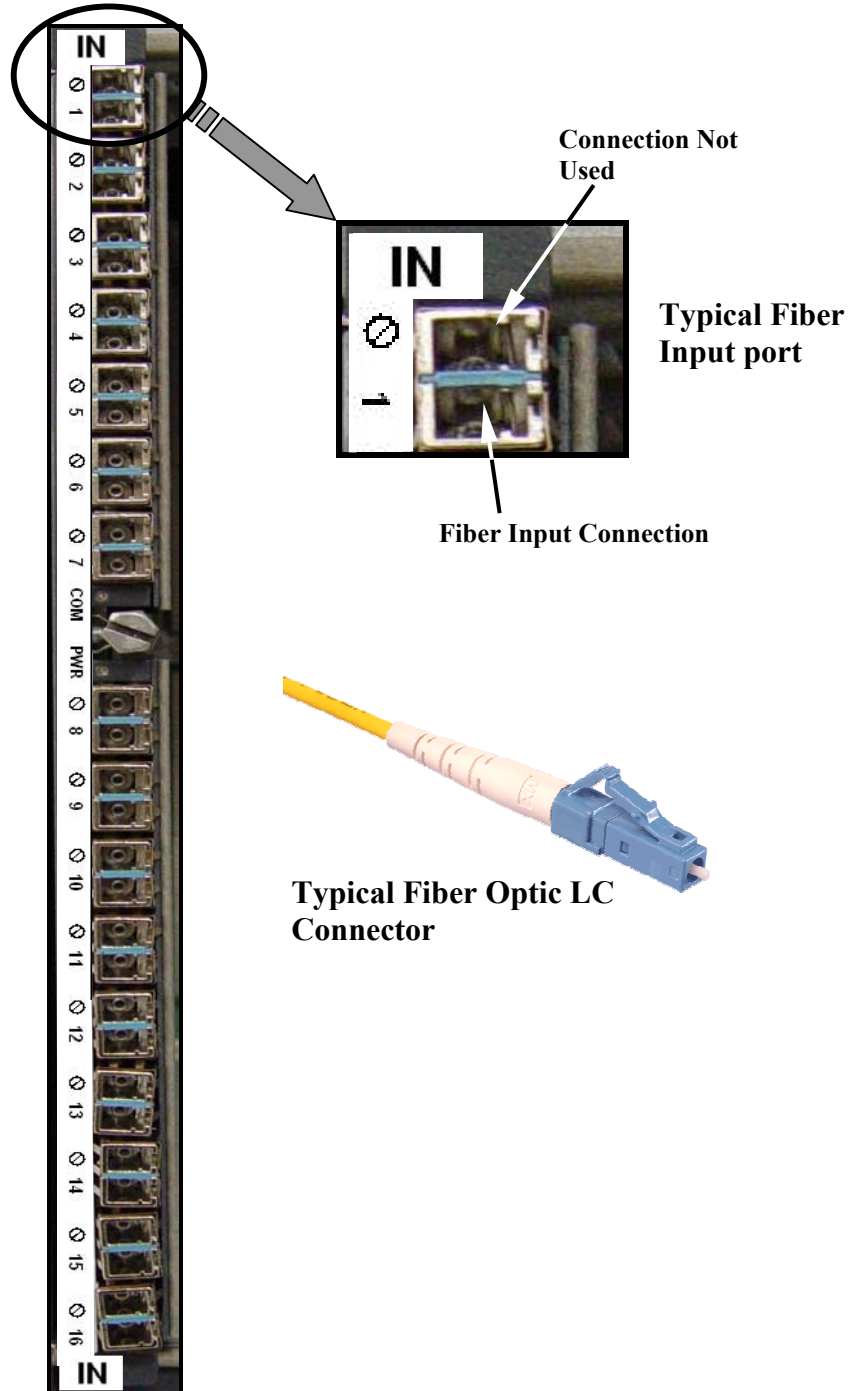
☞ **NOTE**: *Module shown as it is installed into a chassis.*

Connection Not Used

Typical Fiber Input port

Fiber Input Connection

Typical Fiber Optic LC Connector

FIGURE 3: **Fiber Input Module Connections and Pin-outs**

Cheetah Series Output Option Fiber Module (P/N 81-9065-2318-0) Overview

Typically, this module is ordered as an assembly, which the fiber output board is connected and mounted to either an SD or Multi-rate, 16-port, BNC-type output module.
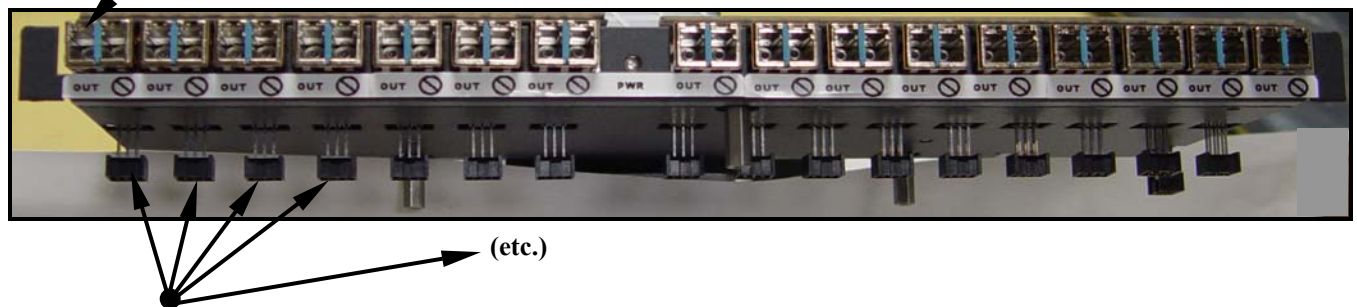
This Cheetah Output Option Fiber Module (see Figure 4) was designed for single-mode applications of fiber-optic output technologies, which provides a transparent transition from electrical signals to optical output signals. All outputs can provide optical signals up to, and including, High Definition (HD) as per the SMPTE 292 Standard.

Fiber Output Option Module (top view)
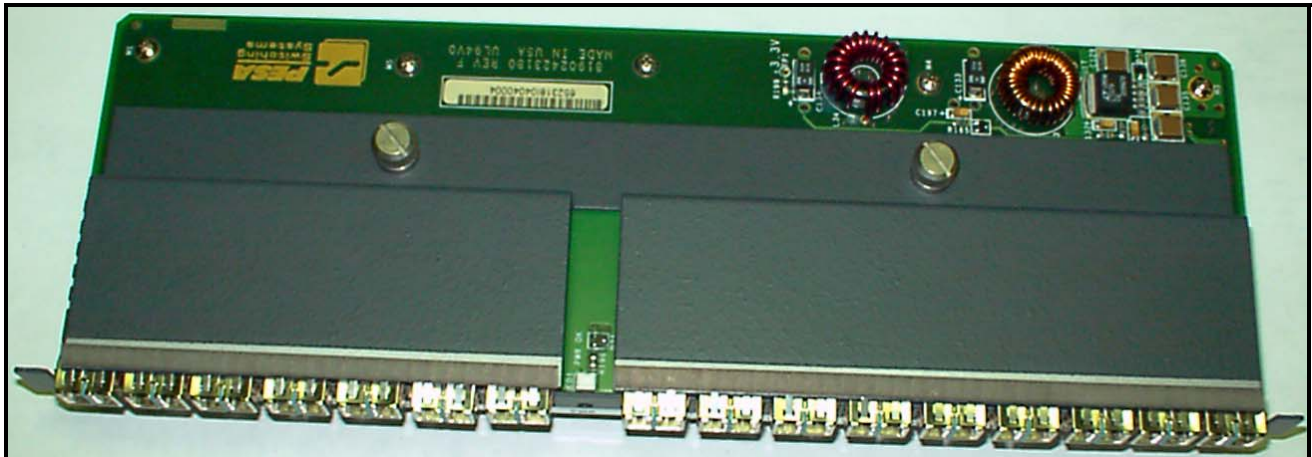
Fiber output port

Fiber Output Option Module (front view)

(etc.)

Connectors for mounting on an SD or Multi-rate output board (module)

FIGURE 4:   Cheetah Series Fiber Output Option Module

Cheetah Output Option Fiber Module Assembly

The following figures (see Figures 5 and 6) depict the individual components and structure of the Cheetah Output Option Fiber Module. The Fiber Output Option module can be mounted to either the SD or Multi-rate Output modules.
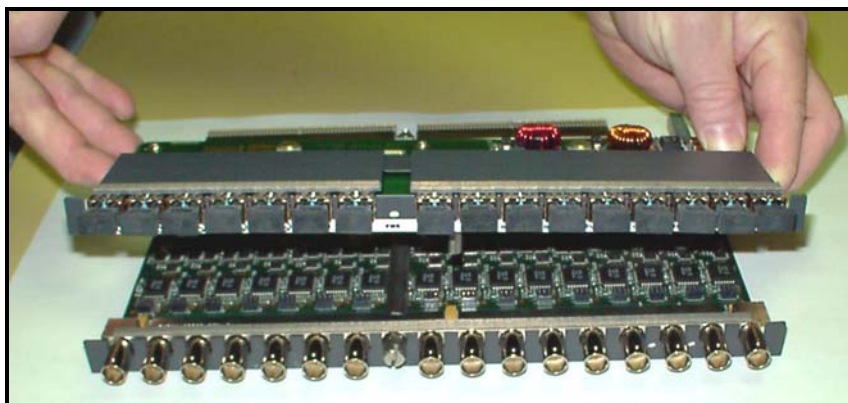

FIGURE 5:   Mounting the Output Option Fiber Module

Cheetah Series Output Option Fiber Module
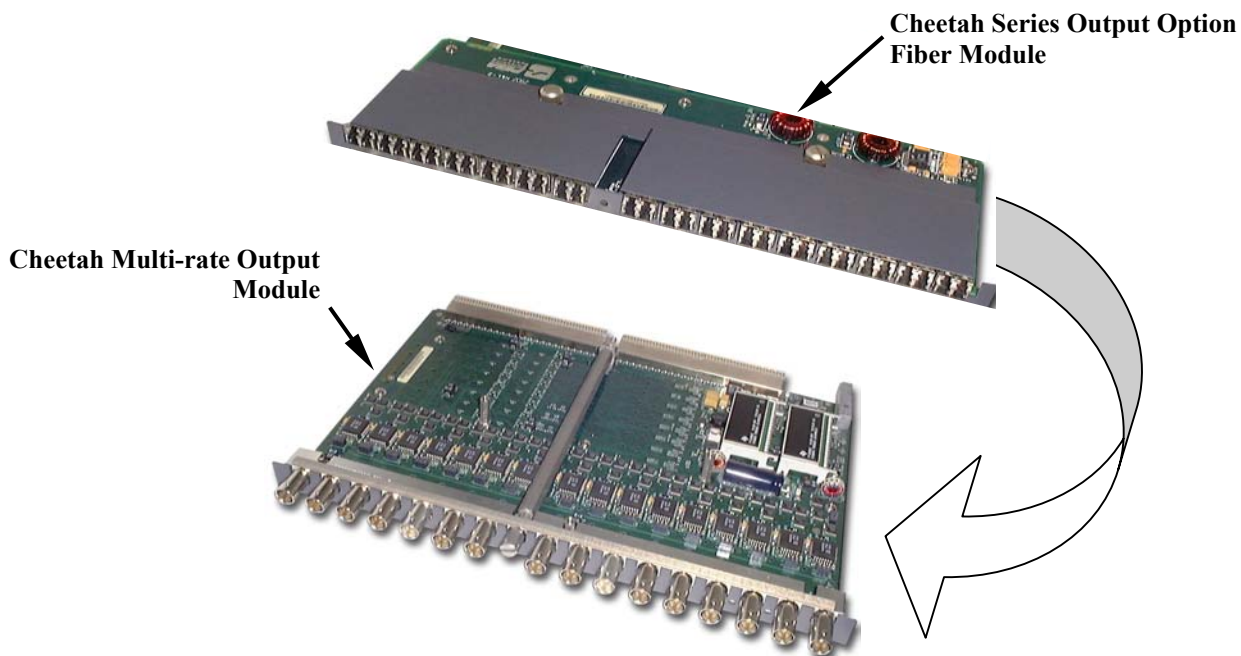
Cheetah Multi-rate Output Module

FIGURE 6:   Cheetah Output Option Fiber Module Assembly

The assembled modules (see Figure 7) are plug-in assemblies that fit Cheetah Series chassis configurations. They include 16 EMI-shielded, optical output ports, 16 BNC-type output ports, and a specially designed shaft for precise card insertion and withdrawal.
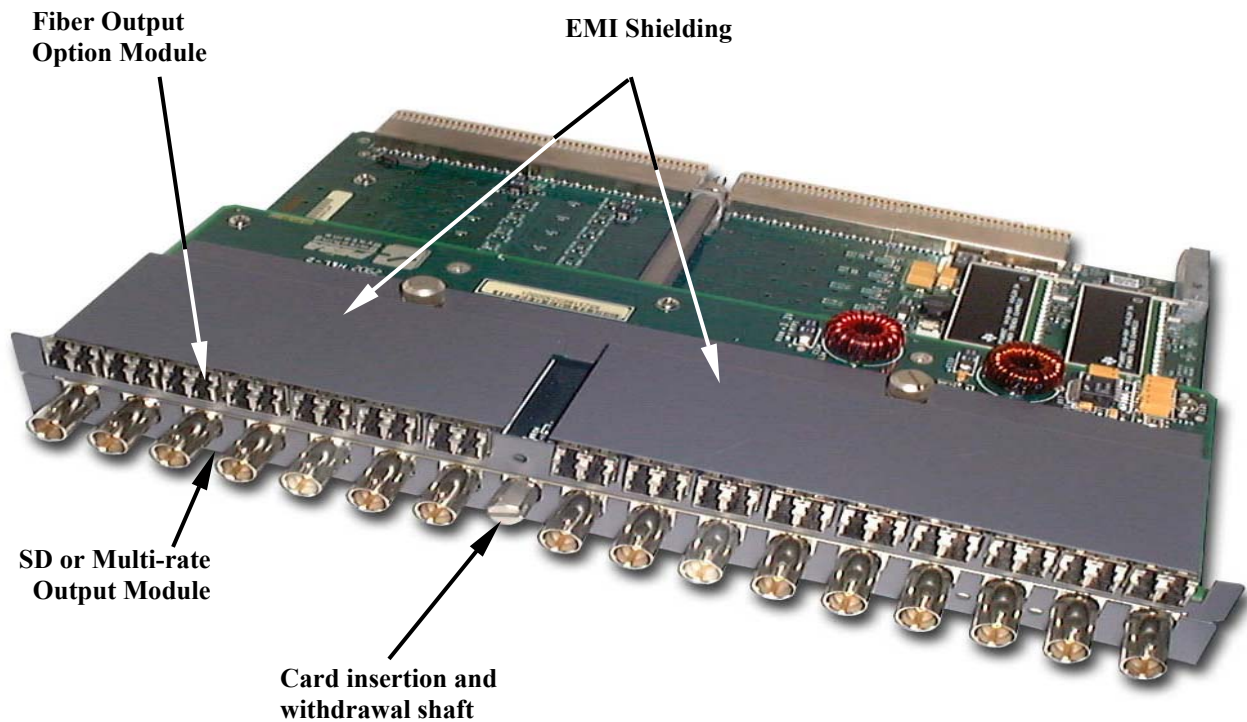

**Fiber Output
Option Module**

EMI Shielding

**SD or Multi-rate
Output Module**

**Card insertion and
withdrawal shaft**

FIGURE 7:   Cheetah Output Option Fiber Module

☛ **NOTE:**   *For further information about this module, refer to the previous section's (Cheetah Series Output Option Fiber Module) overview.*

See Figure 8 for the Cheetah Output Option Fiber Module's output connections.

☞ **NOTE**:   *Module shown as it is installed into a chassis.*

A typical Output Fiber and BNC (copper) output port

Fiber output Connection

BNC output Connection

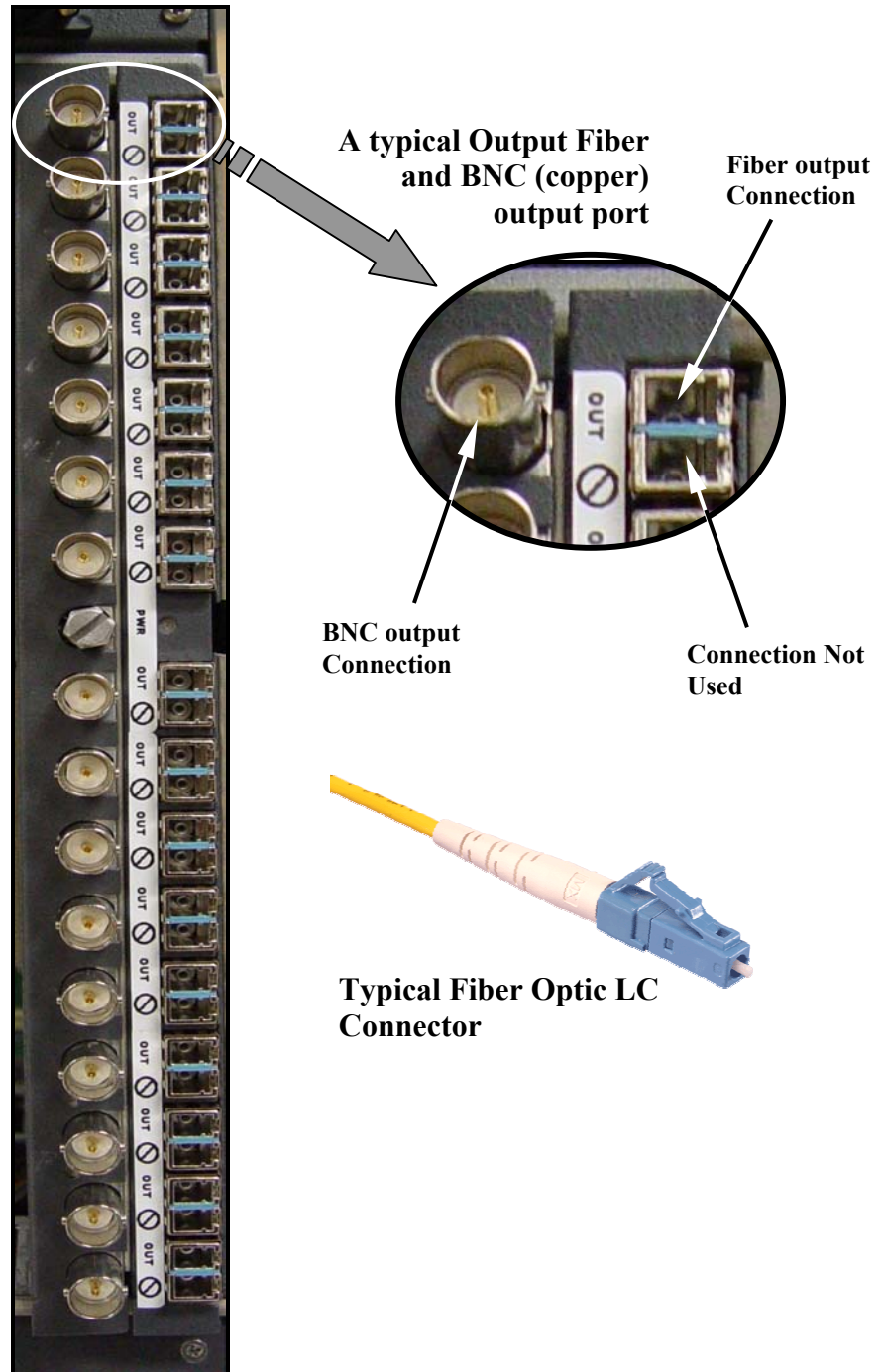**Connection Not Used**

Typical Fiber Optic LC Connector

FIGURE 8:   Cheetah Output Option Fiber Module's Output Connections