CHEETAH SERIES
VIDEO MATRIX SWITCHERS

System Alarm & Frame Alarm Circuits

Technical Addendum

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INTRODUCTION

1.1 PURPOSE OF TECHNICAL ADDENDUM

This Technical Addendum (TA) addresses the System Alarm and Frame Alarm circuits of all Cheetah Series Video Matrix Switcher Frames.

Information for connecting an external system error alarm and frame error alarm warning device is contained in various locations and references of the Cheetah Frame documentation contained on the CD enclosed with your switcher. In all cases, this data will appear in discussions of the frame rear panel connectors. Please note that the circuitry on ALL Cheetah frames has changed since this disk release.

Disregard sections of the documentation contained on the manual CD pertaining to connecting external alarm devices to the Cheetah frame. Use the information contained in the following paragraphs pertaining to configuring external alarm circuits.

QuStream recommends that you keep this TA for future reference.

1.2 SYSTEM CONTROL ALARM CONNECTOR

The three-pin System Control Alarm Connector, illustrated in Figure 1, provides an interface for an external, customer-supplied system control alarm notification device. An alarm condition is initiated by the system controller and is declared when the controller is in reset and when the standby controller is gathering configuration information from the primary controller. During an alarm condition, an optically isolated, electronically closed circuit exists between contacts 2 and 1 as shown in Figure 2. This circuit acts as a switch to trigger an optional external alarm in the event of a controller fault or failure. The controller alarm circuit supplies an electronic contact closure, but does not provide a voltage to the external alarm. **The customer-supplied circuitry must not exceed 12VDC @ 10mA**.

The alarm is activated if the control system detects any of the following conditions:

- Encounters an interrupt that it does not expect or can not process
- Is unable to synchronize with the redundant system controller (dual controller installations)
- Does not receive configuration data from the redundant system controller (dual controller installations)

The customer supplied external alarm circuit is connected with a cable constructed as shown in Figure 2.

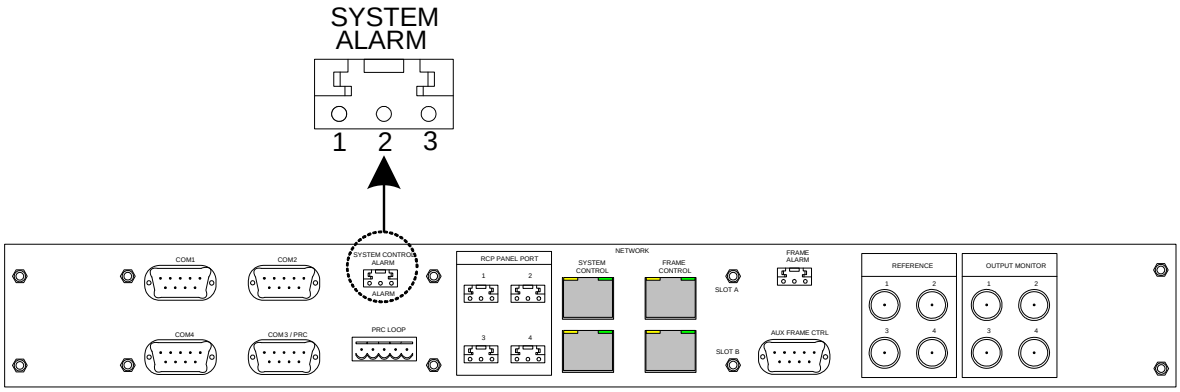


FIGURE 1 - SYSTEM CONTROL ALARM CONNECTOR

CAUTION	**The Customer-supplied alarm circuit voltage to this connector must not exceed 12VDC or 10mA.** **Connections to connector terminals 1 and 2 are polarity sensitive.**

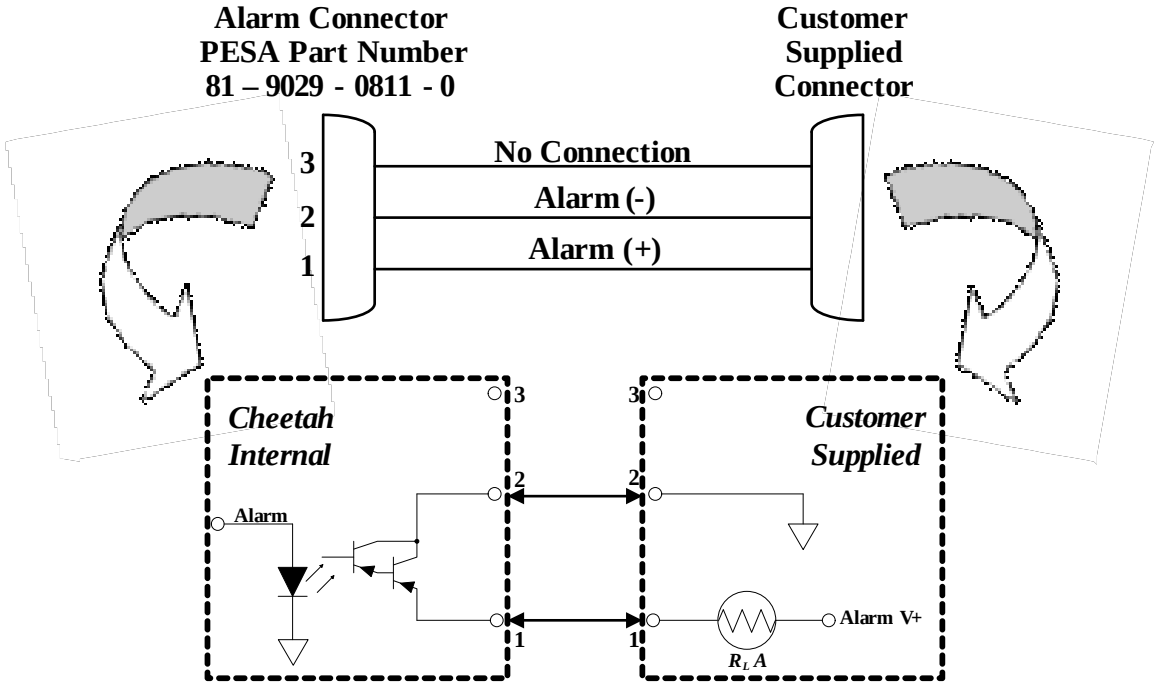


FIGURE 2 - SYSTEM ALARM CABLE SET AND ASSOCIATED SCHEMATIC

1.3 FRAME ALARM CONNECTOR

The three-pin Frame Alarm Connector, illustrated in Figure 3, provides an interface for an external, customer-supplied frame control alarm notification device. The Matrix Frame Controller determines when a frame alarm condition is declared. This circuit acts as a switch to trigger an optional external alarm device in the event of a controller fault or failure. The controller alarm circuit supplies an electronic contact closure, but does not provide a voltage to the external alarm. The customer-supplied external alarm circuit is connected with a cable constructed as shown in Figure 4.

CAUTION	**The Customer-supplied power input to this connector must not exceed 12VDC and the associated amperage must not exceed 10mA.**

NOTE	**Connections to connector terminals 1 and 3 are not polarity sensitive.**

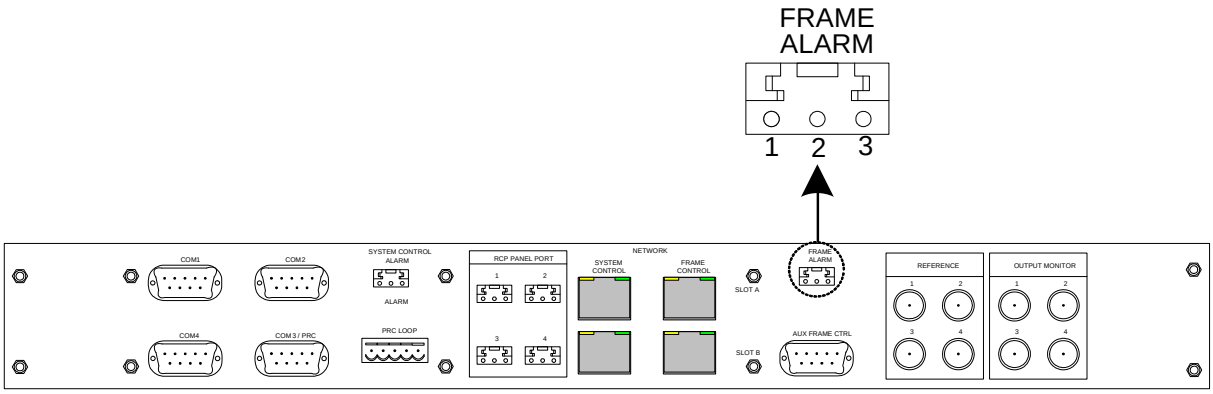


FIGURE 3 - FRAME ALARM CONNECTOR

The alarm is activated if any of the following matrix frame controller conditions exist:

- Finds a card (input, output, matrix, output monitor, power supply, or matrix frame controller) with a temperature out of range (above 114 ºF)
- Finds a fan's voltage out of range
- Finds a power supply's voltage or current out of range

The voltage or current must be out of range for three consecutive status poll events before the Matrix Frame Controller will indicate an alarm.

CAUTION	**The Customer-supplied alarm circuit voltage to this connector must not exceed 12VDC or 10mA.**

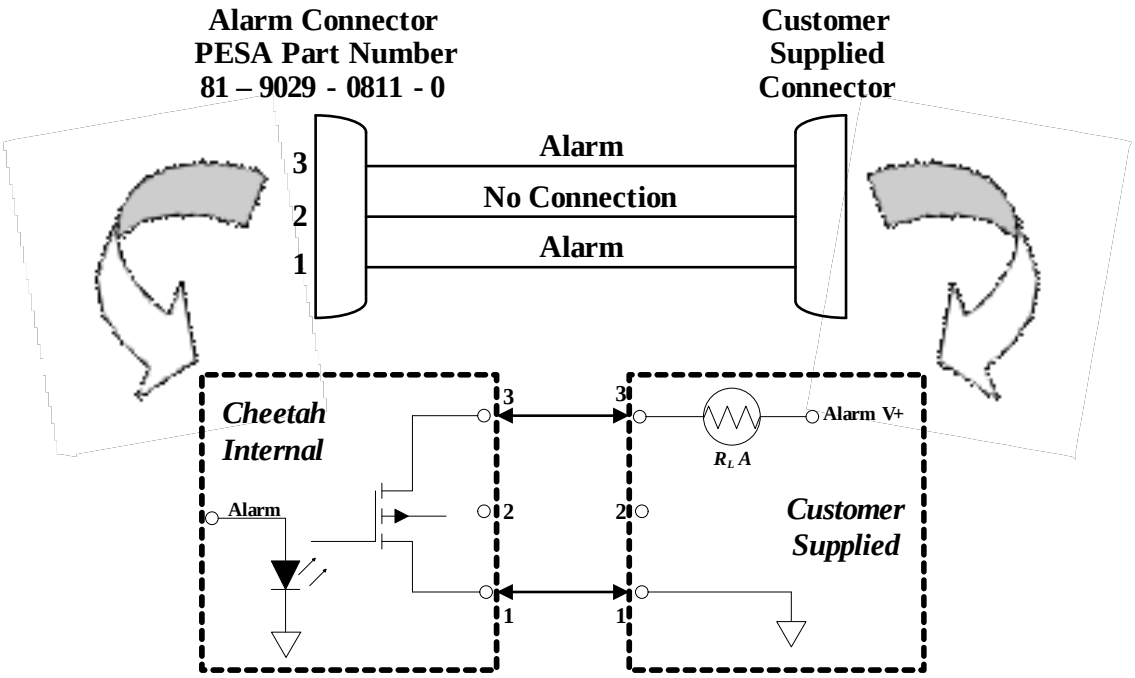
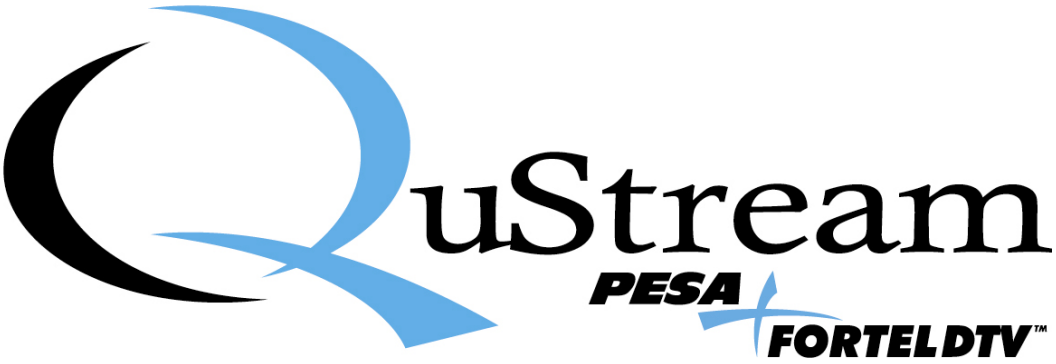


FIGURE 4 - FRAME CONTROL ALARM CABLE CONNECTION AND CIRCUIT SCHEMATIC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