Connector Definition

The channel provides all signal, power, and ground signals to adapters through 50-mil channel connectors.

The channel provides two basic types of connectors:

- 16-bit, which support 8- and 16-bit operations
- 32-bit, which support 8-, 16-, 24-, and 32-bit operations.

Pins 01 through 45 support 8-bit operations. Pins 46 and 47 are keys (physical notch). Pins 48 through 58 provide additional power and signals to support 16-bit operations. For 32-bit adapters that function in 16-bit connectors, pins 59 and 60 are keys; for 32-bit adapters that cannot function in 16-bit connectors, pins 59 and 60 are reserved. Pins 61 through 89 are used with pins 01 through 58 to support 32-bit operations.

The power and ground pins on side A of each connector are offset from side B by 2 pins, and every fourth pin on either side of each connector is an ac ground.

Video and matched-memory extensions to the basic 16- and 32-bit connectors are implemented on a system-by-system basis. For more information, see the technical reference for the specific system.

Note: Adapter designs should not extend the card-edge connector beyond the basic 16- or 32-bit connector unless the signals provided by the extension are used by the adapter.

All of the logic signal lines are transistor-transistor logic (TTL) compatible.

The following figure shows the basic types of channel connectors with optional extensions.

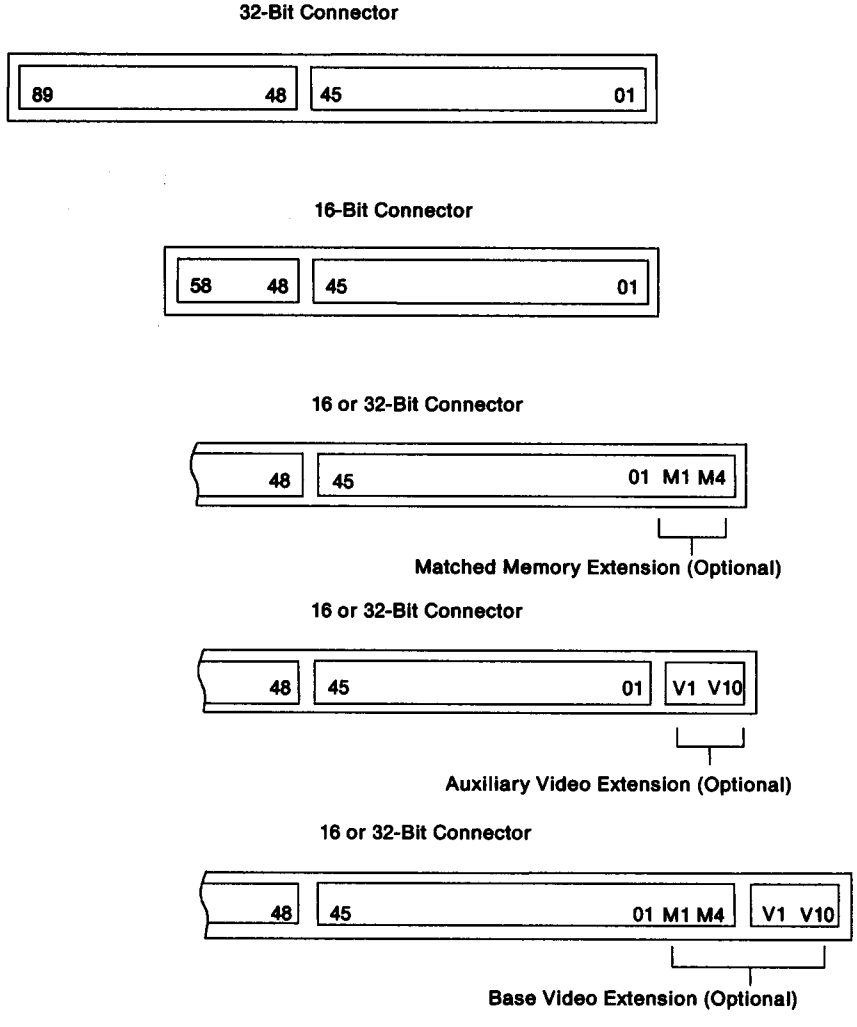


Figure 85. Micro Channel Connectors

Warning: Any signals shown or described as "Reserved" should not be driven or received. These signals are reserved to allow compatibility with future implementations of the channel interface. Serious compatibility problems, loss of data, or permanent damage can result to features or the system, if these signals are misused.

Micro Channel Connector

The following three figures show the signals and the voltages assigned to the 32-bit channel connector. The 16-bit connector is a subset of the 32-bit connector consisting of pins 1 through 58. A key is provided at pin locations 46 and 47 for mechanical alignment.

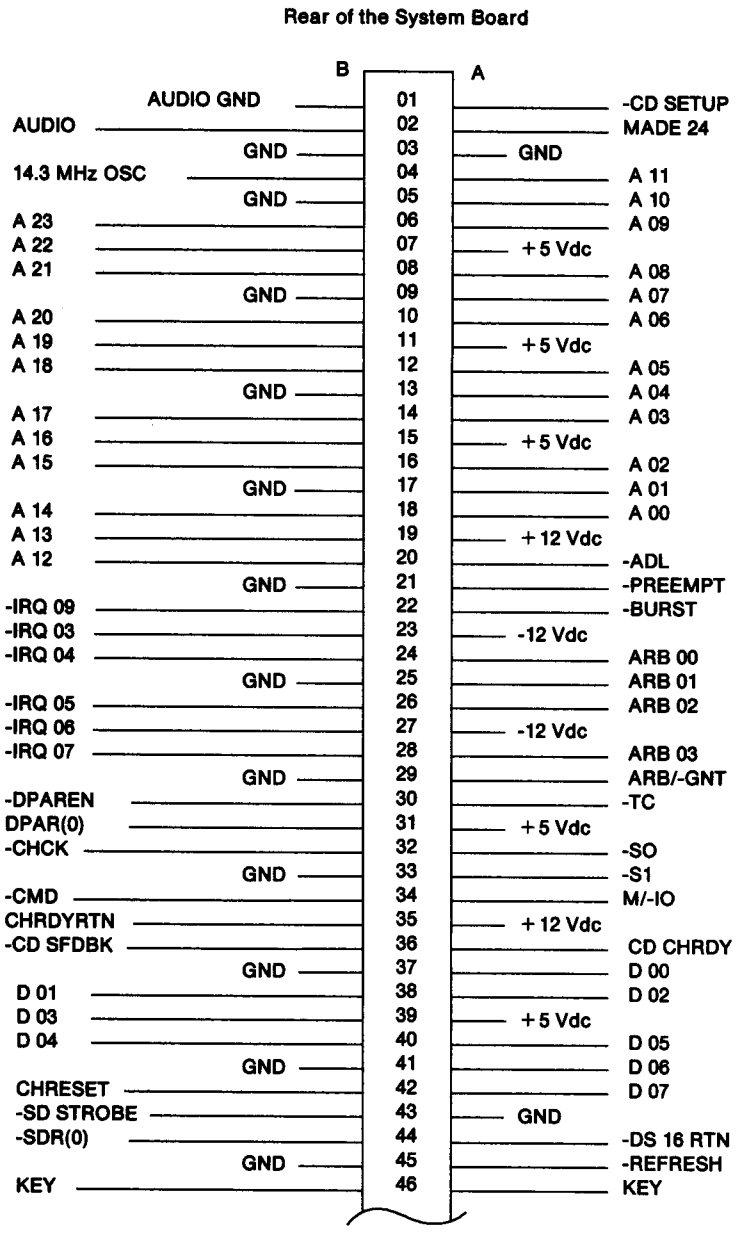


Figure 86. Micro Channel Connector

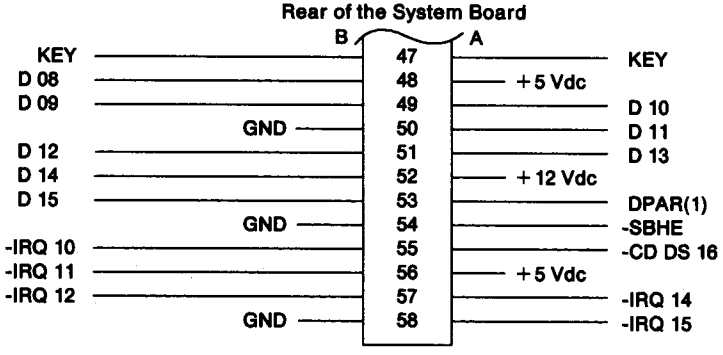


Figure 87. Micro Channel Connector - continued

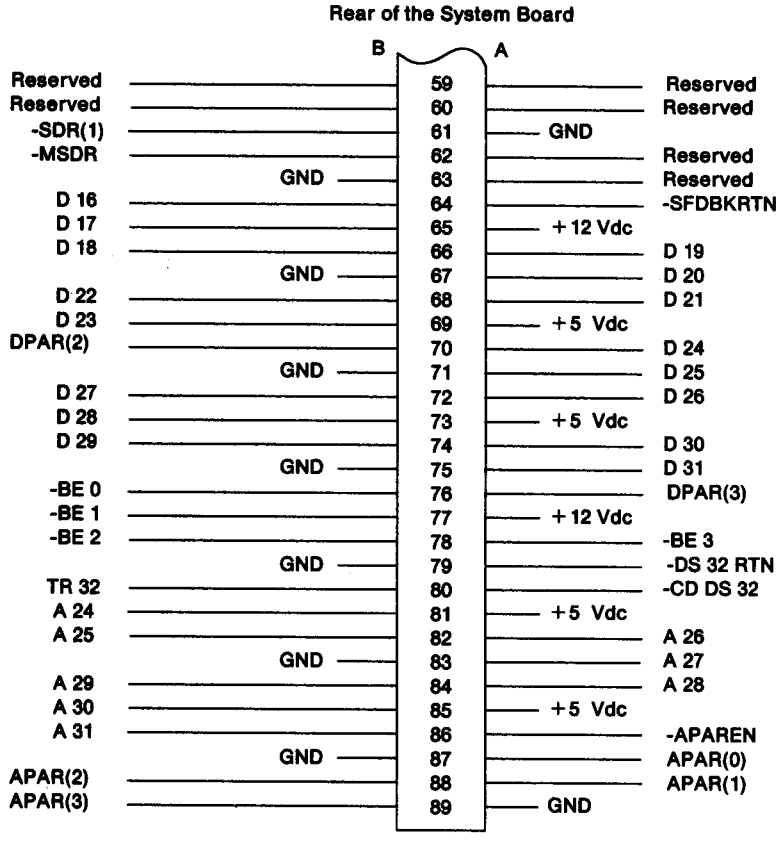


Figure 88. Micro Channel Connector - continued

Matched-Memory Extension

This extension provides additional signals to accommodate matched-memory cycles. The following figure shows a connector with a typical set of matched-memory signals. Refer to the system-specific technical reference for the system you are dealing with for further information.

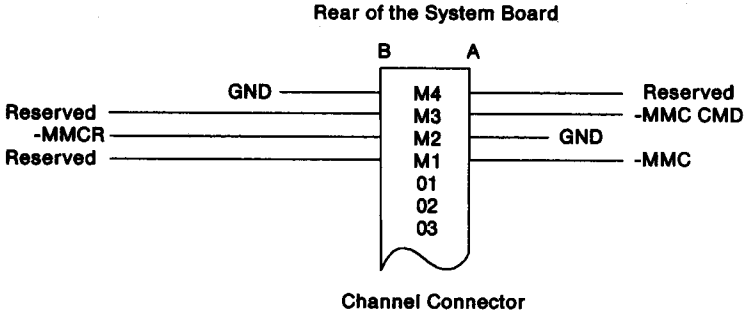


Figure 89. Channel Connector Voltage and Signal Assignments (Matched-Memory Extension)

Auxiliary Video Extension

This extension provides a video adapter with access to resources of the base video subsystem and allows it to extend or supplement the functions provided.

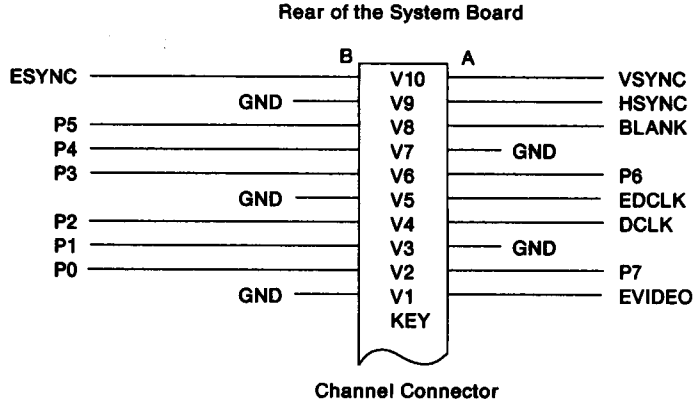
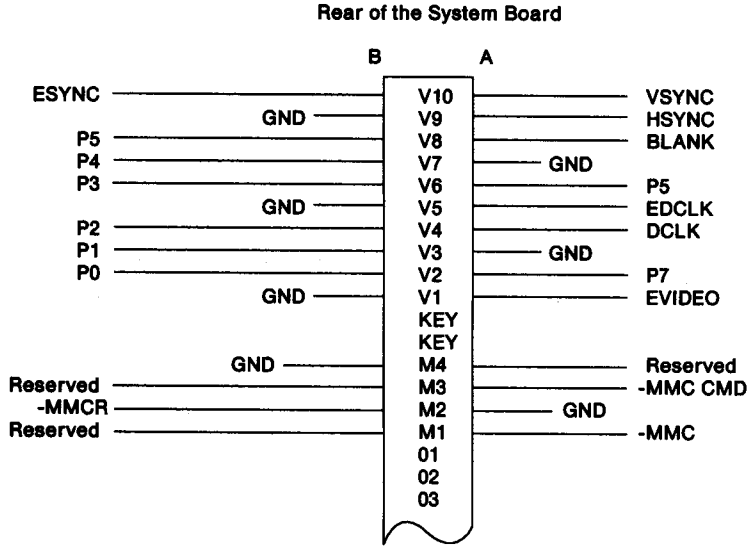


Figure 90. Auxiliary Video Extension

Base Video Extension

This extension is for adapters that provide the base video subsystem. Only systems without a base video subsystem on the system board have a connector with this extension.



Notes:

1. The KEY between M4 and V1 is a physical key.
2. Support of the matched-memory signals (M1 - M4) is optional.

Figure 91. Base Video Extension

Adapter Physical Specifications

The following are the physical specifications for Micro Channel adapters; these adapters can be Type 3, Type 3 half-card, or Type 5. The type number identifies the dimensions of the adapter. Systems specify the adapter type that they support.

Systems that specify support for the Type 3 adapter do not provide the space or the current capacity to accommodate Type 5 adapters (but can accommodate Type 3 half-card adapters). Systems that specify support for the Type 5 adapter support the Type 3, Type 3 half-card, and Type 5 adapters.