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## NuBus Card: Parts for Custom-Building

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TOPIC -----

This article contains questions and answers about sources and specifications, for anyone interested in building a NuBus video card to drive multiple displays from one board.

DISCUSSION -----

- Where do you purchase male DIN 8 connectors?

Male DIN 8 connectors are available from Advanced Electronic Support Products, Inc. (AESP).

- What is the Belden part number for the video cable used by Apple? If this is not available, what is the cable configuration, and can it be expanded to 50 feet?

The Macintosh II video cable is custom built for Apple. However, companies (like Advanced Electronic Support Products) manufacture cables to client specifications.

Here is the cable configuration. There are four video signals and four ground pins on the Macintosh II video card DB-15 female connector:

- |    |                    |  |
|----|--------------------|--|
| 1  | RED VIDEO GROUND   |  |
| 2  | RED                | (analog)   |
| 3  | CSYNC*             | (TTL) used by Apple Displays                                   |
| 4  | CSYNC GROUND       |  |
| 5  | GREEN + CSYNC      | (analog) used for monochrome; CSYNC not used by Apple displays |
| 6  | GREEN CSYNC GROUND |  |
| 9  | BLUE               | (analog)   |
| 12 | GREEN + CSYNC      | (analog) not used  |
| 13 | BLUE VIDEO GROUND  |  |

\*Composite sync (vertical and horizontal).

A custom video extension cable for a Macintosh II requires a cable with a 75-ohm impedance value (usually RG59U standard coaxial video cable). Each line ties to the appropriate pin at the connector, and the shield is connected to the signal ground pin.

Impedance: 75 ohm  
Signal Strength: 13.33 amps, 1 volt

The video signal can be extended 1,000 feet (although there is some color loss at this distance). The signal should be reliable up to 50 feet. The distance is limited by the loss of signal strength through cable resistance.

For more information on pin-outs, cable wiring, and technical specifications, search on "Macintosh II Video Signals".

- Who manufactures the edge connectors--the connector that goes out the back of the Macintosh II, not the motherboard connector--for the NuBus cards?

A source for the video connectors (Part Number:745782-6) is AMP, Inc., of Southeastern, PA.  
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