

**Western Michigan University – Office of Information Technology & Campus
Planning, Design & Construction**

Design Guidelines for Facilities Construction:

DESIGN GUIDELINE DG17-9 **BROADBAND VIDEO / CATV SYSTEM
HORIZONTAL DISTRIBUTION**

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I. GENERAL

The standard video system for current buildings is a CATV-style arrangement with outlets supplying WMU's EDUcable channels to designated outlets. Some modern instructional buildings are having custom video systems installed, which will be defined separately. Where EDUcable is provided, it distributed through the building using a riser system as described elsewhere and distributed to defined user outlets using a horizontal cable distribution system.

II. GENERAL DESIGN REQUIREMENTS

The type of video system that will be used for the building needs to be defined early in the construction planning cycle. If a custom video system is desired, OIT need to be informed so appropriate personnel can participate in the planning and assure smooth integration of EduCABLE signals. Additionally, this specification section needs to be adjusted to reflect the desired system

Unless otherwise specified, the building will have a CATV-style system to deliver WMU's EduCABLE service to:

- All instructional rooms.
- All conference rooms.
- Selected public areas.
- Selected offices and other spaces.

EDUcable video outlets are to be incorporated into the standard Panduit work area outlet.

III. SPECIFIC REQUIREMENTS

A. Products

Cable Hangers

- Cable hangers compatible with Category 6 and fiber optic cable specifications that are intended for use above false ceilings or similar spaces.

Flexible coaxial cable will be Belden type 1189A RG-6 quad-shield. All horizontal cable will be plenum rated.

F connectors will be Paladin RG6 Quad-shield Gilbert SEALTITE type.

The outlet at the user end will be a Panduit F-connector Mini Com module (CMFBA). Color will be IW unless otherwise specified.

Labels: See separate DG17.

B. Execution

1. *Cabling*

Install all horizontal cabling using cable path system. All cabling will be neatly and appropriately dressed and retained within cable pathway. Bend radius, tensions, and other physical parameters for all cables will adhere to manufacturer specifications and appropriate standards at all times during installation and after completion.

At TCs, cables dressed with a service excess of approximately 5 feet near the distribution point to allow re-location if required at a later date.

2. *Video Connections*

Video outlets will be activated by connection to an EDUCable backbone tap outlet in the nearest TC.

- Horizontal user outlets will be routed to the closest TC. If two TCs are very close in distance, the connection will be routed to the one which is most related to the outlet (consult with owner if possible).

3. *F Connectors*

F connectors will be attached to each end of cables in accordance with manufacturers recommendations.

- A 12" (approx.) slack will be left at the TC end of the cable. Slack will be dressed neatly at taps.

- A 6" (approx.) slack will be left at the user end of the cable. Faceplate will be assembled to assure all cables adhere to required bend radiuses.

User outlets will provide a signal level of at least +5.0 dbmv for all channels through 600 MHz.

End user outlets will be completed in a style similar to that used for UTP copper and labeled as specified in DG17-x10. User jacks will be installed in sloped panels with openings facing down whenever practical.

Jacks at both ends will be labeled and system will be documented as specified in separate DG.

END OF SECTION