VDM SERIES
SOLID STATE VIDEO, RF or BALANCED LINE SWITCHING SYSTEMS

CYTEC’s VDM Series Switching Systems are based on a solid state switch fabric and are available in nonblocking, full fan-out configurations from 8x8 to 32x32, with a small signal bandpass to over 400 MHz. Input and output buffers are added to the basic switch fabric allowing a broad range of both 75 and 50 ohm coaxial or two wire signals to be switched. Control is via the new IF-8 Control Module, which supplies RS232, IEEE488, and Ethernet remote controls.

TYPICAL APPLICATIONS INCLUDE:
• Programmable Routing of T3/DS3, Video or Low Level RF (Antenna Downlink, IF, etc).
• Broadcast Video to Multiple Locations.
• Signal Distribution for Communications and Test.
• Automated Patch Panels.

SYSTEM HIGHLIGHTS:
• Modular Design - System can be configured in increments from 8x8 to 32x32 matrix sizes.
• Systems are designed for single ended 50 or 75 ohm coaxial as well as two wire pairs.
• Different Buffer Modules provide for impedance transformation (e.g., 50 to 75 ohms) and balanced to unbalanced signals.
• Input and Output Buffer Modules are hot-swappable.
• Control via IEEE488, RS232 & Ethernet all standard.
• Firmware upgrades can be downloaded from Cytec’s web site.

CONTROL OPTIONS
IF-8 IEEE488, RS232 & ETHERNET LAN
These controls are standard. All interfaces may be active and in use simultaneously. Setup information is stored in NVRAM, which also allows the system to be configured for various matrix addressing combinations which are then remembered. The IF-8 may be removed without affecting the switch state. However, installing the IF-8 will cause the system to clear and reset.

MC-2 Keypad Manual Control
This optional front panel control includes a keypad and LCD Display. The operator can open, close and verify the status of any switch point.

VDM CHASSIS
The VDM Chassis are standard 19” rack mount with RS232, IEEE488 Control and Ethernet Controls. These sold state systems are nonblocking and full fanout. Any input connects to any or even all outputs. BNC Input and Output connectors are standard, while other connectors such as SMA or Twinax are also offered. Small signal bandpass is DC to over 400 MHz, while crosstalk is better than -60 dB at 50 MHz.

The following chassis are available:
VDM/32x32 Mainframe- 5.25” high and 15.6 ” depth
Configured from an 8x8 to 32x32 Matrix
VDM/32x32-E Expansion Chassis - is used to build larger systems. Multiple VDX Chassis can be controlled from one MESA II Control Chassis shown as in the MESA Bulletin.

ALL CHASSIS
Material: Gray anodized extruded or sheet aluminum
Mounting Hardware: Rack mount handles are standard
Flush mount flanges available at no extra cost.
AC Power: Autoranges from 90 - 264 VAC at 47-63 Hz

Custom configurations are available on request. Please contact our Technical Sales Department for application assistance.

FOR TECHNICAL ASSISTANCE, PLEASE CONTACT CYTEC AT 800-346-3117 OR VISIT OUR WEBSITE AT cytec-ate.com
SPECIFICATIONS AND BUFFER OPTIONS

VDX SERIES MATRIX
The VDM Series is intended to switch small signal levels in a nonblocking (any input to any output) and full fan out (any input to any or all outputs) configuration. The heart of the system is a solid state 32x32 switch fabric. The basic system holds the necessary control module, power supplies and the switch fabric. The system is completed by adding the required input or output buffers. The buffers supply impedance matching and/or signal level transformations. This design provides switching for a large number of different signal types.

VDM SPECIFICATIONS
Connections
BNC Signal Connections, AC input and Remote Control input are on rear panel shown in Fig. 1. Optional signal connectors including SMA, SMB, TwinBNC and Triax.

INPUT and OUTPUT BUFFERS
Optional very wideband Buffers are available for all Input and Output Channels. These buffers serve up to three different purposes:
1) They transform impedances to allow the solid state switch fabric to be used for signals requiring other than two wire analog, for example 50 ohm coax.
2) Input Buffers can be used to reduce signals to levels where they can be safely switched by the matrix.
3) Output Buffers can have preset gains to boost signals to required voltages.

A typical Output buffer is shown schematically in Fig. 2. Resistors Rs and Ri set the input impedance and also attenuate the input signal (if needed), while Rout determines the output impedance. The circuit is typically built with one of several standard small signal Op Amps, but custom amplifiers are also possible. Specifications for a typical small signal amplifier are shown below.

BUFFER SPECIFICATIONS
Bandpass (-3dB) Typically >500 MHz
Preset Gains (Av) 2 to 16
Output Current 80 mA typical
Rise Time 3100 V/us typical

Fig. 2 Typical Output Buffer

SOFTWARE
Free drivers and/or sample programs are available for the most commonly available application programming languages.

WARRANTY
CYTEC Corp. warrants that all products are free from defects in material or workmanship for a period of five years.

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