



Data Sheet

# VMS

## Video Management System

### Features

- ◆ Simplifies video distribution in complex aircraft mission fits
- ◆ Enables any display to call up any video or multiple video inputs
- ◆ Quadview shows up to 4 inputs simultaneously
- ◆ Display can control video recorders
- ◆ Display can select which video (including quadview) is sent to the microwave transmitter
- ◆ Touch screen interface

### Introduction

The Video Management System (VMS) was designed for users of modern, multi-sensor camera systems typically used on airborne surveillance aircraft. Using the VMS, users can route multiple videos, VGA, RGB and STANAG signals into the VMS unit and route the output, retained at the highest resolution being fed to the VMS, to as many displays, video recorders and microwave links as required using one standard signal cable. The signal is routed to the device at the highest resolution it is capable of accepting.



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## VMS Functionality

Once all of the video inputs are routed through the VMS:

- ◆ Any display can call up any input signal at any time. This includes multiple video signals and moving map image on the screen simultaneously. At the press of a button, or via the display touch screen feature, any signal can be instantly switched to full screen. All standard display features such as freeze frame, digital zoom and image enhancement are retained.
- ◆ Each display can control and see the status of up to 2 video recorders allowing instant playback on any display.
- ◆ Only 1 signal cable is routed from the VMS to each device (displays, VCR, microwave downlink etc.) making installation much easier. Future inputs can be added to the VMS without the need for further cables to the devices giving full flexibility even after installation.
- ◆ The native resolution of the image is retained throughout the system and sent at the highest quality to each device automatically. For example, when the VGA output is displayed on a screen, it is displayed in it's full VGA quality. When the same map image is routed to a video recorder or to the microwave link it is automatically converted to video.

Outputs from the VMS can be sent to any associated equipment such as the microwave link. Selected outputs can be frozen in the VMS set up configuration so that (for example) the FLIR image is always routed and recorded on a particular video recorder OR you can choose to have whatever image is being viewed on display number 1 to be routed to the video and microwave link.

VMS can be integrated with any Skyquest display (Figures 2 and 3) or recorder. All of our displays use soft keys to enable control of other devices such as moving maps from the display. Soft keys can also be used to control which video is routed to recorders and microwave links.

VMS offers users total video flexibility onboard the aircraft.

Figure 1: VMS quadview



Figure 2: AVDU-2650 10.4" Touch screen display



Figure 3: AVDU-3824 15" Touch screen display



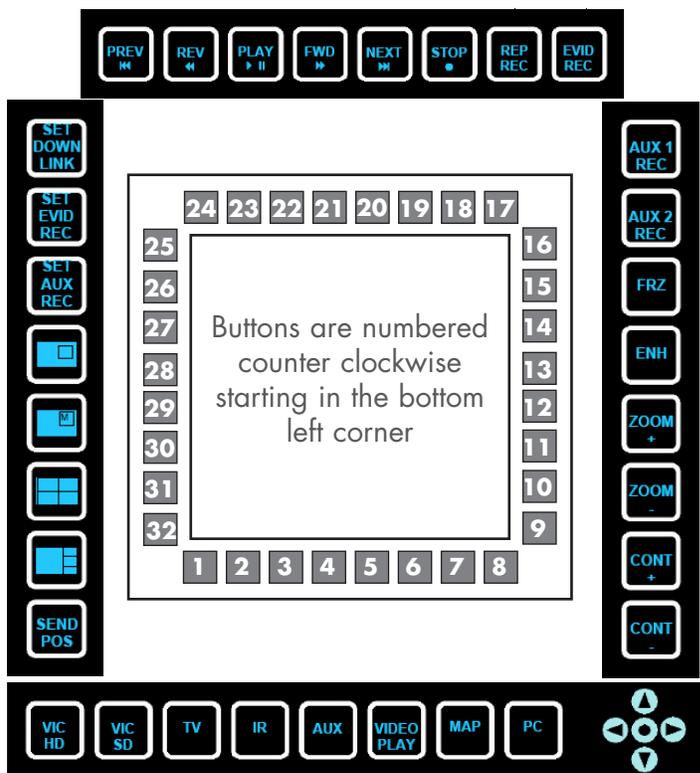


## Standard Display Key Layout and Functionality

The buttons around the edge of the display provide the following functionality. Example shown is a high definition (HD) camera installation.

1. Show Video In Command (VIC) HD Image
2. Show VIC SD Image
3. Show TV Image
4. Show IR Image
5. Show the AUX or Hoist camera - press and hold to select AUX/Port/Starboard camera
6. Show Video Replay
7. Show MAP (touch screen, joy stick and map buttons active on full screen display)
8. Show PC/ANPR (touch screen active when full screen)
9. Push to start recording. Set to record clean VIC with date time stamp for evidence can be overridden by use of button 27. (recorder 3)
10. Push to start recording. Set to record clean VIC with date time stamp for evidence can be overridden by use of button 27.
11. When pressed causes the image displayed on that screen to freeze.
12. Pushing the button will bring up a small enhance window centrally located on the screen, to enlarge the size of the enhance screen the zoom in and out (13, 14) keys will need to be depressed. The default size for the enhance screen, will be small which will reset on start up. If this function is used on several occasions on one flight, the last selected size will remain on screen until start up.
13. Digital Zoom into the center of the image. When the enhance mode is active (number 16), this button will reduce the size of the enhance window.
14. Digital Zoom out of the center of the image. When the enhance mode is active (number 16), this button will increase the size of the enhance window.
15. Adjusts the contrast of that monitor up.
16. Adjusts the contrast of that monitor down.
17. to 24. Standard control for the video recorders.

Figure 4: Display key layout



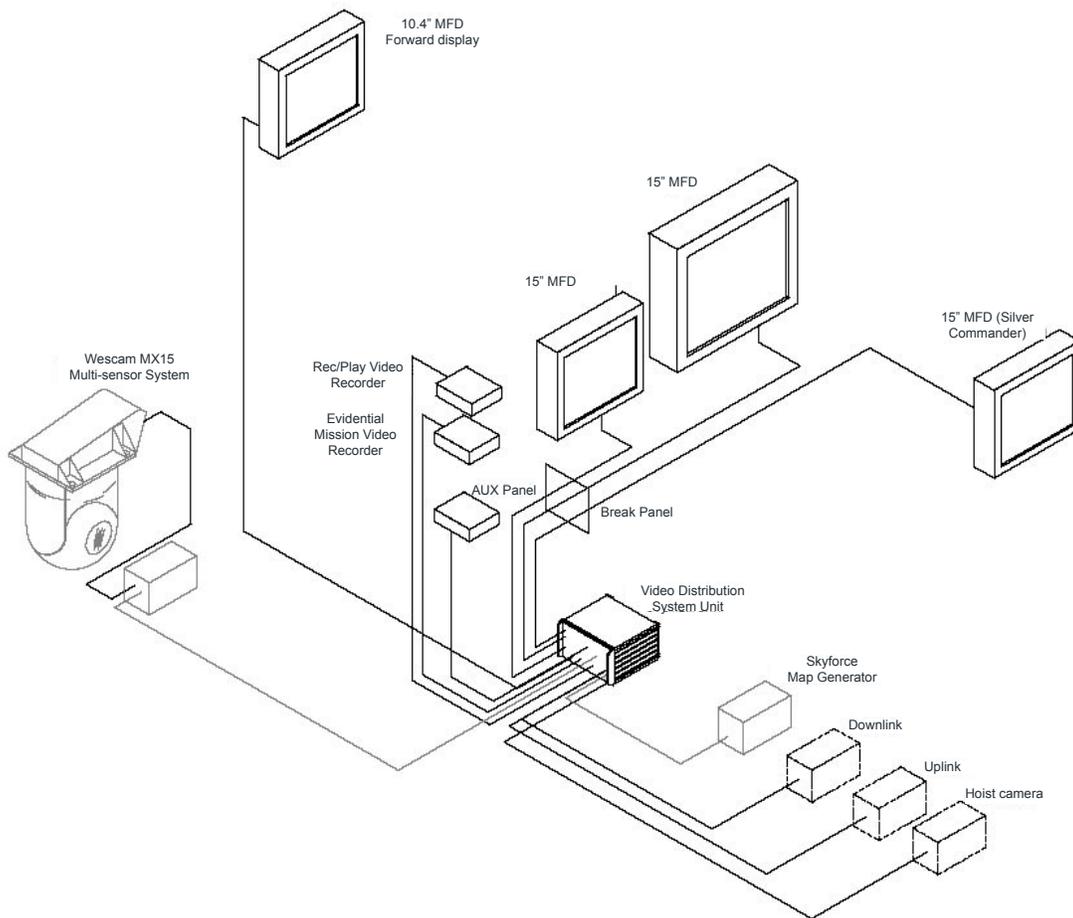
25. When pressed for 4 seconds displays a smaller image of the currently selected downlink video (default from start up: clean VIC with no date and time information). While the smaller image is displayed, the downlink image may be selecting from the input buttons. Pressing the button again will return to a full screen display and exit from set up mode.
26. When pressed for 4 seconds displays a smaller image of current selected Evidential video (default from start up: clean VIC with date and time information). While the smaller image is displayed, the Evidential recorder image may be selected from the input buttons. Pressing the button again will return to a full screen display and exit from set up mode.
27. When pressed for 4 seconds displays a smaller image of current selected AUX recorder input (default from start up: clean VIC). While the smaller image is displayed, the AUX recorder image may be selected from the input buttons. Pressing the button again will return to a full screen display and exit from set up mode.



- 28. When pressed enters PIP mode with MAP or ANPR as main screen dependent on last selected image. The default image for the insert PIP will be clean VIC on power up. Subsequent presses will select the last live video feeds selected. The PIP image will default to top left hand corner size default to allow view of center screen of large image. To change inset image from default, select from buttons 1-6. To get out of PIP mode, press PIP key and the screen will change to full screen MAP (or ANPR). Position and size of pip screen can be altered in flight for user preference but return to default on start up.
- 29. Quad Layout 3 - MAP PIP in Video. Pressing and holding button will allow selected inputs to be changed. The touch screen quadrants scroll through the alternative inputs. Any smaller image can be selected full screen by touching anywhere in the quadrant using the touch screen. Pressing the full image again will revert to the quad again.

- 30. Quad Layout 2 - Pressing and holding button will allow selected inputs to be changed. The touch screen quadrants scroll through the alternative inputs. Any smaller image can be selected full screen by touching anywhere in the quadrant using the touch screen. Pressing the full image again will revert to the quad again.
- 31. Quad Layout 1 - Pressing and holding the button will allow the selected inputs to be changed. Touching the screen scrolls through images to change the contents of the windows. Images can be changed from the small to the large window by pressing anywhere in the three smaller windows.
- 32. Pressing this button is the same as pressing "F9" on the Skyforce keyboard.

Figure 5: Standard VMS Configuration (Large Helicopter)





## Standard VMS System

15 inch displays (AVDU-3824)



10.4 inch display - for the front observer (AVDU-2650)



Pilot display when required (AVDU-1626/7)



Video recorder with playback in flight mode (VRDV-3000)



Video recorder (VRDV-4010)



AUX panel and keyboard (PANL-1090)



## Warranty

This product has a one year warranty.

## Contact Information

To find your appropriate sales representative, please visit:

Website: [www.cwembedded.com/sales](http://www.cwembedded.com/sales)

Email: [sales@cwembedded.com](mailto:sales@cwembedded.com)

For technical support, please visit:

Website: [www.cwembedded.com/support1](http://www.cwembedded.com/support1)

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