MEYERTECH LIMITED

ZoneVu® VMS Installation
And
Maintenance Guide

CONTENTS

REVISION RECORD

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NOTICE

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1. INTRODUCTION

Meyertech's innovative ZoneVu® VMS is the "server" technology linking Fusion® 2 workstations to cameras, recorders, alarm and other equipment, all across high speed digital networks.

A site can contain several ZoneVu® VMSs where one is nominated as the primary and the other(s) as secondary. The secondary ZoneVu® VMS(s) all monitor the network and should the primary fail, one of them will automatically take over responsibility until such time as the primary recovers.

The ZoneVu® VMS can simultaneously manage 1,000,000 sources x 1,000,000 destination IP streams, including DVR's, Mega-pixel Cameras & Domes, CODEC's, Analogue Matrices and NVR's integrating them into a cohesive video management system.

Meyertech's vendor neutral approach to digital IP solutions means you can select IP products from a wide variety of manufactures and incorporate them into the same system.

As part of Meyertech's Digital-IP security management system product portfolio which also includes its ZoneVu® VMW and Fusion® 2-Core security management software, these products offer for the first time, designers of security systems a totally integrated analogue, hybrid and Digital-IP coherent solution.

In addition to providing the virtual matrix management, the ZoneVu® VMS also performs the functions of the Site Controller to provide a 'site model' whose expandability and performance can be guaranteed. The significance of this is that sites can then be connected together to form independent, yet integrated large scale systems which require only a single data path and one or more video trunks between each site.

The ZoneVu® VMS will also act as a bridge to older analogue networks, providing the connectivity to remote sites via a single RS485 half duplex data path. Such a system would then be classed as a Hybrid System.

2. CHASSIS FEATURES

2.1 System Power

The ZoneVu® VMS features a high-efficiency 80%+ low noise power supply with thermal control fan, rated at 200 Watts. In the unlikely event your power supply fails, replacement is simple. The power supply simply needs to be unscrewed from the chassis and replaced.

The system must be shut down when replacing or removing this power supply module.

2.2 Front Control Panel

The chassis' control panel provides system monitoring and control. LEDs indicate system power, HDD activity, network activity (two) and UID/overheat/fan fail/power fail. A main power button and system reset button is also included.

2.3 I/O Back Panel

Ports on the I/O backplane include one COM port, a VGA port, two USB 2.0 ports, PS/2 mouse and keyboard ports and two gigabit Ethernet ports. A UID (Unit Identifier) button and LED are also located beside the LAN2 Ethernet port.

2.4 Cooling System

The chassis accepts two system fans which are powered from the motherboard. These fans are 1U high and are powered by 3-pin or 4-pin connectors.

3. SYSTEM INTERFACE

3.1 Overview

There are several LEDs on the control panel as well as others on the SATA drive carriers to keep you constantly informed of the overall status of the system as well as the activity and health of specific components. There are also two buttons on the chassis control panel and an on/off switch on the power supply. This chapter explains the meanings of all LED indicators and the appropriate response you may need to take.

3.2 Control Panel Buttons

There are two push-buttons located on the front of the chassis: a reset button and a power on/off button.

Reset	Use the reset button to reboot the system.
Power	The main power button is used to apply or remove power from the power supply to the server system. Turning off system power with this button removes the main power but keeps standby power supplied to the system.

3.3 Control Panel LEDs

The control panel located on the front of the chassis has five LEDs.

These LEDs provide the critical information related to different parts of the system. This section explains what each LED indicates when illuminated and any corrective action you may need to take.

NIC1	Network activity on LAN 1. Green LED.
NIC2	Network activity on LAN 2. Green LED.
HDD	Hard Disk channel activity. Yellow LED.
Overheat	System overheat warning. Red LED.
Power	Indicates power is being supplied to the chassis power supply. This LED should normally be illuminated. Green LED.

4. INSTALLATION

The ZoneVu® VMS fits a standard 19″ rack enclosure and is supplied with a sliding rail kit to allow the unit to slide out of the front of the cabinet and which should be taken into account when connecting cables to the rear panel.

Attach rails to both the chassis and the rack unit.

Install the server into the rack. Do this by lining up the rear of the chassis rails with the front of the rack rails. Slide the chassis rails into the rack rails, keeping the pressure even on both.
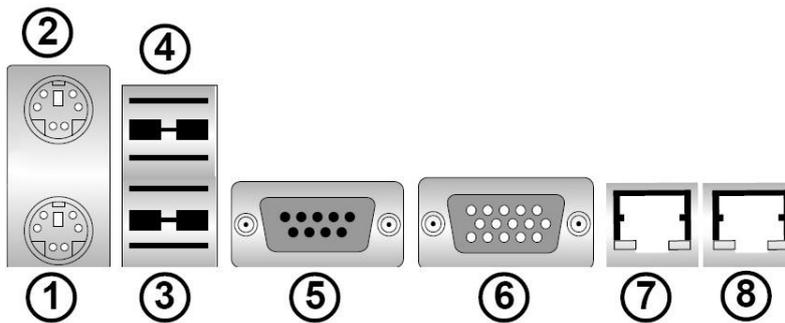
When the server has been pushed completely into the rack, the locking tabs "click". Finish by inserting and tightening the thumbscrews that hold the front of the server to the rack.

5. CONNECTIONS

5.1 Front Panel layout

5.2 Rear Panel layout

5.3 Connector Assignment

Ref	Connector	Type	Usage	Notes
-	Power	IEC C14 Plug	Mains inlet	100-240V, 50-60Hz, 4A Max
1,2	PS/2	PS/2	Mouse & Keyboard	Not required for normal operation
3,4	USB	USB		Not required for normal operation, may be used for servicing that requires local keyboard, mouse.
5	Serial	Female 9 pin D	Serial connection to ZoneVu® matrix	Only used on analogue /hybrid systems
6	VGA	Female 15-pin D-sub	VGA Monitor	Not normally used, engineering only.
7,8	Ethernet	RJ45	LAN connection	GBit

5.4 Minimum Install

In order to function in a basic system, the ZoneVu$^®$ VMS needs only a single data connection to the network plus mains power.

In this basic setup, the LAN connection is used for all control I/O including any remote maintenance using remote desktop sharing such as VNC.

5.4.1 The minimum requirement

Ethernet 1   LAN

Power   Mains power

5.4.2 The minimum requirement plus serial connection to ZoneVu$^®$ matrix

Com 1   Local data to ZoneVu$^®$ matrix system

Ethernet 1   LAN

Power   Mains power

6. ZONEVU® VMS PC SETUP

The ZoneVu® VMS software runs under a Windows Vista / XP environment, which makes configuration & maintenance a task that can be undertaken with minimal training by engineers with a good working knowledge of Windows.

The ZoneVu® VMS is configured to boot into Windows, automatically logon, and run the VMS software as soon as it is connected to the power. It will also return to this operating state automatically following a power interruption.

The user account setup to run VMS has a **username** of 'Engineer' with a default **password** of 'Engineer'. If the VMS is not installed in a secure environment, the password may be reset for better security.

There are two network interfaces available on the server. If the configuration of these has not been specified for use on the network, a default setup is put in place to allow connection either to a network, or direct to another PC for administration purposes.

In this case DHCP is enabled, however if a server is not found the VMS will use a fixed IP address of **192.168.1.nnn** (nnn is the VMS node)

The NetBIOS name is set to **ZoneVuVMSnnn** (nnn is the VMS node) and the workgroup to **ZONEVU**.

These network settings may be changed as appropriate to the installation.

The VMS application is installed within the folder 'C:\Program Files\Meyertech\VMS'.

All configuration and log files are held in this folder.

7. ZONEVU® VMS SOFTWARE CONFIGURATION

All user configuration of the ZoneVu® VMS is made from Fusion 2 Core software.

8. OPERATION

The ZoneVu® VMS is designed to operate 24/7 without any intervention, or direct operator interaction.

The ZoneVu® VMS is configured to boot into Windows, automatically logon, and run the VMS software as soon as it is connected to the power. It will also return to this operating state automatically following a power interruption.

9. MONITORING AND MAINTENANCE

Although the ZoneVu® VMS is designed to operate unattended and without direct user interface, it may be necessary to monitor the status of the PC and/or diagnose issues.

This can be done either directly by connecting a VGA monitor, keyboard and mouse (either PS/2 or USB) to the PC, or from another computer using remote control software through one of the server's network connections, eg VNC.

9.1 Local Connection

When connecting directly to the server, the monitor will show a Windows desktop, with a single application running – the VMS software. There is no need to log in, and unless the server is to be re-booted, the engineer should not log out on completion as this would terminate the VMS server application.

9.2 Remote Connection

To remotely control the server, a VNC client application is required. This allows any other computer to be connected through a network or a simple cross-over cable, and to take control of the PC and display it's monitor output.

There are many VNC clients readily available, both commercial and non-commercial. The VNC host software installed on the PC is UltraVNC. The client application required to control it is available on the Windows desktop of the server, or can be downloaded from: http://www.uvnc.com/download/ . The client (viewer) application is all that is required, is free to use, and requires no installation. Please see the UltraVNC website for further details.

The VNC server uses the default network port of 5900. A password of 'Engineer' is preset.

As with a local connection the engineer should take care not to log out of the server when disconnecting, as this would terminate the VMS application.

10. SPECIFICATION

Form Factor	1U
Colour	Black
Weight	23Kg (approx)
Dimensions (WxDxH)	43 x 426 x 356 (mm)
Operating system	Windows XP Professional 32 bit / Vista
Processor	Single Intel Xeon 3200/3000/Core 2 Duo Series//Pentium D dual-core/Pentium
RAM	4 GB
HDD	160 GB SATA 7,200 RPM Hard drive
Connections	RJ45 LAN x 2 (Gigabit Ethernet) VGA USB (2.0 compliant) x 4 (2 front, 2 rear) PS/2 Mouse & Keyboard 1 x 1 Fast UART 16550 serial port 1 Fast UART 16550 serial header
PSU	AC Input Voltage: 100-240 VAC Rated Input Current: 8A (115V) to 4A (230V) Rated Input Frequency: 50-60 Hz
MTBF MTTR	156,364 Hrs 0.75 hours - replace and re-configure
Operating Environment	Operating Temperature: 0º to 40º C Non-operating Temperature: -10º to 50º C Operating Relative Humidity: 10% to 95% (non-condensing)
Heat	682 BTU/Hour
Noise	34.0 dB(A) @ 1m
Regulatory Compliance	Electromagnetic Emissions: FCC Class A, EN 55022 Class A, EN 61000-3-2/-3-3, CISPR 22 Class A Electromagnetic Immunity: EN 55024/CISPR 24, (EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11) Safety: EN 60950/IEC 60950-Compliant, UL Listed (USA), CUL Listed (Canada), TUV Certified (Germany), CE Marking (Europe), RoHS (Europe)

11. SAFETY PRECAUTIONS

1) Carefully read this Product Manual prior to commencing installation and configuration.
2) Before working on this product power it down and remove the power leads. Removing panel's modules or PCB's may cause damage to the product and present an electric shock and fire hazard.
3) To reduce the risk of electric shock and fire hazard do not operate this product with panels or covers removed.
4) Do not install or operate the product near water.
5) Do not install or operate this equipment outdoors.
6) If work is carried out on the product with panels and covers removed ensure full electrostatic handling procedures are adhered to.
7) Louvers and openings are provided in the product enclosures for ventilation purposes to protect it from overheating. Under no circumstances block or cover these openings.
8) Ensure the product is operated in a suitably temperature controlled environment within the specification limits.
9) Do not operate the product in humidity greater than 90%.
10) Do not drop objects of any kind through the product louvers and openings. This may cause electric shock and fire hazard and product malfunction.
11) Avoid liquid spillages on the product. This may cause electric shock and fire hazard as well as product malfunction.
12) Never attempt to service this product yourself. This product contains no serviceable parts Refer all servicing requirements to the Meyertech Service Centre or appointed Meyertech Service Agent
13) Do not operate this product if
    a. Any product power leads are damaged.
    b. If the product has been exposed to rain.
    c. If the product has been dropped or the enclosure has been damaged.
    d. If liquid has been spilt on the product.
    e. If the appliance has malfunctioned or is not operating to its functional specification.
    f. If the products cooling fans fail to operate.
14) This product must only be operated with the power supply provided or if supplied without a power supply, by the type of power source indicated in the specification.
15) Follow all warnings and instructions marked on the product and in this manual.
16) To clean the enclosure of the product use a cloth. Do not use liquid solvent-based cleaners.

12. MAINTENANCE

The ZoneVu$^®$ VMS requires no Planned Preventive Maintenance periods (PPM's) as it is mainly solid state in design.

The ZoneVu$^®$ VMS contains no serviceable parts and should be returned to our Service Centre for repair or replacement under warranty. Any repairs, attempted repairs or replaced components not carried out by the Meyertech Service Centre will void all Meyertech warranties and liabilities.

If your ZoneVu$^®$ VMS has to be returned to our Service Centre please follow the returns procedure below, otherwise delays may be incurred in returning or replacing the ZoneVu$^®$ VMS.

13. DISPOSAL

There are no additional requirements beyond safe working practice in the decommissioning of the Meyertech ZoneVu® VMS .

However the ZoneVu® VMS contains printed circuit boards populated with electronic components, and as such must be disposed of correctly.

Correct Disposal of This Product :

Waste Electrical & Electronic Equipment (WEEE).

This marking shown on the product or its literature, indicates that it should not be disposed with other commercial wastes at the end of its working life.

To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and contact the Meyertech Service Centre.

Further information can be found at http://www.meyertech.co.uk/weee.html

14. SUPPORT

Meyertech support can be accessed a number of different ways depending on whether you are a Meyertech Certified Partner (MCP), a Non-MCP with a current Support Menu or a customer who has just purchased a new product.

Meyertech Certified Partner (MCP) / Non-MCP with a Support Menu

- Request a Support Ticket http://www.meyertech.co.uk/support.html
- Email the Meyertech Service Centre tech-support@meyertech.co.uk
- Phone the Meyertech Service Centre +44 (0) 161 643 7956

All Other Customers

- Request a Support Ticket http://www.meyertech.co.uk/support.html

Only one issue maybe reported per **Support Case**. If multiple unrelated issues are reported Meyertech support engineers will create a separate support case for each unrelated issue.

Customers access Meyertech support by purchasing a **Support Menu** which meets their Requirements in relation to the support they require access to.

The concept of the Support Menu is based on a food theme. There are six menus to facilitate the provision of support to Meyertech partners, non-partners and SLA driven contracts.

If you are a customer who does not have a current Support Menu or currently not a Meyertech Certified Partner our Support Menus can be purchased or 'topped-up' with additional credits at any time. If you fall into this category you will receive GRATIS Support Credits every time you purchase a product. If you are a customer who has a Support Menu the GRATIS Support Credits are simply added to your current menu with every purchase you make.

15. WARRANTY

Please refer to Meyertech Limited 'Terms & Conditions of Sale of Goods & Services' for interpretation.

1. If the Buyer establishes to the Seller's reasonable satisfaction that there is a defect in the materials or workmanship of the Goods manufactured, then the Seller shall at its option, at its sole discretion and within a reasonable time,

    a. arrange for the repair or making good such defect or failure in such Goods free of charge to the Buyer (including all costs of transportation of any Goods or materials to and from the Buyer for that purpose),

    b. replace such Goods with Goods which are in all respects in accordance with the Contract, or subject, in every case, to the remaining provisions of this Condition 1 provided that the liability of the Seller under this Condition 1 shall in no event exceed the purchase price of such Goods and performance of anyone of the above options shall constitute an entire discharge of the Seller's liability under this warranty.

2. Condition 1 shall not apply unless the Buyer:

    a. notifies the Seller in writing of the alleged defect within 12 (twelve) months from delivery or such other period or periods as may be agreed in writing between the Seller and the Buyer, and

    b. Allows the Seller a reasonable opportunity to inspect the relevant Goods.

3. For the avoidance of doubt, the Seller shall be under no liability under the warranty in Condition 1 above:

    a. where such defects arise from any drawing, design or specification supplied by the Buyer; or

    b. where such defects arise from fair wear and tear, willful damage, or negligence of a party other than the Seller (or its employees or authorized personnel), abnormal working conditions, failure to follow the Seller's instructions (whether oral or in writing), misuse or alteration or repair of the Goods without the Seller's approval; or

    c. where such defects arise in parts, materials or equipment which have not been manufactured or designed by the Seller but have been purchased at the Buyer's request by the Seller from the Buyer's designer and manufacturer or from some other third party (the "Third Party Supplier").

    d. if the total price of the Goods has not been paid by the due date for payment

    e. in respect of any type of defect, damage or wear specifically excluded by the Seller by notice in writing: or

    f. if the Buyer makes any further use of the Goods after giving notice in accordance with Clause 1

4. Any repaired or replaced Goods shall be redelivered to the Buyer free of charge to the original point of delivery but otherwise in accordance with and subject to these Conditions.

5. Alternatively to Condition 1 the Seller shall be entitled at its absolute discretion on return of the defective Goods to the Seller (at the Seller's request) to refund the price of the defective Goods in the event that such price shall already have been paid by the Buyer to the Seller, or, if such price has not been paid, to relieve the Buyer of all obligation to pay the sum by the issue of a credit note in favour of the Buyer in the amount of such price.

1. In respect of all Goods supplied to the Seller by a Third Party Supplier the Seller will on request pass on to the Buyer (in so far as reasonably possible) the benefit of any warranty given to the Seller by such Third Party Supplier and will (on request) supply to the Buyer details of the terms and conditions of such warranty and copies of any relevant product information sheets, technical data sheets or product leaflets issued by such Third Party Supplier and the Buyer shall be solely responsible to the entire exclusion of the Seller for complying with the same.

2. For the purposes of Condition 1 references to Goods shall be deemed to exclude software.

3. The Buyer acknowledges that software in general is not error-free and agrees that the existence of such errors in the Software Programs shall not constitute a breach of this Contract.

4. In the event that the Buyer discovers a material error which results in the Programmed Products not performing substantially in accordance with the Functional Specification, or the Licensed Programs not performing substantially in accordance with the relevant Program Documentation and notifies the Seller of the error within 90 days from the date of the Seller making available the respective software to the Buyer (the `warranty period") the Seller shall at its sole option either refund the price which the Buyer has paid to the Seller (or if such price has not been paid, relieve the Buyer of all obligations to pay the sum) in respect of the respective software or use all reasonable endeavors to correct by patch or new release (at its option) that part of the software which does not so comply provided that such non-compliance has not been caused by any modification, variation or addition to the software not performed by the Seller or caused by its incorrect use, abuse or corruption of the software by use of the software with other software or on equipment with which it is incompatible.

5. To the extent permitted by English law, the Seller disclaims all other warranties, with respect to the software which it provides pursuant to the Contract, either express or implied, including but not limited to any implied warranties of satisfactory quality or fitness for any particular purpose.

6. The Buyer is solely responsible for various scanning the software that it receives from the Seller pursuant to the Contract.

7. The Seller warrants that it will use reasonable skill and care in providing the Services to the buyer