FIELD-READY

COMMAND CONSOLE 14

User Manual

Z Microsystems

Regulatory

FCC INFORMATION

WARNING

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO, DO NOT USE THIS UNIT'S POLARIZED AC PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS UNLESS ALL THREE PRONGS CAN BE FULLY INSERTED

COMMAND CONSOLE 14

1. Use the power and video cables supplied with the Command Console to help prevent interference with radio and television reception. The use of cables and adapters may cause interference with electronic equipment in the vicinity of this unit.
2. This equipment has been tested and found to comply with the limits for Class "A" digital devices, pursuant to certain limits imposed by Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in when equipment is operated in commercial environments. This equipment generates, uses and can radiate radio frequency energy, and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
3. Operation of this equipment in a residential area is likely to cause interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved by Z Microsystems could void user's authority to operate the equipment

CAUTION

RISK OF ELECTRIC SHOCK - DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK OF UNIT). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

This symbol warns the user that insulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore it should be read carefully in order to avoid any problems.

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Contents

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SHIPMENT CONTENTS

The Command Console shipping box contains the following:

- The Command Console Unit
- Video Signal Cable
- AC/DC Power Supply Brick with attached DC cable
- AC Power Cable
- Setup Diskette
- User Manual

Remember to save your original shipping container and packing material to transport or ship the Command Console.

The User Manual comes in two formats: printed hardcopy or CD-ROM. This Manual is also available on the Z Microsystems website (www.zmicro.com).

We recommend you read this manual as follows:

Carefully follow the instructions in the Installation and Testing chapter for hookup and initial control settings. Refer to the Operation chapter for a complete description of all the user controls, and the Maintenance and Troubleshooting chapters for care and correcting any unforeseen problems with the system. The Appendices and References chapters are provided for quickly finding technical information about the Command Console.

SYSTEM REQUIREMENTS

The Command Console works with any computer system that provides industry standard screen formats from 640 x 480 to 1024 x 768, with up to 75 Hz vertical sync. See the Specifications Table of this Manual for a complete listing of all resolutions supported.

The Command Console requires a computer with a suitable onboard subsystems for Video Adapter Card that can support XGA 1024 x 768, SVGA 800 x 600, or VGA 640 x 480 at 60 Hz

PRODUCT DESCRIPTION

The Command Console provides a liquid crystal display, a desk work surface and storage for any size keyboard and mouse in a 3.5" high (2U) standard 19" rack or transit case.

Specially designed locks on each side of the Command Console hold the compact folded unit securely in place during storage.

Release of the two Z-Locks on the front sides of the Console allow it to slide out and the LCD display to quickly swing up into a reading position

By lifting up the desktop, the keyboard and mouse can be easily removed and set on top.

The lightweight and durable aluminum construction provides exceptional strength in field applications.

The high quality LCD screen provides full color and features up to 1024 x 768 pixel resolution.

The LCD screen has a backlight control that reduces power and extends the life of the monitor.

The side-viewing angle is up to 160 degrees. It can be easily adjusted to any vertical-viewing angle up to 100 degrees. The display works effectively with any workstation.

An electrostatically-applied and baked-on finish is used for extreme durability for shipboard, airborne, field deployments, and industrial or lab applications where weight and size are very critical.

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Starting Point

TOOLS REQUIRED

Required Tools and Equipment

- Flathead screwdriver with about 10" shaft.
- Phillips screwdriver with about 10" shaft.
- Computer Setup Diskette

DANGER: To avoid shock hazard:

- *Do not remove the covers around the Command Console.*
- *Do not connect or disconnect the Command Console during an electrical storm.*
- *The power cord plug must be connected to a properly wired and grounded power outlet.*
- *Any equipment to which the Command Console will be attached must also be connected to properly wired and grounded power outlets.*

PRECAUTIONS

NOTE: For the fastest and easiest installation of the Command Console, follow these steps in the sequence they are presented.

In preparation to install the Command Console, take the following precautionary steps:

Turn off the electrical power to your computer.

Verify the Command Console power switch is off. If the Console is off, the light will not be illuminated.

SLIDE REMOVAL

With the Console sitting on a workbench with the front facing towards you, press down to release the Z-Locks on each side of the front of the Console to slide the side rails back.

The slide rail will reach a stop about half way back.

This is a safety stop to prevent the Console sliding out too far while mounted to the rack.

Simultaneously press in the safety catches on each slide rail and slide the side rails all the way off the back of the Console.

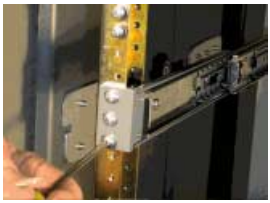
The slides should now be separated from the Console.

Each slide unit includes the slide rail, with the front Z-lock mount and the rear mount.

INSTALL THE SLIDES IN THE CABINET FRAME

On the front of the cabinet frame, use three Phillips screws ((V) see page 30 - Install hardware) on each side to secure the right and left Z-Lock mounts.

DO NOT tighten these screws to allow for adjustment of the Console within the cabinet frame.

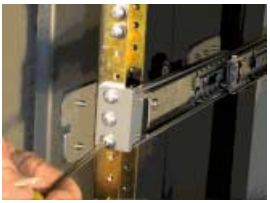


On the rear of the cabinet frame, use the three Phillips screws ((W) see page 30 - Install hardware) to loosely secure the right and left rear slide mount to the cabinet frame.

DO NOT tighten these screws fully at this time.

On the slide rails, using a slot screwdriver, loosen off the slide extension rail screw ((U) see page 30 - Install hardware). Repeat on each side.

Install Rails



Go back on the rear of the cabinet frame, and fully tighten the three Phillips screws ((W) see page 30 - Install hardware) holding the slide extension rail to the cabinet frame.

Make sure you hold the slide mounts hard against the rack rail.

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INSTALL THE COMMAND CONSOLE IN THE SLIDES

Pull the two Console slides out until they lock.

Hold the Console by each side, with the front toward you.

Feed the four cables coming out of the Console back through the cabinet frame.

Guide the Console into the slides and slide the Console in until it stops.

Simultaneously press in the catches on each slide and slide the Console all the way into the cabinet frame.

The Console should slide in and out easily.

TEST INSTALLATION AND MAKE ADJUSTMENTS

Slide the Console in and out several times.

The Console should easily close completely.

Because of variances in cabinet frames, there may need to be some adjustments of the Console slide system for best fit and movement of the Console in and out.

To be sure the slide and mount assembly are aligned properly, slide the Console in and out several times.

If the Console binds during sliding, do the following:

Install Console

FINAL ADJUSTMENTS OF THE COMMAND CONSOLE

Loosen the screws on each of the front Z-Lock mounts.

Slide the Console partially out.

Use a flathead screw driver to slightly move the Z-Locks out away from the Console.

Tighten all the screws on the front Z-Lock mounts.

Slide the Console in and out to see if it moves smoothly.

Go back to the rear of the rack and fully tighten the slide extension rail screw ((U) see page 30 - Install hardware).screws.

Note: A wrench may be necessary to hold the nut on the other side.

SETTING UP THE MONITOR KEYBOARD AND MOUSE

With both hands, press both the Z-Locks down and

Slide the Console all the way out.

Using both hands, gently lift the Console screen by the top bar.

Open the storage tray top.

Remove the keyboard and mouse.

Align the Keyboard and Mouse cable to pass through the recessed access notch.

Close the storage tray top, then place the keyboard and mouse on top of the tray door.

The storage tray door now becomes a workstation for the keyboard and mouse.

There should be ample cable to both units for movement around the workstation.

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Closing Console

CLOSING DOWN THE MONITOR

Remove the keyboard and mouse from top.

Open the storage tray top.

Place the keyboard and mouse inside the tray along with all cables and close door.

Using both hands, gently drop the Console screen by the top bar until it lays flat.

Slide the Console in with both hands.

Press both the Z-Locks down and slide in the console until you hear the positive click from the lock.

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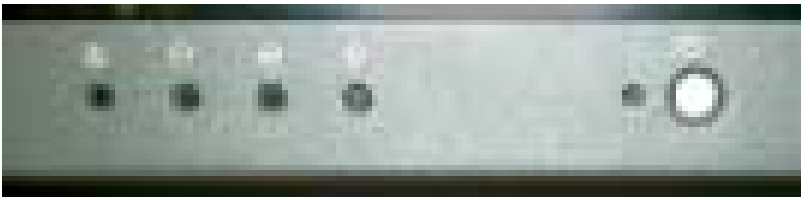
Switch the Console monitor on by pushing and releasing the power switch marked.

Turn on the monitor and then the computer.

Monitor Adjustments

ON-SCREEN DISPLAY



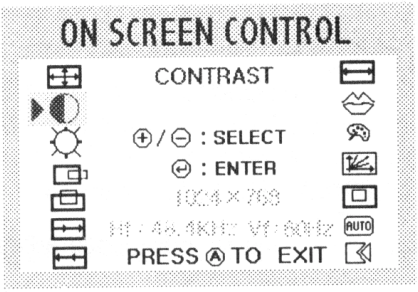
The LCD monitor features an *On-Screen Display* (OSD) with menus designed to make adjusting the monitor display settings easier. When highlighted, the icons illustrate the control function to assist in identifying which control needs adjustment.

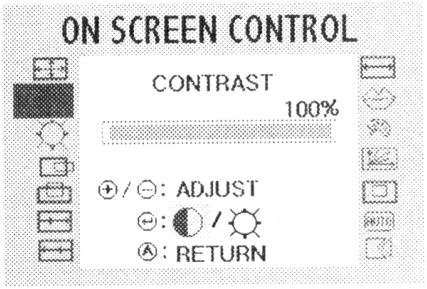
Before activation of the OSD menu, the Enter button Ⓐ can be used to automatically adjust the display to the proper size and horizontal and vertical position. The monitor must be set to one of the 15 factory preset timing modes to utilize this feature. The OSD menu activates automatically when the Enter button ↵ on the rear of the monitor is pressed. The OSD remains centered on the screen while the adjustments are made. Use either the ⊕ or ⊖ button to move the highlight to the control to be selected. A submenu or the control with a status bar will appear. From the factory preset, the status bar indicates in which direction the adjustments are being made. Use the ⊕ or ⊖ button to adjust the control. In addition, a second control icon will appear allowing to toggle between the two controls.

The contrast and brightness can also be adjusted by simply pressing either the ⊕ or ⊖ button.

When you have finished making adjustments, press the Ⓐ button to save the setting and exit back to the main menu. If the buttons are left untouched for 15 seconds, the settings will be automatically saved and exited. While in the main menu, pressing the Ⓐ button will save and exit the OSD.

MENU DESCRIPTIONS





AUTO ADJUSTMENT

Select this control to adjust the size and position automatically. It takes a maximum of 10 seconds to complete.

NOTE: This item must operate on full screen image. If it does not, it is possible to operate abnormally.

CONTRAST

This control allows adjustments to the black level of the display screen.

BRIGHTNESS

Selection of this control allows making adjustments to the luminosity level of the display screen.

H-POSITION
(HORIZONTAL POSITION)

Use this control and then use the ⊕ and ⊖ buttons to center the image horizontally on the screen.

V-POSITION
(VERTICAL POSITION)

Select this control and then use the ⊕ and ⊖ buttons to center the image vertically on the screen.

TUNING & FINE TUNING

Select these controls, then use the ⊕ and ⊖ buttons until the screen images looks focused, crisp and sharp.

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Monitor Adjustments

MENU DESCRIPTIONS

H-SIZE

Select this control, then use the ⊕ and ⊖ buttons to expand or decrease the image width to horizontally fill the display screen.

LANGUAGE

Select this control, then use the ⊕ and ⊖ buttons to choose from: English, German (Deutsch), Spanish (Espanol), Italian (Italiano) or French (Francais).

COLOR CONTROL

Select this control, then use the ⊕ and ⊖ buttons to individually adjust R, G or B color.

GAMMA

Select this control, then use the ⊕ and ⊖ buttons, which allows adjustment of the natural color tone.

MOVE OSD

Select this control, then use the ENTER button ↵ to select in which direction to move the OSD menu. Use the ⊕ and ⊖ buttons to move the OSD menu.

AUTO CALIBRATION

This function requires the 3.5" diskette provided with the Command Console.

CALIBRATION

When the Auto Calibration program diskette is used, select this menu using the ENTER button ↵, then use the ⊕ and ⊖ buttons to the setting "ON".

VGA GRAPHICS

When the 640x480 or 720x400 displays are displayed, select this menu using the ENTER button, ↵ then use the ⊕ and ⊖ buttons to set "ON" or "OFF".

RECALL

If the menu is operated, then the current mode's settings are all erased and returned to the factory settings.

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AUTO CALIBRATION PROGRAM

This program cooperates with FPMC firmware which automatically adjusts and saves the panel settings, which will fit each support mode. It takes about 50 seconds for auto adjustment.

NOTE: In order to make it work correctly, first set "ON" in the OSD menu of the AUTO CALIBRATION item.

Follow these steps to start the Auto Calibration Program:

1. Insert the Auto Calibration diskette into the 3.5" disk driver.
2. Drag the Auto Calibration file to the Windows background on the computer.
3. Set "ON" the Auto Calibration in the OSD menu.
4. Select taskbar properties with Auto Hide in the Windows OS.
5. Double click the Auto Calibration icon in the background.

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LED INDICATOR

The Power Management feature of the LCD monitor is comprised of three stages:

1. On (green)
2. Standby, Suspend or Active Off (amber/green)
3. Out of Range (amber)

Power Mode	LED Color
On (normal state)	Green
Standby, suspend, Active off	Flashing Amber/Green(1flash/second)
Out of range	Amber

TIMING GUIDE

The monitor is a multi-frequency monitor. It operates at horizontal frequencies between 31.25KHz and 60.24KHZ, vertical frequencies between 56Hz and 75Hz. Because of its microprocessor-based design, it offers auto-synchronization and auto-sizing capabilities. The monitor offers 15 pre-programmed settings that are listed in the following table.

These preset modes cover most of the common video modes supported by popular graphics adapters. However, each adapter's implementation of these video modes may vary slightly in timing. If it is necessary to make minor display adjustments (horizontal and vertical position and horizontal position), refer to the On-Screen Display section of this manual for instructions.

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TIMING GUIDE

The monitor is not limited to these preset factory-timing modes. In fact, because the monitor is multi-scanning, it can accept any signal within its frequency range of 31.25KHz - 60.24KHz horizontal and 56Hz - 75Hz vertical.

If it is desired to use one of the preset timing modes, refer to the video card manufacturer's installation guide for instructions on how to make these changes. The video card controls the refresh rate. Most video cards provide software utility or hardware DIP switches that allow to change the frequency used for each resolution.

Mode Name	Resolution		Frequency		Pixel
	H	V	H(KHz)	V(Hz)	Freq-(MHz)
VGA	640	400	31.25	70	25
	640	480	31.5	60	25
	640	480	37.5	75	31.5
	720	400	31.25	70	28
VESA	640	480	37.9	72	31.5
	800	600	35.2	56	36
	800	600	37.9	60	40
	800	600	48.1	72	50
	800	600	46.7	75	49.5
	1024	768	48.4	60	65
	1024	768	56.5	70	75
	1024	768	60	75	78.8
MAC	640	480	35	67	30.24
	832	624	49.8	74.6	57.29
	1024	768	60.24	75	80

* If using Macintosh, need Mac adapter.

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Troubleshooting

NO POWER	• Flip the Power switch ON. The Power LED turns on. • Make sure the A/C power cord is securely connected to the power jack and to a power outlet. • Plug another electrical device (like a radio) into the power outlet to verify that the power outlet is supplying the proper voltage.
POWER ON BUT NO SCREEN IMAGE	• Make sure the video cable attached from the monitor is tightly secured to the video output port on the back of the computer. • Adjust the brightness and contrast.
FLICKERING	• Not enough power is being supplied to the LCD monitor. Connect the LCD monitor to a different outlet. If a surge protector is being used, there may be too many devices plugged in. • See Timing Guide Section of this manual with a list of refresh rates and frequency settings showing the recommended setting for the LCD monitor.
WRONG OR ABNORMAL COLORS	• If any colors (red, green or blue) are missing, check the video cable to make sure it is securely connected. Loose pins in the cable connector could cause a bad connection. • Connect the LCD monitor to another computer. • Check the graphics card for proper sync scheme (or sync polarities) to match the LCD monitor's specifications.

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DOUBLE (SPLIT) SCREEN IMAGE

ENTIRE SCREEN IMAGE ROLL (SCROLLS) VERTICALLY

- Make sure the graphics card is set to Non-Interlaced mode.
- Make sure the input signals are within the LCD monitor's specified frequency range. (Maximum: VESA 1024x768/75Hz, MAC 1024x768/75Hz)
- Connect the video cable securely.
- Try the LCD monitor with another power source.

CONTROL BUTTONS DO NOT WORK

- Press only one button at a time.

NOTE: The LCD contains over 2,359,926 thin-film transistors (TFTs). A small number of missing, discolored or lighted dots on the screen is an intrinsic characteristic of TFT LCD technology and is not a LCD defect. If a fixed pattern is displayed for more than 10 hours, its image may remain on the screen in overlap mode when something else is displayed.

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Specifications

Mode Name	Resolution		Frequency		Pixel
	H	V	H(KHz)	V(Hz)	Freq-(MHz)
VGA	640	400	31.25	70	25
	640	480	31.5	60	25
	640	480	37.5	75	31.5
	720	400	31.25	70	28
VESA	640	480	37.9	72	31.5
	800	600	35.2	56	36
	800	600	37.9	60	40
	800	600	48.1	72	50
	800	600	46.7	75	49.5
	1024	768	48.4	60	65
	1024	768	56.5	70	75
	1024	768	60	75	78.8
MAC	640	480	35	67	30.24
	832	624	49.8	74.6	57.29
	1024	768	60.24	75	80

Power	100 - 240 VAC, 47 - 63Hz, 1.2 A Max
Weight	26 lbs.
Colors	262,144
Viewing Angle	L/R 45/45 Deg.
	Up/Down. 15/35 Deg.
Refresh Rate	1024 x 768 @ 75 Hz Max
Display Area	284.9mm (H) x 213.7 mm (V)
Operating Temp.	0 to +40 Celsius
Storage Temp.	-10 to +50 Celsius

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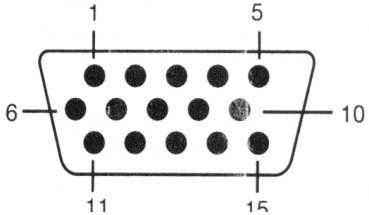
PIN ASSIGNMENT

POWER JACK 

1	Ground
2	DC + 14 V output

VGA CONNECTOR



Pin 1	Red
Pin 2	Green
Pin 3	Blue
Pin 4	No Connection
Pin 5	Ground
Pin 6	Red Ground
Pin 7	Green Ground
Pin 8	Blue Ground
Pin 9	No Connection
Pin 10	Ground
Pin 11	Ground
Pin 12	SDA
Pin 13	Horizontal Sync.
Pin 14	Vertical Sync.
Pin 15	SCL

Support

FURTHER HELP

If you are unable to correct the problem yourself, contact:

NOTE: For image problems, run AUTO SETUP again before consulting this section. In most cases, AUTO SETUP can fix the problems. See the Auto Setup section for details.

NOTE: If possible, stay by the computer. The Z Microsystems Technical Support Representative may wish to go through the problem over the telephone.

NOTE: More help, late-breaking news and details of the latest accessories for these products may be found on the worldwide web at: http://www.zmicro.com

Z Microsystems at:
(858) 657-1000
Fax: (858) 657-1001
Website: www.zmicro.com

Before calling, please have available as much of the following information as possible:

1. Model and serial number from the label on the monitor.
2. Purchase P.O.
3. Description of problem.
4. Computer type and model.
5. System configuration (hardware fitted, etc.).
6. System BIOS version number.
7. Operating System and version number.
8. Display driver version number.
9. Video Adapter Type.

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If the Z Microsystems Technical Support Engineer determines that the product needs to be replaced, a Customer Service representative will issue a Return Material Authorization (RMA) number and return address.

An RMA number is required to return a product to Z Microsystems, regardless of the reason for the return.

The following information is required when returning Z Microsystems products:

1. Model number
2. Serial number
3. Date of purchase
4. Proof of purchase (use the invoice or packing slip)
5. Customer ship-to address and any special shipping requirements
6. Specific and detailed description of the problem

PROVIDING FEEDBACK

We value feedback on our products, their performance, any problems and constructive suggestions. Please send such productive information in writing to:

Customer Service
Z Microsystems
5945 Pacific Center Blvd., Suite 509
San Diego, CA 92121-4309
or www.zmicro.com

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Compliance

Y2K COMPLIANCE

Z Microsystems has achieved full Y2K Compliance.

In late 1997, the company's senior management assigned a Y2K Project Team that consists of a cross-functional representation from information technology, procurement, manufacturing, test and development, finance, general affairs, engineering, marketing and facilities organizations to address the Year 2000 issues.

The Assessment/Rectification Phase of the Year 2000 efforts and full compliance for all mission critical internal systems were accomplished as scheduled by the end of Q1, 1999. Contingency development and validation of the company's overall Year 2000 readiness will continue through 1999.

The following strategically important categories have been assessed for Year 2000 readiness:

Suppliers and Service Providers Readiness.

All major strategic suppliers are assessed to be Year 2000 compliant. Most of the company's service providers' compliance efforts will continue through 1999. Major concerns and efforts will be focused on the company's shipping companies in 1999.

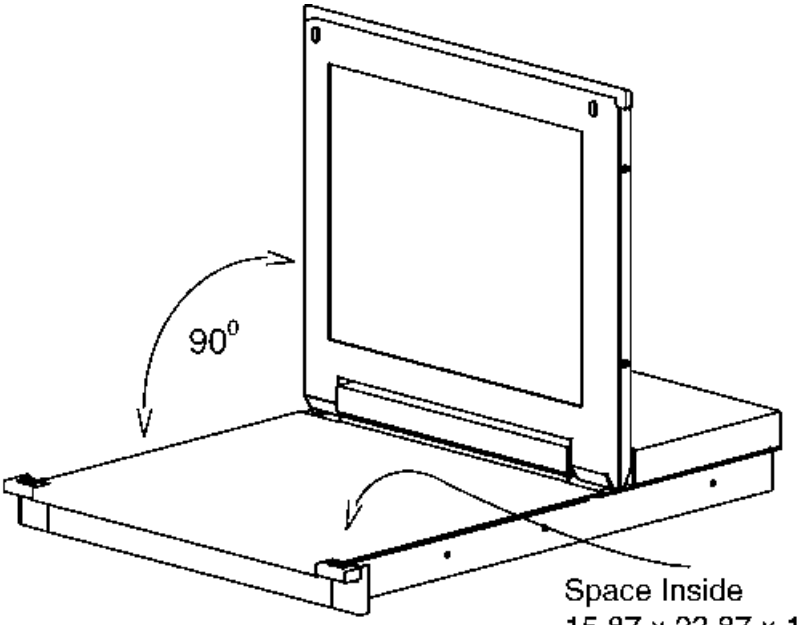
Z Microsystems Internal Systems

All mission critical internal systems are determined to be fully Year 2000 Compliant. A few minor Year 2000 Related issues need to be addressed in 1999.

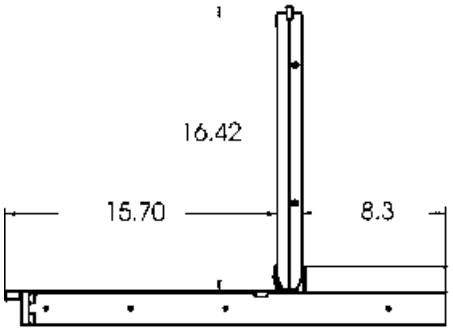
Z Microsystems Products

All Z Microsystems products are in full compliance.

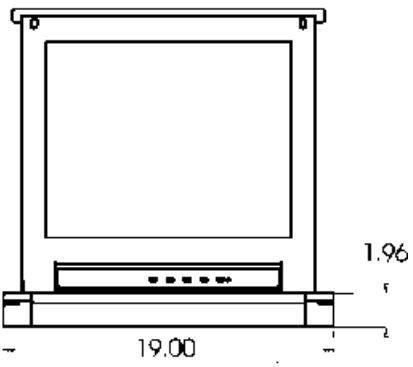
The company MIS has taken the lead and worked with the Finance Department to develop comprehensive Year 2000 Contingency Plans for the company mission critical application systems to assure the continuity of daily business.



Front View Open Iso



Side View Open



Front View Open

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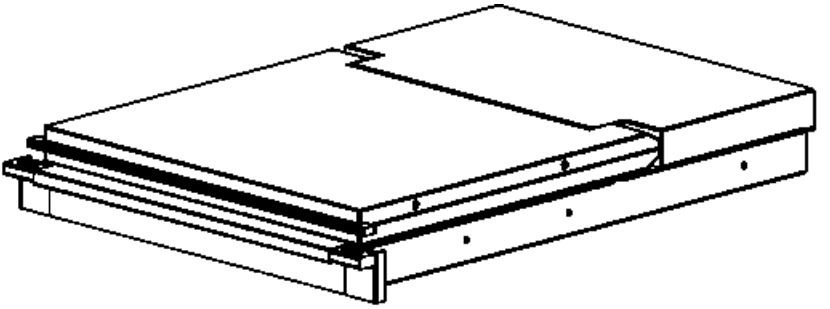
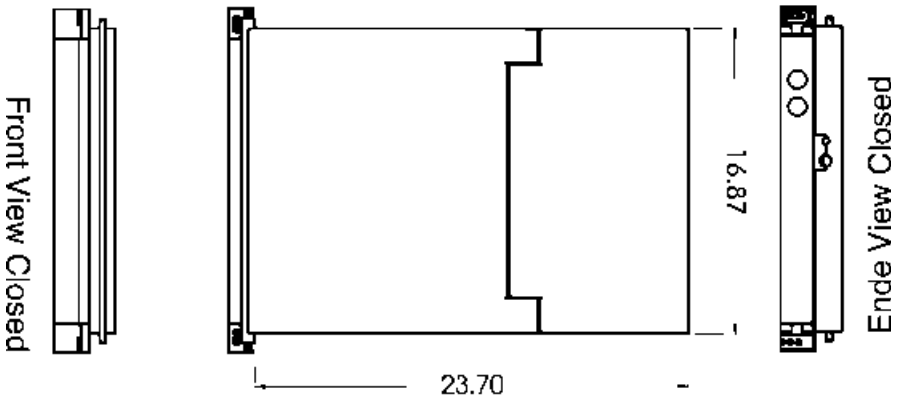
Drawings



Front View Closed Iso



Top View Closed

Side View Closed

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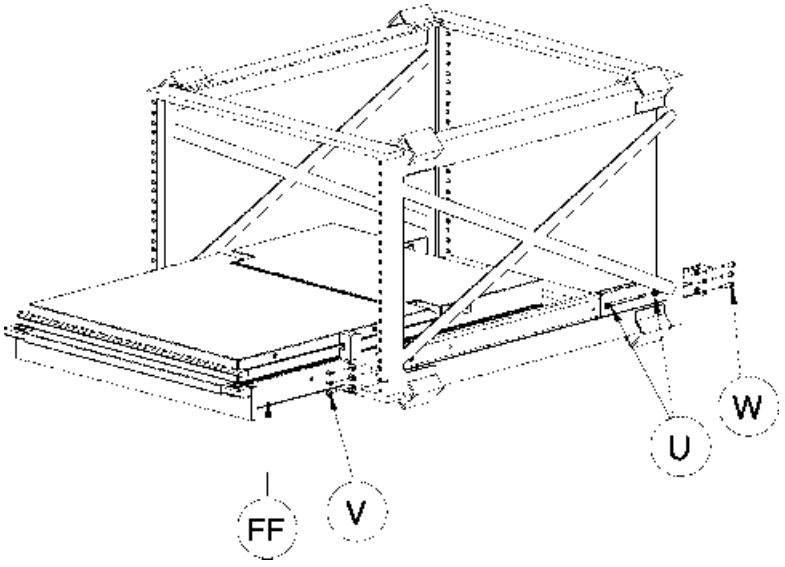
INSTALL HARDWARE

- Install the slide assemblies to the rack by installing three screws (V) to the front and three screws (W) to the rear.
- Tighten the hex nuts (U) that were installed in the previous page.
- Install the command console (FF) into the rack slides.

U.	01-91802	Nut 8-32 Nylon Hex
V.	01-92087	Scr, 10-32 x .375 Low Hd
W.	01-92097	Scr, 10-32 x .625 Pan Hd
FF.		Command Console



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