FIELD-READY

COMMAND CONSOLE 15

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 15

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 is pending approval for a Class A digital device, pursuant to certain limits imposed by Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference, to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
   - Reorient or relocate the receiving antenna.
   - Increase the separation between the equipment and receiver.
   - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
   - Consult your dealer or an experienced radio/TV technician for help.
3. If necessary, the user should contact the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet, prepared to be the FCC, helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, DC, 20402, Stock No. 004-00345-4.

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.

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.

USER MANUAL

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 1280 x 1024, 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 1280 x 1024 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.

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.

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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 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 two Phillips screws 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 screw. Repeat on each side.

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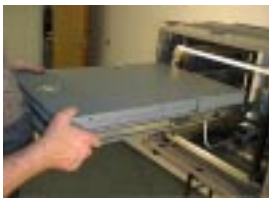
Install Rails

Go back on the rear of the cabinet frame, and tighten the slide mount to the cabinet frame.

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

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:

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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 side rail screws.

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

SETTING UP 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 and slide in the console untill you hear the positive click from the lock.

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INSTALLING CABLES

4 cables connect the back of the Console to the computer.

- Power cable
- Video cable
- Keyboard cable
- Mouse cable

To connect the four cables:

- Turn off the computer and all attached devices.
- Connect the video cable to the video port on the back of the computer.
- Insert the power plug into a properly grounded electrical outlet.

WARNING: *Be sure all electrical power to the cabinet is off before connecting any of the cables.*

WARNING: *There is a key guide for alignment on all the cables. Be sure the cable plug and receptacles are aligned properly using the key guide. Misalignment can cause short circuiting.*

POWERING UP

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

Turn on the monitor and then the computer.

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Configure Monitor

The Command Console offers several methods to set up the monitor, depending on the operating system used for your computer. Use the Setup Diskette and select the setup that is best for your computer operating system.

When first used, you must perform Automatic Setup (AUTO SETUP). This procedures sets up the monitor to process the video signals from the computer without image discoloration or smearing. After performing AUTO SETUP, the settings are stored and used each time the monitor is turned on.

The Setup Utility included on the Setup Diskette is for display dot patterns. They do not replace or modify the display driver.

The Automatic Setup instructions require the monitor to be warmed up for 15 minutes. However, this is not required for normal operation.

SETUP FOR WINDOWS 95 OR WINDOWS 98

NOTE: This section must be completed before continuing with the Windows 95 or Windows 98 Auto Setup for the computer.

To use the Plug and Play feature in Windows 95 or Windows 98, files should be loaded from the Setup Diskette as follows:

1. Turn the computer off and attach devices.
2. Ensure that the monitor is connected correctly.
3. Turn on the monitor and then the computer. Allow the computer to boot into Windows 95 or Windows 98. The computer's Plug and Play code may display a warning that the system hardware has changed. This probably means that it has detected the new monitor for the first time.
4. Open the DISPLAY PROPERTIES window by clicking on START, SETTINGS, CONTROL PANEL and then double clicking on the DISPLAY icon.
5. Select the SETTINGS tab.
6. Select the CHANGE DISPLAY TYPE button.
7. Select the CHANGE MONITOR TYPE button.
8. Insert the Setup Diskette into drive A: and select the Have Diskette button.
9. Select OK.
10. Choose IBM T55A monitor and select OK. The files will be copied from the diskette to the computer hard drive.
11. Close all open windows and remove the diskette.
12. Reboot the computer system. The system will automatically select the maximum refresh rate and corresponding Color Matching Profiles.

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AUTO SETUP

NOTE: After making changes in the Setup, the computer must be Rebooted to insure proper changes to the CONFIG.SYS and AUTOEXEC.BAT files.

NOTE: Before proceeding with the next section, it is very important that The Setup Diskette for Windows 95 or Windows 98 has been run.

Locate the operating system installed on the computer in the Table below and follow the appropriate instructions. You may choose to run Auto Setup for each operating system that is used. This means that if sometimes the monitor is used while running any version of Windows and sometimes it is also used within DOS (not a DOS window), you must run Auto Setup for both Windows and DOS. You may run versions of Auto Setup in any order.

Operating System	Corresponding Auto Setup procedure
DOS	***Auto Setup for DOS***
Windows 3.1	***Auto Setup for Windows 3.1, Windows 95, Windows 98 or Windows NT***
Windows 95	
Windows 98	
Window NT	
Operating System/2 (OS/2)	***Auto Setup OS/2***

NOTE: If your computer does not run with the Setup Diskette shipped with the monitor, refer to Manual Setup.

Before beginning Auto Setup for the computer:

- Make a backup copy of the Setup Diskettes supplied with the monitor.
- Make sure the computer's video mode is set in the range of the supported screen resolution shown in the table in the Reference section.

NOTE: The Auto Setup process only applies to the current screen mode. When a new mode is selected, repeat this section to reset the monitor.

Perform Auto Setup for each screen mode used.

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Configure Monitor

AUTO SETUP FOR WINDOWS 3.1, 95, 98 OR NT

NOTE: If the monitor is in standby mode (STANDBY ON), it may automatically turn off while you are waiting for it to warm up.

NOTE: The size and diversity of the dot pattern varies with the screen resolution.

NOTE: Position the mouse pointer at the bottom center of the screen. This allows Auto Setup to run properly.

1. Turn the monitor on first, then the computer. If the message CHECK SIGNAL CABLE is displayed. If nothing is displayed check:
   - that the video interface cable is connected properly.
   - the correct video adapter card is installed.
   - the correct support display mode is selected for the computer.
2. Wait approximately 15 minutes, until the monitor warms up.
3. Drag the icon bar and tool bar, if they are displayed, to the bottom of the screen.
4. Insert the Setup Diskette into the diskette drive.
5. Check the operation system installed on your computer and follow the instructions from the table above.
6. When the test pattern appears, press the OSD Enter button ↵ at the bottom of the monitor to display the initial OSD menu.

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7. Use an Arrow button (← or →) to select the Image Lock icon (symbol of Image Lock) and press OSD Enter button ↵ to access the function.
8. Using an Arrow button (← or →), select Automatic and press the OSD Enter button ↵. This activates the Auto Setup procedure, which will optimize the display settings with the provided test pattern. The screen will dim, blink on and off several times, and you may notice small changes to the test pattern. To abort the Auto Setup function, press the Esc key.
9. When finished, the OSD main menu returns. Press the Exit button ⍈ once to exit from the OSD.
10. Press the Esc key to return to Windows. You have completed the monitor setup for Windows.

You have completed the monitor setup for Windows. If you use other operating systems, perform the appropriate AUTO SETUP for those systems.

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User Control Features

Making adjustments to the Command Console screen is a matter of performing the following easy On-Screen Display steps:

Icon	Control	Description
	Exit	Displays the OSD main menu Exits from menus and sub-menus Exits the OSD
←	Left Arrow	Displays the OSD main menu Moves the cursor to highlight icons and other options
→	Right Arrow	Displays the OSD main menu Moves the cursor to highlight icons and other options
↵	OSD Enter	Displays the OSD main menu Enters menus and sub-menus and selects the highlighted option
	Power Switch	Switches the monitor on and off

Operation

NOTE: The image is already optimized for many display modes, however the user controls can be used to adjust the image to your liking.

NOTE: The settings saved after adjustment and when existing the OSD and will be effective thereafter.

NOTE: After making adjustments, the Power indicator LED will briefly turn amber to indicate that the new value has been saved.

- Press any of the OSD control buttons to display the main OSD menu.
- Use the Arrow buttons to move among the icons. Select an icon and press OSD Enter to access that function. If there is a submenu, you can move between options using the Arrow buttons, then press OSD Enter to select that function. Use the Arrow buttons to make adjustments.
- Press the Exit button to move backwards through the submenus and exit from the OSD.

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OSD Lock/Unlock

- This feature allows you to secure the current control settings, while allowing the user to adjust Brightness and Contrast, so that they cannot be inadvertently changed, you can unlock the OSD controls at any time by using the same procedure.
- Push and hold the button 10 seconds to Lock or to Unlock. When locked, a "LOCKED" message will be displayed.

On-Screen Display (OSD) Controls

NOTE: The LCD monitor needs time to become thermally stable the first time you turn it on each day. Thus, to achieve more accurate adjustments for parameters. Allow the LCD monitor to warm up (be On) for at least 15 minutes before making any screen adjustments.

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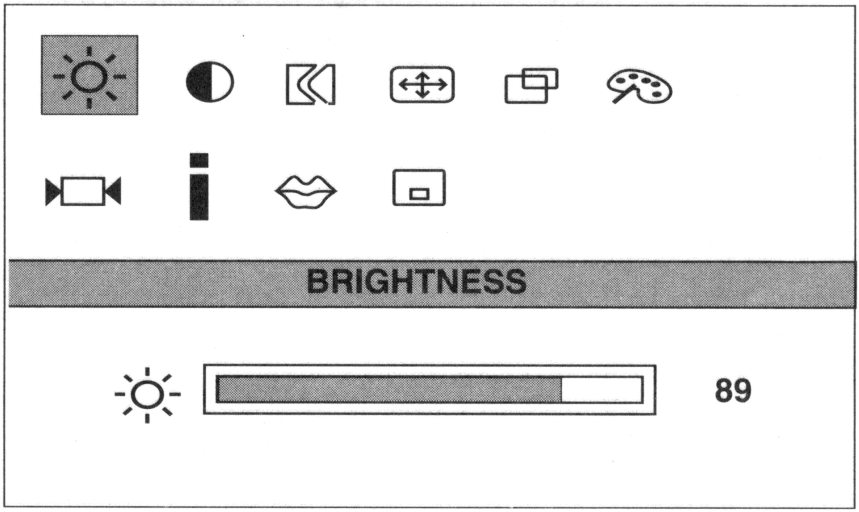
Initial Appearance of OSD



OSD Functions

OSD Icon	Description	Sub-menu(s)	Controls and Adjustments	
Brightness	Adjusts brightness		←	→
Contrast	Adjusts contrast		←	→
Image Lock	The image lock function is used to adjust the level of noise in the video signal which causes horizontal lines or areas on the screen where the image appears to be unstable and jitters or shimmers. This can be done automatically or manually.	**Automatic**	**NO -** Does not make the adjustment **YES -** Automatic adjustment	

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OSD Functions

OSD Icon	Description	Sub-menu(s)	Controls and Adjustments
		Manual - • **Fine** • **Coarse**	Use the Arrow buttons to adjust away the interference. If satisfactory results are not obtained using the Fine adjustment, use the Coarse adjustment and then use Fine again. This function may change the width of the display image. Use the H-Position function on the Image Position menu to center the display image on the screen.
 **Display Size**	If your computer or video board supplies a signal rate and addressability lower than 1024 × 768, this LCD monitor provides a scaling processor that can expand the addressability up to 1024 × 768.		**NORMAL** - Image at normal size. **EXPANDED** - Image enlarged to fill screen.
 **Image Position**	Moves the screen left and right or up and down.	**H-POSITION**	 
		V-POSITION	 
 **Color**	Select the Color Mode you find most comfortable and then fine tune the colors using the User Color Mode menu, if necessary.	**COLOR MODE**	**Mode 1** (Cool White) **Mode 2** (Normal White) **Mode 3** (Warm White)
		USER COLOR MODE - • Red	Increases or decreases redness

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OSD Functions

OSD Icon	Description	Sub-menu(s)	Controls and Adjustments
		• Green • Blue	Increases or decreases greenness Increases or decreases blueness
 **Reset**	Resets the Brightness, Contrast and Color settings.	**COLOR RESET**	**NO** - Does not make the adjustment **YES** - Resets the color
	Resets the Image position settings	**GEOMETRY RESET**	**NO** - Does not make the adjustment **YES** - Resets the geometry
 **Information**	Shows information about the addressability and the horizontal and vertical frequencies of the images received from the computer or video board.		
 **Language**	The language chosen affects only the language of the OSD. It has no effect on any software running on the computer.		Select one of the five languages to use for the OSD.
 **OSD Menu Position**	Changes the position of the OSD on the screen.	**H-POSITION**	
		V-POSITION	

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CLEAN MONITOR

- Gently wipe the covers and the screen with a soft cloth.
- Remove finger marks and grease with a damp cloth and mild detergent. DO NOT use solvents or abrasives.
- Never use flammable cleaning material to clean the monitor or other electrical apparatus.

WARNING: To avoid risk of electric shock, do not disassemble the monitor cabinet. Users cannot service the monitor. User maintenance is restricted to cleaning as explained below.

Be sure to turn off the power before you perform any maintenance on the monitor.

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Troubleshooting

WARNING: Be sure to turn off the power before you perform any maintenance on the monitor.

CAUSES AND CORRECTIVE ACTION

Problem	Possible Cause	Suggested Action	Reference
Screen is blank and power indicator is off	No power to monitor	Ensure that the electrical outlet and the monitor are both switched on. Check that the power cord is firmly plugged into the electrical outlet and the power supply unit. If the power cord plug has a removable fuse, replace it. Try another power cord. Try another electrical outlet.	***Connecting your Monitor***
Screen is blank and power indicator is steady green	Brightness and Contrast may be too low	Adjust brightness and contrast.	***User controls***
Screen is blank and power indicator is steady amber	The monitor is in the Power Management Standby state	Press any key on the keyboard or move the mouse to restore operation. Check the Power Management software on your computer	***Power Management***

NOTE: For image problems, you may want to run AUTO SETUP again before consulting to this section. In most cases, AUTO SETUP can fix the problems.

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Problem	Possible Cause	Suggested Action	Reference
Screen is blank and power indicator is Flashing green every 0.5 second	The monitor is not receiving a video signal	Check that the signal cable is firmly connected to the computer. Check that no pins are bent in the signal cable connector.	***Connecting your Monitor***
	Display mode of the computer is outside the range of the monitor	Reconfigure the computer to use a supported display mode.	***Further Information***
Screen is blank and power indicator is flashing amber every 0.5 or 1 second	The monitor is in the Power Management Suspend or Off state	Press any key on the keyboard or move the mouse to restore operation. Check the Power Management software on your computer.	***Power Management***
Image appears to be smeared	There are noises in the video signal	Select IMAGE LOCK menu in the OSD. Then select MANUAL to adjust FINE/ COARSE settings.	***User controls***
Image appears to be discolored	The Color setting may be incorrect	Adjust the Color settings.	***User controls***
A few dots are missing, discolored, or inappropriately lighted.	The LCD contains over 2,300,000 thin-film transistors (TFTs). A small number of missing, discolored, or lighted dots may be present on the screen, which is an intrinsic characteristic of the TFT LCD technology and is not an LCD defect.		

Display Modes

The display mode the monitor uses is controlled by the computer. Refer to the computer documentation for details on how to change display modes.

The image size, position and shape may change when the display mode changes. This is normal and the image can be readjusted using AUTO SETUP and the monitor controls.

Unlike CRT monitors, which require a high refresh rate to minimize flicker, TFT technology is inherently flicker-free. If possible, configure the computer for 1024 x 768 addressablility at 60 Hz vertical refresh rate.

For the Factor Set Display Modes listed below, the screen image has been optimized during manufacture.

FACTORY SET DISPLAY MODES

Addressability	Refresh Rate	Horizontal Frequency
640 × 350	70 Hz	31.5 kHz
640 × 480	60 Hz	31.5 kHz
640 × 480	75 Hz	37.5 kHz
720 × 400	70 Hz	31.5 kHz
800 × 600	75 Hz	46.9 kHz
800 × 600	60 Hz	37.9 kHz
832 × 624	75 Hz	49.7 kHz
1024 × 768†	60 Hz	48.4 kHz
1024 × 768	70 Hz	56.5 kHz
1024 × 768	75 Hz	60.0 kHz

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POWER MANAGEMENT

NOTE: If the computer has previously been used with a CRT monitor and is currently configured to a display mode outside the range that the Flat Panel monitor can display, reattach the CRT monitor temporarily until the computer is reconfigured, preferably to 1024 x 768 at 60 Hz.

To benefit from power management, the monitor must be used in conjunction with a computer that implements the Video Electronics Standards Association (VESA) Display Power Management Signaling (DPMS) Standard.

The power management feature is invoked when the computer recognizes that the mouse and keyboard have not been used for a user-definable period. There are several states as described in the table below.

It is recommended that the monitor be switched off at the end of each working day, or whenever it is expected to be unused for long periods during the day.

The following is the Power Management Table:

State	Power Indicator	Screen	Restoring Operation	Compliance
On	Steady green	Normal		
DPMS Standby	Steady amber	Blank	Press a key or move the mouse.	ENERGY STAR® and NUTEK
DPMS Suspend	Flashing amber (0.5 sec. interval)	Blank	Press a key or move the mouse. ‡	ENERGY STAR® and NUTEK
DPMS Off	Flashing amber (1 sec. interval)	Blank	Press a key or move the mouse. ‡	ENERGY STAR® and NUTEK

‡ There may be a slight delay before the picture reappears.

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Specifications

Display Specifications

Display Type	AMLCD
Display Area Diagonal	15.0" (381 mm)
Viewing Area	11.97" (304 mm) x 8.97" (228 mm)
Viewing Angle	160 degrees (horizontal/vertical)
Resolution	1024 x 768, RGB Vertical Strip
Color Pixel Size	Hor. - 0.297 mm, Ver. - 0.297 mm
Colors	Full Color (millions)
Contrast Ratio	220:1 (typ)
Luminance	180 cd/m2 (typ)
Screen Refresh	75 Hz
Input Signal	Analog VGA, SVA, XGA, SXGA
Sync Types	Separate, Composite (on H Sync), Sync on Green
Video Connectors	BNC, 13W3, HD15
Response Time	58ms (type) "black to white"
Clock Frequency	80 MHz
Supported Display Modes	
VESA Standard modes between	
Horiz. Frequency	30 kHz - 61 kHz
Vert. Frequency	56 Hz - 75 Hz
Communications	
VESA DDC	2 B
Power Input	
Supply Voltage	90 260 Vac 60/50+/- 3hZ
Max. Supply Current	1.0 A at 120 Vac
Power Consumption	
Normal Operation	< 40 W
DPMS Standby	< 5 W
DPMS Suspend	< 5 W
DPMS off	< 5 W

Performance Tested

Acoustic signal data, (taped and generated), electron-optical live video.
Cold soak and display photometric/radiometric characteristics

Environmental Specifications

Temperature	-10 to +35 C Operating
	-20 C to +60 C Nonoperating
	-20 C to +60 C Shipping
Humidity	10% to +80% Operating
	5% to +95% Noncondensing
	5% to +95% Shipping
Altitude	0 to 15,000 ft. Operating
	0 to 40,000 Nonoperating

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Specifications

Shock	15 G, 11 mS Operating 30 G, 11mS Nonoperating Bench handing per MIL-STD-810E
Vibration, Random	3.0G RMS, 20-2,000 Hz Operating 4.0G HMS, 20-2,000Hz Nonoperating
Enclosure	NEMA 4/12 at front panel
Weight	24 lb.
Sand and Dust	5.5 M.P.H. for 25 minutes
Rain	Per MIL-STD-810E, method 506.3, procedure II
Fungus	Non Nutrients/contaminants
Regulatory	
EM/RFI	FCC Class A, MIL-STD-401 (optional)
Safety	(Pending Approval) FCC Class A: UL 1950
Reliability Specifications	
Mean-time-between-failure (MTBF)	20,000 hours (Bellcore)
Operating Life	10 years without major overhaul
Quality Assurance	Complies with MIL-1-45208 and MIL-Q-9858
Maintainability MTTR	<30 minutes or less

Developmental Options
Touch panel
28 VDC operation
Elapsed time meter
Customer specified mounting
Interchangeably power supply

Support

FURTHER HELP

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

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

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

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.

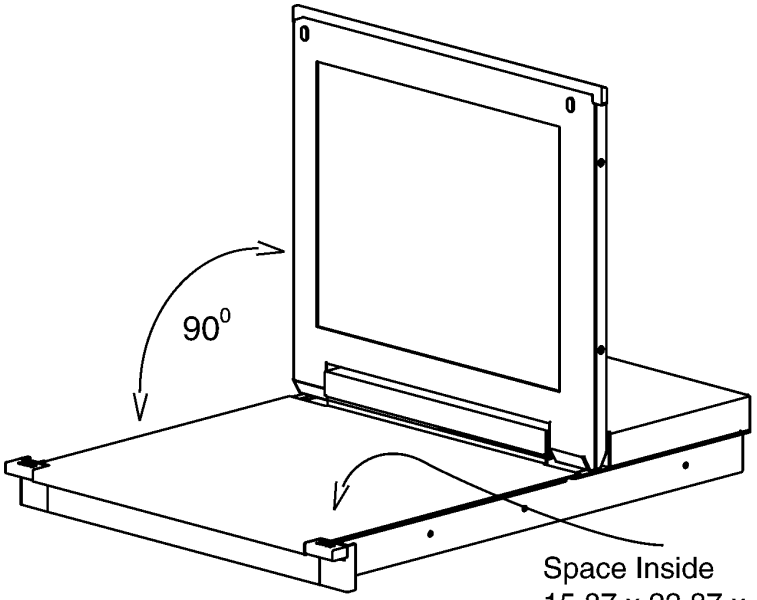
Z Microsystems Internal Systems

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.

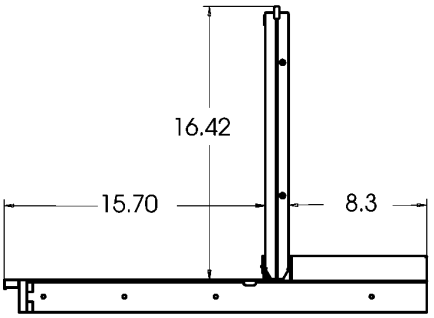
Z Microsystems Products

All Z Microsystems products are in full compliance.

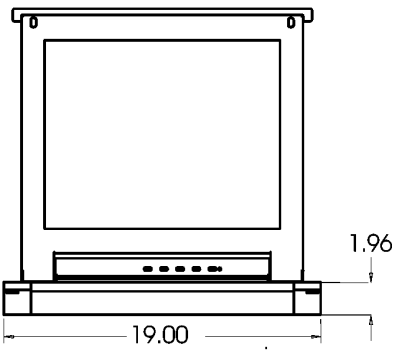
The company MIS has taken the lead and worked with the Finance Department to develop comprehensive Year 2000 Contingency Plans for the company mission critical application systems to assure the continuity of daily business.



Front View Open Iso

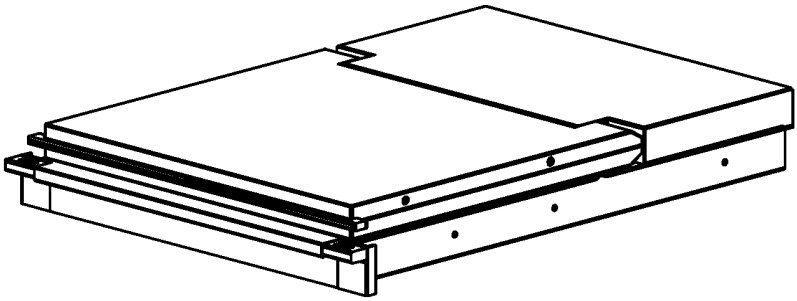


Side View Open

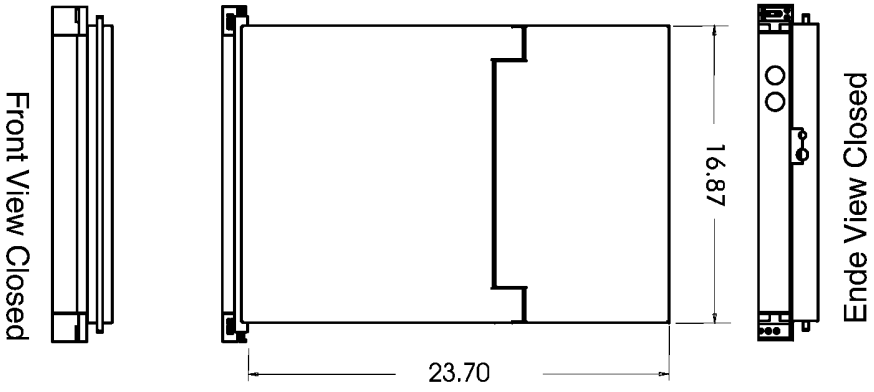


Front View Open

Drawings



Front View Closed Iso



Top View Closed

Side View Closed

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