



**DKM-UX20M, DKM-WS19M**  
**LCD Monitor-Keyboard-Mouse Rack Console Drawer**

Setup Guide

## Introduction

### Product Overview

Your DKM series flat panel LCD monitor-keyboard is an integrated monitor-keyboard assembly designed for installing in a standard 19" rack. The chassis is mounted on slide rails. The retractable assembly occupies only two rack unit space, and its fold-down LCD design makes storage and access a real convenience.

The monitor-keyboard assembly consists of an active matrix LCD monitor with built-in A/D controller designed to automatically work with any standard analog video signal from a computer. An optional DVI interface is available for high quality digital signal transfer. The unit comes with a keyboard, optical mouse and an externally attached AC adapter power supply.

This guide provides step-by-step instructions for installation and use of your DKM series monitor-keyboard drawer.

### Safety Guidelines

Before you set up your monitor-keyboard drawer, it is important to follow some basic safety precautions to prevent damage to the product and to ensure your own personal safety.

#### Handling the Drawer Assembly

The monitor-keyboard drawer is constructed of heavy gauge metal and can weight up to 30 lbs. To avoid injury during installation watch for edges and corners on the assembly.



*To prevent the drawer from accidentally sliding out and cause bodily injury, the unit is shipped with a metal strap installed across the front rackmount brackets. It is recommended that you do not remove it until the unit is installed in the rack, or when the unit is set down on a level work area.*

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## Power Connections

The monitor is shipped with a high quality AC adapter. The adapter may already be mounted on the back side of the drawer assembly. If not, you will need to unpack the adapter and attach it to the back of the chassis before installing the entire assembly into the rack.

## Care for the LCD

The monitor is an active matrix LCD. Liquid crystal displays are made of glass which will break or crack if mishandled.

## Replacement Mouse Requirement



***The LCD folds down over the keyboard and mouse storage compartment!***

*It is important that the height of any replacement mouse you put in the storage compartment not to exceed 1.75". Otherwise you may damage the LCD when you fold it down. A replacement mouse can be connected to the unit provided that it has a mini-DIN 6-pin connector.*

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## Unpacking

As you unpack your unit check the packing material to ensure that you have found all of the proper cables and accessories. Save all of the shipping material in case you need it for transporting the unit in the future.

The monitor-keyboard comes completely assembled. You should find these items in your package:

- ◆ Monitor-keyboard drawer assembly with slide rails and rack mounting brackets.
- ◆ Optical mouse.
- ◆ Combo cable for analog video, keyboard and mouse.
- ◆ Audio cable for the DKM series with built-in speakers.
- ◆ AC adapter power supply and power cord.
- ◆ Keys for the key lock.

## Front Side View

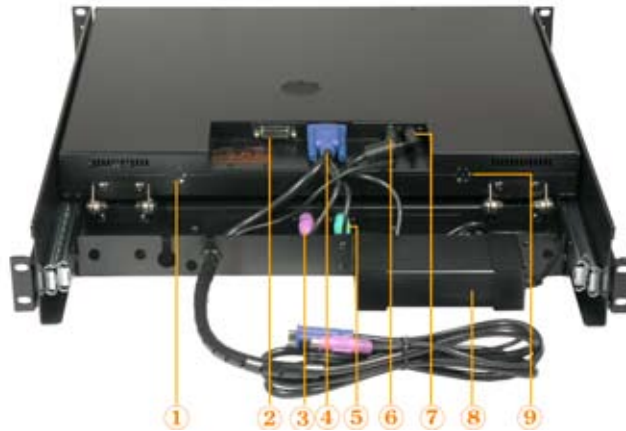
The monitor-keyboard drawer features a flip-up LCD. Unlock the LCD panel and use the handle to lift it up. Facing the unit you'll find these components:



1. *Mouse storage and 6-pin mini-DIN connector..*
2. *Optical mouse.*
3. *Mouse pad.*
4. *LCD standby button; OSD (on-screen display) control buttons.*
5. *Power on/off switch.*

## Back Side View

On the back side you'll find these components and connectors:



1. *Right speaker .*
2. *Optional DVI-D (Digital Dual Link) connector.*
3. *Keyboard connector (mini-DIN 6-pin).*
4. *15-pin VGA socket.*
5. *Mouse connector (mini-DIN 6-pin).*
6. *3.5mm stereo jack.*
7. *DC input socket.*
8. *AC adapter.*
9. *Left speaker.*

## System Requirements

Your LCD monitor-keyboard drawer connects to the video, keyboard and mouse ports of a computer system. Your computer system is required to have the following:

- ◆ A standard video card with a D-Sub 15-pin VGA connector. If you intend to connect the LCD monitor to your video card's DVI connector, you are responsible to have the correct cable. You are also responsible to have the video card and its driver already installed.
- ◆ Mini-DIN 6-pin ports for both the keyboard and mouse.
- ◆ An audio-out jack if you will be using the audio component of the monitor-keyboard drawer.



## Configuring your Computer's Video

There are no special software drivers required for your DKM series LCD monitor. It is important that you configure your video display according to the following parameters:

- ♦ Resolution 640x480 (VGA) or 800x600 (SGA) or 1024x768 (XGA) or 1280x1024 (SXGA); 1600x1200 (UXGA) if your unit is the DKM-UX20M. For best image quality set the resolution to the native resolution of the LCD (WSXGA+ for the DKM-WS19M and UXGA for the DKM-UX20M).
- ♦ Color depth up to 24 bit (or 16.7 Million Colors; True color).
- ♦ Vertical refresh or scan rate of 60 to 75 Hz.





## Installation

The DKM series monitor-keyboard drawer is designed to be installed in a 19" equipment rack or cabinet. The unit has mounting brackets that let you install it in rack cabinets up to 30" in depth.

You'll find the unit fully assembled on slide rails and functional. Use the following steps to install the unit, connect the cables and it's ready to use.

*Step 1. Determine the height that you want to install the unit and locate it on the rack posts.*

*Step 2. Adjust the rear mounting bracket if necessary.*



*Step 3. Carefully insert the unit into the rack enclosure. Align the front and rear mounting brackets with the screw holes along the rack posts.*



*Step 4. Install the mounting screws. Tighten down all of the mounting bolts.*

*Step 5. Once the unit has been installed and secured, remove the metal strap.*



*Step 6. Turn OFF your computer and then make all of the cable connections. The keyboard and mouse port connectors are color coded— purple colored connector for the keyboard and green colored connector for the mouse.*

*Step 7. Unlock the LCD-keyboard drawer. Grasp the LCD panel handle and pull it out of the rack cabinet.*

*Step 8. Lift up the display. Remove the clear protective film from the front of the screen.*

*Step 9. Power up your computer system. Turn on the LCD-keyboard using the rocker switch on the front bezel and then turn on the LCD by pressing the front bezel standby button.*

## OSD (On-screen menu display)

The LCD is driven by a conversion board that converts the analog video signal into a digital video format for the LCD monitor's driver circuit. The conversion board includes an integrated RAM-based OSD (On-Screen Display) menu. The OSD uses four push buttons to let you access its menu system and make adjustments to the display for optimum performance.

The front panel push buttons are labeled as follows:

- ◆ Button **M**: pressing it toggles the OSD on and off; or returns to main menu categories from a submenu.
- ◆ Button **S**: pressing it selects the highlighted menu/submenu item; or returns to main menu categories from a submenu.
- ◆ Buttons **▶** and **◀** navigates through the menu items; after **S** is pressed, these buttons change the selected menu item's parameter.

### Using the OSD

Follow these steps to activate the on-screen display:

*Step 1. Power up the computer system and then turn on the LCD.*

*Step 2. Press **M** to invoke the on-screen menu.*

*Step 3. Navigate and select the menu options using **▶**, **◀** and **S**.*

*Step 4. Press **▶** or **◀** to modify the selected item's values.*

*Step 5. After you've made your adjustments press **M** repeatedly until the OSD is turned off.*

### OSD Menu Item Description

Menu	Description
BRIGHTNESS	Adjusts the overall light level of the entire image. When it is used in combination contrast, or black level control, the brightness control can be used to define the black level of the image.
BLACK LEVEL	Sets the light level of the darkest portion of the video signal to match that of the display's black level capability.
CONTRAST	Adjusts the relative difference between the brightest and darkest parts of an image. The contrast control adjusts the peak white level of your display.
COLOR	Adjust intensity of RGB channels.
POSITION	Adjusts the horizontal and vertical image position within the display area of the LCD.
IMAGE	Adjustment of the sample pixel clock and phase to control 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.
AUTO CONFIG	Performs automatic adjustment of the ADC sample pixel clock.
INFO	Shows information about the addressability and the horizontal and vertical frequencies of the images received from the computer or video board.
MISC	Resets display to factory default; adjust OSD time-out and on-screen position; toggle dithering on/off; toggle native resolution on/off.
INPUT SELECT	Select video signal from analog VGA or digital DVI interface.
SAVE	Saves you current display settings.



## Troubleshooting

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### Symptom

Screen is blank and power indicator is off.

### Possible Cause

No power to the display

### Suggested Action

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 AC adapter power supply. Ensure the AC adapter is working by examining the green LED indicator on the adapter.

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### Symptom

Screen is blank and power indicator is red.

### Possible Cause

No video signal to the LCD. The computer may be in a power-save mode.

### Suggested Action

Press the standby button on the front bezel of the LCD. Press a key or move the mouse to restore operation to the computer. Check the power management setup of your computer or adjust the screen saver properties of your operating system.

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### Symptom

A few dots are missing, discolored, or inappropriately lighted.

### Possible Cause

An XGA LCD (1024 x 768 resolution) 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. Imperfections may appear on the screen if either the pixel or sub-pixel is stuck always ON; a bright spot on a dark background, or it is stuck always OFF; a dark spot on a bright background.

### Suggested Action

The criteria for replacement of LCDs with defective pixels depends on the manufacturer of the LCD. Use the following as a guideline to see if your LCD is defined as “defective” and possibly replaceable through your manufacturer.

The LCD meets one of the following criteria:

- ♦ a total of 15 stuck sub-pixels or 10 stuck full pixels
- ♦ 10 stuck red sub-pixels
- ♦ 10 stuck blue sub-pixels
- ♦ 4 stuck green sub-pixels
- ♦ No more than two "adjacent" pixels may be stuck, adjacent being defined as less than 2.5mm edge to edge
- ♦ No more than two pairs of two-adjacent stuck pixels per display

*note: A pixel (picture element) consists of one red, one green and one blue sub-pixel. A stuck green sub-pixel is more visible than blue or red.*

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### Symptom

My LCD displays this message “OUT OF RANGE” when I connect it to my computer. What should I do?

### Possible Cause

Either the resolution, or the vertical fresh rate, or both of these settings of your graphics card has exceeded the range of the LCD.

### Suggested Action

Ensure your graphics card is set to a resolution no higher than that of the LCD. Check the refresh rate of the graphics card through your computer’s display properties (also known as vertical sync, screen refresh). Make sure it doesn’t exceed the capability of the LCD. Set it to 60Hz if you’re unsure of your LCD’s maximum acceptable refresh rate.

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## Symptom

The image on my LCD seems to jitter.

## Possible Cause

In an LCD, each pixel corresponds to a specific set of red, green, and blue LCD cells. When an LCD monitor gets an analog signal, it has to decide which cell is supposed to display a specific pixel. If it can't make up its mind, the pixel will jump back and forth between adjacent sets of cells, creating an annoying jitter in the display.

## Suggested Action

Look for an "automatic" adjustment feature that will eliminate the jitter, and adjust image size and position at the same time. The feature is available as a choice in the on-screen display (OSD).

If the OSD does not have an automatic adjustment feature, or the feature doesn't stop the jitter completely, you'll have to adjust the settings manually. Start by adjusting the coarse timing for the LCD, which should be an available setting in the onscreen display (OSD). Typical names for this feature are Clock and Tuning. Increase or decrease the setting until you have minimized the jitter you see in the image. Next, you may also adjust the fine timing for the LCD. Typical names for this adjustment are Phase and Fine Tuning.



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