

# NEC MultiSync® 90 Series

19" - 21" pro-level LCD displays ideal for high-end users



**Introducing a family of LCDs that matches its inner appeal with outer looks you won't want to take your eyes off.** The NEC MultiSync 90 Series, comprised of the 19" MultiSync LCD1990SX, 20" LCD2090UXi, 21" MultiSync LCD2190UXi and 21" MultiSync LCD2190UXp, has not only revolutionized the way flat-panel monitors are engineered and designed, but how they can be used. With their multitude of leading-edge capabilities, combined with groundbreaking design, these monitors could easily be considered the most intelligent visual display solutions to date. These models are ideal for a variety of environments and applications, most notably financial trading floors, call centers, graphic arts/desktop publishing and computer-aided design, as well as medical office information systems and soft-copy clinical viewing, including PACS. Not only are these monitors smart investments for you and your company, their advanced

functionality and productivity-enhancing technologies illustrate their unique brilliance.

A design that combines the best in form and function. With the development of the MultiSync 90 Series, NEC engineers have taken the concept of display design to uncharted territories, prompting a "They thought of everything" reaction from users. Not only does the cabinet add an aesthetically pleasing presence to your desktop, it boasts many advanced features that increase your ease of use and daily productivity.

One of the thinnest display frames in the industry highlights the MultiSync 90 Series' dynamic design. Aside from providing an increased screen area to let you focus more on your ideas, the virtually

# Custom technologies and multi-functional design unite in this **intelligent** flat-panel display series.

imperceptible bezel frees up more horizontal and vertical desktop space for multi-monitor applications. These include both standard side-by-side and tiled configurations, which are also assisted by the cabinet's rear clip slots. Using the clips (available separately), these allow for easier alignment of the displays for a more seamless overall appearance.

Newly designed control buttons on the bottom corner of the bezel provide you with a more intuitive means to reach your preferred image settings. By having a key guide for each button appear on-screen alongside it when activated, an even thinner and more non-distracting bezel is achieved. Plus, when switching from landscape to portrait orientation or vice versa, an internal gravitational sensor automatically changes the on-screen guides accordingly.

In addition to their ability to easily switch orientations, MultiSync 90 Series displays provide other means of reaching your preferred viewing comfort (see images on the next page). The newly designed base allows for a height adjustment range of an astounding 150mm, while the tilt and swivel functions provide you flexibility in meeting ergonomic standards or personal preferences. Despite its wide range of motion, the display's cable management feature is able to safely conceal video cables and power cords, helping you avoid unattractive desktop clutter.

For environments in which easy adaptability with the displays is required, the quick release stand and recessed handle are essential. With the simple pull of a lever on the base, the display quickly disengages from the stand, allowing you to move the display from a desktop to a wall or arm mount. Tools and easy-to-lose screws also can be avoided with the use of this quick and simple function. The handle on the back of the display further eases the display's portability.

## **A smarter display. Only from NEC.**

In order to provide the MultiSync 90 Series with its multitude of advanced technologies, NEC engineers literally started its development from scratch. While competing displays normally employ "off-the-shelf" video chipsets, we designed an Application-Specific Integrated Circuit (ASIC), a chip designed for specific applications. As a result of this costly, time-consuming process, these displays are able to deliver all of their cutting-edge features directly to your desktop.

**Achieve complete color and brightness uniformity.** By nature, LCD panels and CCFL backlights contain uniformity errors, or mura, which are visible as slightly brighter or darker areas on the screen. To combat this inherent trait, each MultiSync 90 Series display is individually

characterized during production using a fully automated system that measures hundreds of points across the screen at different gray levels. These measurements are used to build a 3-D correction matrix stored inside the display. This data is used to compensate for the uniformity not only as a function of position on the screen but of gray level as well. In turn, this technology, called ColorComp™, reduces the uniformity to virtually unnoticeable levels and applies a digital correction to each pixel on the screen to compensate for differences in color and luminance.

**LCD panels ideal for even the most discerning applications.** The MultiSync 90 Series utilizes the highest-quality active matrix LCD modules used in professional flat-panel, wide-angle monitors. Each has slightly different characteristics that make them suitable for different types of applications. The in-plane switching (IPS) type module (indicated with an "i" in 90 Series model names) boasts the best possible color and grayscale accuracy and minimal gamma (brightness tone) shift at off angles. These features make IPS LCDs more suitable for demanding, color-critical applications. In addition, dark black colors and excellent grayscale reproductions make the IPS panel ideal for medical applications.

Vertical alignment (VA) LCD module technology (indicated with a "p" in 90 Series model names) offers excellent image quality, high brightness and contrast ratios, and fast response times in a cost-effective solution. These models are well-suited to meet the needs of financial, public information, CAD/CAM and other environments that demand high resolutions, precise images, adjustment flexibility and advanced features but may not have a need for exacting color reproduction.



*NEC's TileMatrix and TileComp technologies allow you to build video walls in various configurations (shown above), creating a custom-sized, virtually seamless screen for advertising, branding or high-tech decor..*

**Improve your view with high-performance color control.** A 12-bit gamma lookup table (LUT), which allows MultiSync 90 Series monitors to display 16.7 million colors out of a palette of 68.5 billion, provides for more finely detailed, high-definition rendering of color images and crisper display of even the most delicate shadings and color differences. GammaComp™ internal circuitry automatically converts 8-bit data from the PC to 12-bit and back to 8-bit, producing smooth, accurate color tones. Gamma can be set by using preset values (including S-Curve and DICOM GSDF) or creating a custom setting from 0.5 to 4.0 in increments of 0.1, providing an ideal setting for video or other applications.

**Advanced image control.** The completely redesigned Advanced OSM™ delivers a host of additional features that give you complete control of your monitor and its settings. This helps make these monitors extremely flexible in working with most any computer video system. The screen saver and real-time clock functions help reduce the risk of image persistence, extending the life of the display, while gamma adjustment decreases the effect of high-contrast images on long-term image quality. Also, when switching between landscape and portrait orientations, you can have your on-screen images automatically rotated and resized.

Automatic black level adjustment allows for better control of grayscale

images. Video bandwidth can be adjusted to compensate for bad signals and gives you more flexibility in the number of signals you can view, while the auto adjust level can be customized to various settings for personal preferences when powering up a new system. Additionally, the zoom mode enables you to customize the screen size in three directions.

Also controlled through the Advanced OSM is TileMatrix™, which allows you to build video walls of various configurations. With the use of a video amplifier and a standard video card, this feature saves you time and money compared to other connection solutions. With the ability to utilize up to 25 monitors (in horizontal or vertical configurations from 1x2 through 5x5) that display a shared image (see images on previous page), you can build an impressive video wall for various applications, including advertising and tradeshow. TileComp™ works in tandem with TileMatrix to compensate for the width of tiled bezels and optimally display still images.

Another user-controlled feature offered by the Advanced OSM is Ambi-Bright™, which automatically adjusts the backlight depending on the brightness of ambient lighting conditions. For example, if the sensor detects the ambient lighting becoming darker, it reduces the backlight appropriately, which helps provide optimal readability and reduce eyestrain. Further, if desired, you can set the display to automatically enter a power-saving mode

### **Multi-functional cabinet design**

*In addition to adding eye-pleasing aesthetics to your desktop, the design of the MultiSync 90 Series boasts many functional features that increase your viewing comfort and lead to gains in overall productivity.*



**Height-adjustable stand (150mm)**



**Tilt capability**



**Redesigned OSM control buttons**



**Quick-release stand**

when the ambient lighting falls below a predetermined value (i.e. when office lights are shut off at the end of the day), which can significantly reduce energy expenses. When you consider the number of monitors used on trading floors and other display-heavy environments, this brightness function can contribute significantly to a lower total cost of ownership.

The displays' ECO Mode™ further helps conserve energy by allowing you to define a setting for the backlight at a 50 or 75% brightness level. This feature's benefits are best utilized in larger corporate environments where many displays are employed.

**Achieve consistent, long-distance signals.** The MultiSync 90 Series' Cable-Comp™ lets you realize the advantages of long analog or digital monitor cable lengths without the difficulties and costs normally associated with this type of configuration. This technology uses a digitized signal delay circuit to automatically compensate for each red, green and blue cable's length and video signal delay, ensuring sharp image reproduction. Cable-Comp also boosts the video signal to prevent blurred images without the need for costly repeaters. In environments such as trading floors and call centers, longer cables enable systems to be centrally located in control rooms far away from users (up to 326 feet/100 meters [analog]; 90 feet/30 meters [digital]), allowing monitor upgrades, service and repairs to be accomplished without interrupting the work environment.

**Wide compatibility for today and tomorrow.** Ambix<sup>3</sup>™ technology provides the widest range of computer video compatibilities between analog and digital systems by allowing the same monitor to work seamlessly in any technical environment. The DVI-I connector provides digital or analog input, the DVI-D connector provides digital-only input, and a third input is provided with a traditional 15-pin VGA connector, which allows for legacy analog-only connection. Ambix<sup>3</sup> provides the ability to toggle between all three inputs, reducing the expense of external monitor switches. This triple-interface architecture provides a number of single-, dual- or triple-input configurations.

**Hassle-free display setup.** With Advanced No Touch Auto Adjust™, MultiSync 90 Series monitors not only provide for an optimal image upon initial power-on but can also detect closed signal changes even if they run under the same resolution and refresh rate, as is the case with external signal switch boxes. This results in a more stable image after switching. These models also feature auto DVI cable detection, which, upon power-up of your computer system, allows it to identify which signal cable (analog or digital) is attached to the monitor's DVI-I connector. This technology eliminates many manual setup steps and assures that your system and monitor configuration are achieving optimal performance.

**Enhanced pro-level screen performance.** With XtraView+™ wide-angle viewing technology you can enjoy flexible horizontal and vertical viewing angles up to 178° (89° up, down, left and right) with minimal color shift and less glare, reflection and distortion. Less off-angle color shift results in less image degradation and, in environments where data may be viewed by multiple users, this enhanced feature proves to be a winning solution.

NEC's Rapid Response™ technology with overdrive provides for uninterrupted display of full-motion video with response times as quick as 16ms. The overdrive function improves the critical gray-to-gray response time, reducing pixel lag and enhancing the video experience. This feature has been developed specifically for 50 Hz broadcast video sources as it guarantees smooth representation of moving images. Rapid Motion™, a

technology strictly for viewing moving video, DVD movies or MPEG files, bypasses frame memory altogether for smooth-flowing video reproduction without ghosting or digital artifacts. Overall, this remarkably quick motion makes these models better than ever for animation, game development and video applications such as presentations and streaming web video.

**Environmental friendliness and intelligent power management ensure a smart investment.** MultiSync 90 Series displays were developed using materials that not only meet strict environmental standards but make it easier for you to recycle the product at the end of its lifecycle. The displays' RoHS compliancy ensures that they are free of hazardous chemicals such as lead, hex-chrome, cadmium, PBDE and PBB, with reduced mercury. They also meet Waste Electrical and Electronic Equipment (WEEE) regulations, a directive that controls the disposal of equipment and the percentage going to landfills.

The MultiSync 90 Series meets or exceeds the EPA's Energy Star® 4.0 Tier 2 standard for energy consumption, allowing you to conserve power and lower your total cost of ownership. Many technologies contribute to these savings, including the real-time clock with power management scheduler, which can be set from 1-24 hours x 7 days via the on-screen display. If users forget to turn off their monitors, this function will turn them off automatically after a user-determined period of time, thereby reducing electrical power costs. The high-efficiency backlight, which provides the longest lifetimes of any NEC LCD monitor family, reduces not only the power consumption but also the heat generation at the front of the screen.

**Gain greater control.** Our exclusive NaViSet™ software (available by download) offers an intuitive graphical user interface that allows you to adjust On Screen Display (OSD™) display settings via mouse and keyboard instead of using the monitor's up-front buttons. This software provides animated graphics and test patterns to help guide you through adjustments.

For an unprecedented level of control, NaViSet Administrator software for IT professionals (available upon request) contains Windows Management Instrumentation™ (WMI) for remote control and diagnostics maintenance for all installed MultiSync 90 Series units. This software provides IT personnel remote access to the monitor and its settings without disrupting the user.

All of these control capabilities are made possible using the improved remote diagnostics and remote control capabilities of the Display Data Channel/Command Interface (DDC/CI). This allows control commands to be sent directly to the monitor by the local system or remotely over an existing network (LAN) by a system administrator. In order to take full advantage of these benefits, users must use a DDC/CI-compatible graphics card and be running Windows 2000/XP.

DDC/CI also enables self-diagnostics for MultiSync 90 Series displays, helping keep administrators aware of possible abnormalities such as lamp and circuit block failures, input signal status and temperatures on the inside of the cabinet. When the display detects a problem, the LED on the front of the bezel flashes in a pattern of long and short blinks, depending on the type of abnormality. The diagnosis information also can be accessed via NaViSet.

These displays support asset management capability by adhering to VESA DDC and EDID standards. Based on these standards, information from the monitors such as serial number, model name and date of manufacture can be communicated to a central system using asset management software such as Microsoft's System Management Server.

## SERIES FEATURES AND BENEFITS

### Design features for improved aesthetics and ease of use

- Ultra-thin-frame design lets you to view more of your ideas and less of the monitor bezel, while freeing up more horizontal and vertical desktop space for multiple-monitor applications
- Redesigned bezel controls increase simplicity and ease of use, displaying on-screen functions alongside the appropriate buttons
- Height-adjustable stand boasts a range of up to 150mm to maximize your viewing comfort
- Recessed portability handle on the back of the display provides easier transport
- Quick-release stand allows you to detach the display from its base with the simple pull of a lever
- Improved cable management helps prevent unattractive cable and cord clutters no matter the height adjustment/orientation of your display
- Rear alignment clip slots allow for easier, more seamless multi-display setups
- Pivot capability adds flexibility to your viewing preferences

### Electronics for enhanced screen performance and display management

- ColorComp reduces screen uniformity errors and compensates for differences in color/grayscale and luminance using new signal processing circuitry
- Internal 12-bit lookup table (LUT) allows the display of 16.7 million colors out of a palette of 69 billion, while providing for more points of shading between white and black and overall improved representation of gamma curves
- XtraView+ technology provides for the widest viewing angles available (up to 178°) with minimal off-angle color shift
- Rapid Response technology with Rapid Motion and overdrive delivers virtually uninterrupted, undistorted viewing of high-speed video
- Gamma selection lets you adjust the screen to custom or your preferred settings (2.2, DICOM GSDF, S-Curve or native)
- Ambix<sup>3</sup> technology provides the widest range of computer video compatibility between analog and digital systems, and enables you to switch between three inputs
- NaViSet software offers an expanded and intuitive graphical interface, allowing you to more easily adjust display settings via mouse and keyboard. Through DDC/CI, the Administrator version utilizes the monitor's advanced control and diagnostics capabilities to provide IT professionals with remote access to monitor settings over their existing network
- TileMatrix and TileComp allow you to build virtually seamless video walls of various configurations (horizontal or vertical) through the Advanced OSM
- AmbiBright automatically adjusts the backlight and power management depending on ambient lighting brightness
- ECO Mode helps extend the life of the display by allowing the user to dim the backlight, thereby reducing heat generation and conserving energy
- CableComp automatic long cable compensation prevents image quality degradation caused by long analog or digital DVI-D cable lengths
- Real-time clock allows for 24/7 power management scheduling and monitor sleep/wake management, improving energy savings and extending display life
- Advanced OSD enables display management customization to meet your preferred settings and features
- Automatic black level adjustment regulates grayscale images for optimal picture quality
- AutoBright function aligns the monitor's brightness level with the application in use for optimal viewing
- Auto DVI cable detection eliminates manual setup steps and ensures optimal performance between your system and monitor
- Advanced No Touch Auto Adjust provides optimal image settings upon initial power-on and closed signal changes (includes a user-selectable mode in the Advanced OSD)
- Touch or protective glass integration-enabling design increases application options
- Zoom mode enables you to customize the screen size in three directions
- Screen saver function, including gamma adjustment, unnoticeably reduces the risk of image persistence for extended display life
- Self-diagnostic capabilities alert you of failure points and other abnormalities with a flashing LED on the display's bezel
- 6-axis color control engine allows for precise and simplified color, color temperature (2600-10,000K), hue and saturation adjustment

Model	LCD1990SX	LCD2090UXi	LCD2190UXi	LCD2190UXp	
<b>Display</b>	Viewable Size Image Pixel Pitch Pixels Per Inch Brightness (typical) Contrast Ratio (typical) Viewing Angle (typical)  Response Time (typical) Display Colors	19" 0.294mm 86 @ native resolution 250 cd/m <sup>2</sup> 1500:1 178° Vert., 178° Hor. (89U/89D/89L/89R) @ CR > 10 Rapid Response (8ms G-to-G) 16.7 million out of 68.5 billion	20.1" 0.255mm 100 @ native resolution 280 cd/m <sup>2</sup> 700:1 178° Vert., 178° Hor. (89U/89D/89L/89R) @ CR > 10 Rapid Response (8ms G-to-G) 16.7 million out of 68.5 billion	21.3" 0.270mm 94 @ native resolution 250 cd/m <sup>2</sup> 500:1 178° Vert., 178° Hor. (89U/89D/89L/89R) @ CR > 10 Rapid Response (10ms G-to-G) 16.7 million out of 68.5 billion	21.3" 0.270mm 94 @ native resolution 300 cd/m <sup>2</sup> 1000:1 178° Vert., 178° Hor. (89U/89D/89L/89R) @ CR > 10 Rapid Response (8ms G-to-G) 16.7 million out of 68.5 billion
<b>Synchronization Range</b>					
Horizontal	31.5 - 81.1 KHz (Analog/Digital)	31.5 - 91.1 KHz (Analog/Digital)	31.5 - 91.1 KHz (Analog) / 31.5 - 99.4 KHz (Digital)	31.5 - 91.1 KHz (Analog) / 31.5 - 99.4 KHz (Digital)	
Vertical	50 - 85 Hz	50 - 85 Hz	50 - 85 Hz	50 - 85 Hz	
<b>Input Signal</b>					
Video Sync	ANALOG RGB 0.7 Vp-p/75 Ohms Separate sync: TTL Level (Positive/Negative) Composite sync: TTL Level (Positive/Negative) Composite sync on green: (0.3Vp-p negative 0.7Vp-p positive)	ANALOG RGB 0.7 Vp-p/75 Ohms Separate sync: TTL Level (Positive/Negative) Composite sync: TTL Level (Positive/Negative) Composite sync on green: (0.3Vp-p negative 0.7Vp-p positive)	ANALOG RGB 0.7 Vp-p/75 Ohms Separate sync: TTL Level (Positive/Negative) Composite sync: TTL Level (Positive/Negative) Composite sync on green: (0.3Vp-p negative 0.7Vp-p positive)	ANALOG RGB 0.7 Vp-p/75 Ohms Separate sync: TTL Level (Positive/Negative) Composite sync: TTL Level (Positive/Negative) Composite sync on green: (0.3Vp-p negative 0.7Vp-p positive)	
<b>Input</b>	DVI-D, DVI-I & VGA 15 pin D-sub	DVI-D, DVI-I & VGA 15 pin D-sub	DVI-D, DVI-I & VGA 15 pin D-sub	DVI-D, DVI-I & VGA 15 pin D-sub	
<b>Resolutions Supported</b>	ANALOG/DIGITAL 640 x 480 @ 60-85 Hz 720 x 400 @ 70-80 Hz 800 x 600 @ 56-85 Hz 832 x 624 @ 75 Hz 1024 x 768 @ 60-85 Hz 1152 x 864 @ 70-85 Hz 1152 x 870 @ 75 Hz 1280 x 960 @ 60 Hz 1280 x 1024 @ 60-75 Hz	ANALOG/DIGITAL 640 x 400 @ 70-85 Hz 720 x 400 @ 70-85 Hz 640 x 480 @ 60-85 Hz 800 x 600 @ 56-85 Hz 832 x 624 @ 75 Hz 1024 x 768 @ 60-85 Hz 1152 x 864 @ 70-85 Hz 1152 x 870 @ 75 Hz 1280 x 960 @ 60 Hz 1280 x 1024 @ 60-85 Hz 1600 x 1200 @ 60 Hz	ANALOG/DIGITAL 640 x 400 @ 70-85 Hz 720 x 400 @ 70-85 Hz 640 x 480 @ 60-85 Hz 800 x 600 @ 56-85 Hz 832 x 624 @ 75 Hz 1024 x 768 @ 60-85 Hz 1152 x 864 @ 70-85 Hz 1152 x 870 @ 75 Hz 1280 x 960 @ 60 Hz 1280 x 1024 @ 60-85 Hz 1600 x 1200 @ 60 Hz	ANALOG/DIGITAL 640 x 400 @ 70-85 Hz (Digital) 720 x 400 @ 70-85 Hz 640 x 480 @ 60-85 Hz 800 x 600 @ 56-85 Hz 832 x 624 @ 75 Hz 1024 x 768 @ 60-85 Hz 1152 x 864 @ 70-85 Hz 1152 x 870 @ 75 Hz 1280 x 960 @ 60 Hz 1280 x 1024 @ 60-85 Hz 1600 x 1200 @ 60 Hz	
<b>Native Resolution</b>	1280 x 1024 @ 60 Hz	1600 x 1200 @ 60 Hz	1600 x 1200 @ 60 Hz	1600 x 1200 @ 60 Hz	
<b>Additional Features</b>	Ultra-thin-frame (bezel), No Touch Auto Adjust, NaViSet software, tilt, VESA mount, sRGB, cable management, touch-enabled, swivel, vacation switch, height-adjustable stand, 12-bit gamma, AmbiBright, pivot, ColorComp, overdrive, ECO Mode, real-time clock, quick release stand, Ambix <sup>3</sup> , Windows Vista-certified	Ultra-thin-frame (bezel), No Touch Auto Adjust, NaViSet software, tilt, VESA mount, sRGB, cable management, touch-enabled, swivel, vacation switch, height-adjustable stand, 12-bit gamma, AmbiBright, pivot, ColorComp, overdrive, ECO Mode, real-time clock, quick release stand, Ambix <sup>3</sup> , Windows Vista-certified	Ultra-thin-frame (bezel), No Touch Auto Adjust, NaViSet software, tilt, VESA mount, sRGB, cable management, touch-enabled, swivel, vacation switch, height-adjustable stand, 12-bit gamma, AmbiBright, pivot, ColorComp, overdrive, ECO Mode, real-time clock, quick release stand, Ambix <sup>3</sup> , Windows Vista-certified	Ultra-thin-frame (bezel), No Touch Auto Adjust, NaViSet software, tilt, VESA mount, sRGB, cable management, touch-enabled, swivel, vacation switch, height-adjustable stand, 12-bit gamma, AmbiBright, pivot, ColorComp, overdrive, ECO Mode, real-time clock, quick release stand, Ambix <sup>3</sup> , Windows Vista-certified	
<b>Touch-Capable</b>	Designed for integration	Designed for integration	Designed for integration	Designed for integration	
<b>Voltage Rating</b>	AC 100-120V / AC 220-240V	AC 100-120V / AC 220-240V	AC 100-120V / AC 220-240V	AC 100-120V / AC 220-240V	
<b>Power Consumption (typical)</b>					
On	39W	50W	52W	60W	
Power Savings Mode	1W	< 1W	< 1W	1W	
<b>Dimensions (WxHxD)</b>					
Net (with stand)	15.8 x 14.4-19.5 x 9.7 in./ 402.3 x 410.7-560.7 x 247.3mm	15.8 x 14.4-19.5 x 9.7 in./ 401.3 x 365.8-495.3.5 x 246.4mm	18.3 x 16.7-22.6 x 9.7 in./ 464.8 x 424.8-574.8 x 247.3mm	18.3 x 16.7-22.6 x 9.7 in./ 464.8 x 424.8-574.8 x 247.3mm	
Net (without stand)	15.8 x 13 x 3.1 in./ 402.3 x 330.3 x 80mm	15.8 x 13 x 3.1 in./ 401.3 x 330.2 x 78.7mm	18.3 x 14.1 x 3.3 in./ 464.8 x 358.6 x 85mm	18.3 x 14.1 x 3.3 in./ 464.8 x 358.6 x 85mm	
<b>Net Weight</b>					
(with stand)	19.8 lbs. / 9 kg	19.3 lbs. / 8.8 kg	23.6 lbs. / 10.7 kg	23.6 lbs. / 10.7 kg	
(without stand)	13.8 lbs. / 6.3 kg	18.5 lbs. / 8.4 kg	17.6 lbs. / 8 kg	17.6 lbs. / 8 kg	
<b>YESA Hole Configuration Specifications</b>	100 x 100mm	100 x 100mm	100 x 100mm	100 x 100mm	
<b>Environmental Conditions</b>					
Operating Temperature	5-35° C / 41-95° F	5-35° C / 41-95° F	5-35° C / 41-95° F	5-35° C / 41-95° F	
Operating Humidity	30-80%	30-80%	30-80%	30-80%	
Operating Altitude	3048m / 10,000 ft.	4572m / 15,000 ft.	3048m / 10,000 ft.	3048m / 10,000 ft.	
Storage Temperature	-10-60° C / 14-140° F	-10-60° C / 14-140° F	-10-60° C / 14-140° F	-10-60° C / 14-140° F	
Storage Humidity	10-85%	10-85%	10-85%	10-85%	
Storage Altitude	12,192m / 40,000 ft.	12,192m / 40,000 ft.	12,192m / 40,000 ft.	12,192m / 40,000 ft.	
<b>Limited Warranty</b>	3 years parts and labor, including backlight / 2-day Advanced Exchange service	4 years parts and labor, including backlight / 2-day Advanced Exchange service	4 years parts and labor, including backlight / 2-day Advanced Exchange service	3 years parts and labor, including backlight / 2-day Advanced Exchange service	
<b>Technical Support</b>	M - F (7am - 7pm CST)	M - F (7am - 7pm CST)	M - F (7am - 7pm CST)	M - F (7am - 7pm CST)	



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