

Sun Ray™ Ultra-Thin Clients

A device for a new era.

Key feature highlights

- Sun Ray™ ultra-thin clients have no local processing, operating system, or applications to upgrade. All of these functions are handled at the server so that an upgrade for one is an upgrade for all.
- Each unit includes an integrated smart card reader, 10/100 Mbit Ethernet connection, four powered USB ports for connecting peripherals (can also be used for serial and parallel adapters), and audio and I/O connections. Sun Ray clients access the Solaris™ Operating System and Java™ technology, as well as the UNIX® platform, Microsoft Windows, and mainframe applications through Sun™ and third-party software.
- Up to 16 Sun Ray units may be combined to control separate applications on multiple screens with a single input device or, with XINERAMA, to span a single application across multiple screens.
- Sun Ray ultra-thin clients are compact, “plug-and-work” units that feature Sun’s Hot Desk technology. With Hot Desking, users’ sessions run on servers and are accessed through the use of either a smart card or user login. This unique feature brings flexibility and mobility to the user, enabling access to their session from any Sun Ray client in the server group.

Sun Ray™ ultra-thin clients process only keyboard input and screen output, leaving all of the application processing and storage to the server. The user is greeted with a rich, simple experience, while the administrator is rewarded with a centrally managed and reliable environment. Sun Ray ultra-thin clients are simple “plug-and-work,” zero administration devices, much like the telephone. And as such, they are completely stateless, meaning they are always on, readily accessible, and easily replaceable.

Reduce Complexity

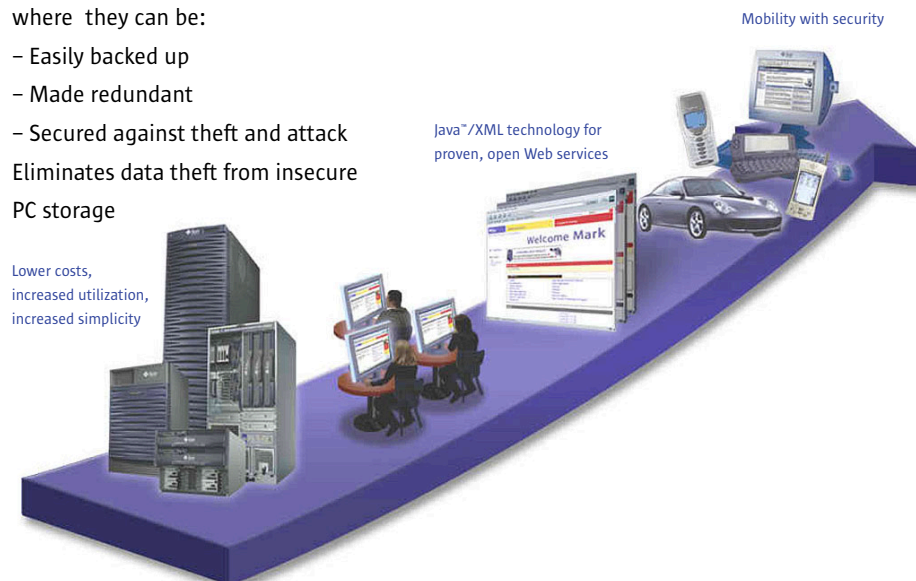
- Enables a few system administrators to manage thousands of desktops
- Allows thousands of desktops to be upgraded in hours
- Reduces desktop productivity licensing by a factor of 10
- Optimizes the user environment for the task

Improve Security

- Centralizes data and applications where they can be:
 - Easily backed up
 - Made redundant
 - Secured against theft and attack
- Eliminates data theft from insecure PC storage

Promote Mobility

- Enables user access to individual computing sessions
- Work any time from any desktop
- Enables a “work-from-anywhere” environment through centralization



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Sun Ray 1g

The Sun Ray 1g thin client ships without a monitor and is compatible with Sun's 17-inch, 19-inch, 21-inch, and 24-inch monitors or Sun's 18-inch flat panel display. It also supports standard VGA monitors commonly used with personal computers, enabling organizations to leverage existing IT investments.



Sun Ray 100

The Sun Ray 100 thin client integrates Sun Ray functionality into a 17-inch CRT display. The ultra-thin client design reduces the desktop system footprint, while simplifying cabling and setup. Users will notice a large, clear display with no bulky computer equipment on their desk, while administrators will benefit from the easy maintenance.



Sun Ray 150

The Sun Ray 150 thin client integrates Sun Ray functionality into a bright and clear 15-inch flat panel display. The display's compact design takes up little room on the desktop and is VESA compatible, allowing for wall or other mounting techniques.

The device comes with a built-in projector port that supports standard RGB projectors, which is especially useful for conference rooms, alleviating the need for presenters to bring their laptops or presentation equipment. And through Hot Desking, a presentation setup in an office can be accessed instantly from the conference room.

Specifications

Sun Ray 1g Ultra-Thin Client

Hardware

Graphics: 24-bit graphics; Up to 1920x1200 @ 75 Hz

Peripheral Interface: Four USB, powered

Networking: 10/100Base-T

Input Devices: Type 6 USB keyboard; USB mouse; Smart card reader

Audio: CD-quality audio in/out, microphone, headphone jacks

Monitor: Industry standard DVI/I connector supports Sun's monitors, including 17-in., 19-in., and 21-in.; Sun's 18-in. flat panel with included HD15 adapter; standard VGA compatible monitors

Smart card: ISO-7816-1 (smart card reader)

Adjustments: N/A

Dimensions

- Width: 102 mm (4 in.)
- Depth: 280 mm (11 in.)
- Height: 306 mm (12 in.)
- Weight: 1.8 kg (3.9 lb.)

Regulations

Meets or exceeds the following requirements:

- Safety: UL 1950/CSA C22.2, No. 950, CE Mark: EN 60950, CB scheme: IEC 950, w/Nordic Deviations to EMKO-TSE (74-SEC)
- Ergonomics: GS Mark: EN 29241-3, -7, -8 (ISO 9241-3, 7, 8), EKI 59-98 and EKI 60-98, BildscharbV A3, A5, A15, and A17
- EMC: EN55022 Class B; FCC CFR Title 47, Part 15, Subpart B, Class B; ICES-003 Class B; VCCI Class B; EN55024:1998 (CISPR24:1997)
- Power Management: EPA Energy Star Compliant

Environment

- Operating: 0°C to 35°C (32°F to 95°F), 5% to 93% RH, 3 km (10k ft.)
- Nonoperating: -20°C to 60°C(-4°F to 140°F), 5% to 93% RH, 12 km (39k ft.)

Power

- AC Power
- Power consumption: 100–240 VAC autoranging power supply, 50–60 Hz, 0.5A; Appliance power consumption 30W AC maximum, less than 20W typical

Acoustic Emissions

<3.5B, <28dBA (operator), ISO 9296

Software

Sun Ray server software:

- Authentication Manager, Session Manager, Group Manager, Administration Tools
- Requires Solaris 8 or 9 Operating System on Sun's SPARC® servers

Related Software: Sun Management Center, SunForum™ software

Sun Ray 100 Ultra-Thin Client

Hardware

Graphics: 24-bit graphics; 17-in. diagonal shadowmask CRT display with maximum 1280x1024 @ 75 Hz

Peripheral Interface: Four USB, powered

Networking: 10/100Base-T

Input Devices: Type 6 USB keyboard; USB mouse; Smart card reader

Audio: CD-quality audio in/out, microphone, headphone jacks

Monitor: Integrated 17-in. CRT, .26 dot pitch

Smart card: ISO-7816-1 (smart card reader)

Adjustments: Monitor tilt and swivel adjustment

Dimensions

- 417 mm (16.4 in.)
- 450 mm (17.7 in.)
- 467 mm (18.4 in.)
- 18 kg (39 lb.)

Regulations

Meets or exceeds the following requirements:

- Safety: UL 1950/CSA C22.2, No. 950, CE Mark: EN 60950, CB scheme: IEC 950, w/Nordic Deviations to EMKO-TSE (74-SEC)
- Ergonomics: GS Mark: EN 29241-3, -7, -8 (ISO 9241-3, 7, 8), EKI 59-98 and EKI 60-98, BildscharbV A3, A5, A15, and A17; TCO '99
- EMC: EN55022 Class B; FCC CFR Title 47, Part 15, Subpart B, Class B; ICES-003 Class B; VCCI Class B; EN55024:1998 (CISPR24:1997)
- Power Management: EPA Energy Star Compliant; TCO '99 Compliant

Environment

- Operating: 0°C to 35°C (32°F to 95°F), 5% to 93% RH, 3 km (10k ft.)
- Nonoperating: -20°C to 60°C(-4°F to 140°F), 5% to 93% RH, 12 km (39k ft.)

Power

- AC Power
- Power consumption: 100–240 VAC autoranging power supply, 50–60 Hz, 1.8A; System power consumption 110W AC maximum, 95W AC typical, 25W AC maximum in PowerSaver mode

Acoustic Emissions

<3.0B, <28dBA (operator), ISO 9296

Software

Sun Ray server software:

- Authentication Manager, Session Manager, Group Manager, Administration Tools
- Requires Solaris 8 or 9 Operating System on Sun's SPARC® servers

Related Software: Sun Management Center, SunForum™ software

Sun Ray 150 Ultra-Thin Client

Hardware

Graphics: 24-bit graphics; 15-in. TFT and LCD p/flat panel display with backlight system and 1024x768

Peripheral Interface: Four USB, powered; Support of RGB projector port (1024x768 @ 60 Hz)

Networking: 10/100Base-T

Input Devices: Type 6 USB keyboard; USB mouse; Smart card reader

Audio: CD-quality audio in/out, microphone, headphone jacks

Monitor: Integrated 15-in. TFT-LCD, .31 full pixel pitch

Smart card: ISO-7816-1 (smart card reader)

Adjustments: Monitor tilt and height adjustment; Removable support stand for wall mounting

Dimensions

- 429 mm (16.8 in.)
- 240 mm (9.4 in.)
- 405 mm to 450 mm (15.9 in. to 17.7 in.)
- 6 kg (13.4 lb.)

Regulations

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- Safety: UL 1950/CSA C22.2, No. 950, CE Mark: EN 60950, CB scheme: IEC 950, w/Nordic Deviations to EMKO-TSE (74-SEC)
- Ergonomics: GS Mark: EN 29241-3, -7, -8 (ISO 9241-3, 7, 8), EKI 59-98 and EKI 60-98, ISO 13406, BildscharbV A3, A5, A15, and A17; TCO '99
- EMC: EN55022 Class B; FCC CFR Title 47, Part 15, Subpart B, Class B; ICES-003 Class B; VCCI Class B; EN55024:1998 (CISPR24:1997)
- Power Management: EPA Energy Star Compliant; TCO '99 Compliant

Environment

- Operating: 0°C to 35°C (32°F to 95°F), 5% to 93% RH, 3 km (10k ft.)
- Nonoperating: -20°C to 60°C(-4°F to 140°F), 5% to 93% RH, 12 km (39k ft.)

Power

- AC Power
- Power consumption: 100–240 VAC autoranging power supply, 50–60 Hz, .5A; System power consumption 45W AC maximum, 30W AC typical, 15W AC maximum in PowerSaver mode

Acoustic Emissions

<3.0B, <28dBA (operator), ISO 9296

Software

Sun Ray server software:

- Authentication Manager, Session Manager, Group Manager, Administration Tools
- Requires Solaris 8 or 9 Operating System on Sun's SPARC® servers

Related Software: Sun Management Center, SunForum™ software

Sun Ray Ultra-Thin Clients

Features and Benefits

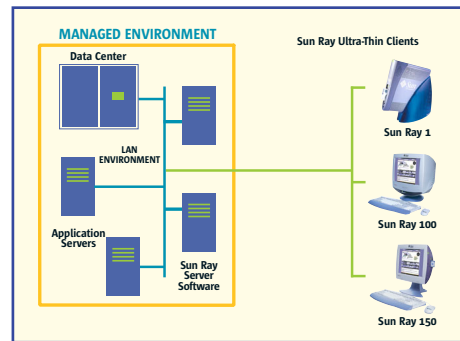
For IT Professionals:

- Eliminates maintenance at the desktop:
 - No operating system or software – eliminates all upgrades at the desktop
 - Stateless appliance
 - Simple “plug-and-work” set-up or replacement
 - Eliminates need to upgrade desktop resources to take advantage of new applications
 - Low power consumption
- Centralized management
- More efficient utilization of computing resources
- Load distribution and failover supported by server grouping
- Access to large number of applications running on the Solaris™ Operating System, Java™ technology, Microsoft Windows, other UNIX® platforms, and 3270/5250 environments
- Leverages Sun’s proven reliability, availability, and scalability

For Desktop Users:

- Enables access to user’s session from any Sun Ray ultra-thin client in the network
- No need for multiple systems on the desktop
- Quiet, reliable operation — no fan or moving parts
- Small-footprint desktop
- Instant “plug-and-work” features
- Delivers server class performance to the desktop
- Multimedia capable

Recommended Architecture:



Sun Ray Ultra-Thin Clients

The ultimate desktop client, Sun Ray ultra-thin clients are well-suited for workgroup environments, including customer relationship management solutions and call centers, education, government, financial services, hospitality, healthcare, and technical markets. Powered by Hot Desk technology, the Sun Ray ultra-thin client solution centralizes management, significantly lowers total cost of ownership, and maximizes access to computer services throughout the enterprise.

Learn More

Get the inside story on the trends and technologies shaping the future of computing by signing up for the Sun Inner Circle program. You'll receive a monthly newsletter packed with information on the latest innovations, plus access to a wealth of resources. Register today to join the Sun Inner Circle Program at sun.com/joinic.

To receive additional information on Sun software, products, programs, and solutions, visit sun.com/software.

For More Information

To purchase these or other products from the Sun™ Store, go to sun.com or contact an authorized Sun reseller in your area.

Features and Functionality

Feature	Sun Ray Ultra-Thin Client	Microsoft Windows PC	Microsoft Windows Terminal	Microsoft XTerminal
Multiplatform Access	●	●	●	●
Smart Card Session Mobility	●			
Multimedia Enabled	●	●		
Centralized Administration	●		●	●
No Client OS	●			
“Plug-and-work” Desktop	●			

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