

Sun Ray™ Ultra-Thin Clients

A desktop solution for the network era



The Sun Ray™ ultra-thin client is an affordable, secure, and simple solution for any organization that wants PC functionality without the PC complexity and vulnerability.

Zero-administration Sun Ray ultra-thin desktop clients enable access to applications on virtually any platform — the Solaris™ Operating System, Java™ technology, Linux, UNIX®, Microsoft Windows, AS/400, and mainframes. They differ from complex PCs and other thin clients because they have no local operating system (such as Windows XP Embedded or Windows CE) to manage and administer.

reduce the complexity and administration of the IT environment. Sun Ray Server Software provides automatic load balancing, optimizing performance by distributing sessions across the servers in the group. Load balancing takes into account each server's load and capacity (number and speed of its CPUs), so that larger or less heavily loaded servers bear more of the load.

Highlights

Affordable

- Manage thousands of desktops with fewer system administrators
- Virtually eliminate costs of client virus attacks

Simple

- Leverage investment in back-end infrastructure by accessing many application platforms
- Upgrade thousands of desktops in days, not months

Secure

- Centralize data and applications for easier back up and enhanced security
- Protect intellectual property by eliminating insecure storage, removable media

Mobile

- Hot Desk from office to conference room to home
- Work-from-anywhere access

The Sun Ray architecture consists of two components: the Sun Ray ultra-thin client and Sun Ray Server Software.

The Sun Ray ultra-thin client is a simple, low-power, low-cost device that requires no desktop administration. Unlike complex Microsoft Windows- or Embedded Linux-based thin clients and PCs, Sun Ray ultra-thin clients do not need to be upgraded when new applications are introduced or more computing power is required. Users can access their sessions from any Sun Ray ultra-thin client on the Local Area Network (LAN) or Wide Area Network (WAN). With a smart card, a user simply inserts it into any available Sun Ray ultra-thin client and instantaneously accesses an existing session.

Sun Ray Server Software provides user authentication and encryption between server and client, as well as user session management. It not only enhances security, but also helps



Sun Ray 1g

The Sun Ray 1g system is the only thin client that supports resolutions up to 1920x1200 (24-inch displays). It ships without a monitor and is compatible with Sun's monitors as well as standard Video Graphics Array (VGA) or Digital Video Interface (DVI) monitors, enabling organizations to leverage existing IT investments.



Sun Ray 170

The Sun Ray 170 ultra-thin client integrates Sun Ray functionality with a 17-inch, flat-panel display for a sleek and elegant design. The compact design is perfect for tight desktop spaces, and with four USB and two serial ports, the Sun Ray 170 ultra-thin client is ideal for situations that require legacy peripherals. The addition of a projector port makes this unit the right choice for conference rooms as well, allowing presenters to bring just a smart card rather than a laptop. The Sun Ray 170 client also includes an additional port for PC displays.

Sun Ray Server Software 3.1

Sun Ray Server Software is available on both the Solaris and Linux platforms, and enables the centralization of desktop applications. With built-in failover and load balancing capabilities, plus an easy-to-use, Web-based, Graphical User Interface (GUI), it simplifies desktop management.

Features and benefits

For IT professionals:

- Eliminate maintenance at the desktop
- No operating system or software to upgrade at the desktop
- Simple “plug-and-work” setup or replacement

- No memory upgrades at the desktop for new applications
- Low power consumption
- Centralized desktop management
- More efficient utilization of computing resources
- Access to virtually any application: Solaris OS, Linux, Java technology, Microsoft Windows, 3270/5250, or other UNIX software
- Proven technology backed by Sun’s support and services

For desktop users:

- Instant access to a customized compute environment from any Sun Ray client on the network (LAN or WAN)
- Seamlessly integrated applications from Microsoft Windows to mainframes
- Quiet, reliable operation — no fan or moving parts
- Small desktop footprint

System Requirements

Sun Ray 1g ultra-thin client

Hardware

- Graphics: 24-bit graphics; up to 1920x1200 resolution @ 75 Hz
- Peripheral interface: Four USB ports, powered
- Networking: 10/100Base-T
- Input devices: Universal Serial Bus (USB) keyboard; USB mouse; smart card reader
- Audio: CD-quality audio in/out; microphone; headphone jacks
- Monitor: Industry-standard Digital Video Interface (DVI-I) connector supports Sun™ monitors, 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
- System power consumption: 30W AC maximum, less than 20W typical acoustic

 Emissions

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

Sun Ray 170 ultra-thin client

 Hardware

- Graphics: 24-bit graphics; 17-inch Thin Film Transistor (TFT) and Liquid Crystal Display (LCD) flat-panel display; up to 1280x1024 resolution maximum @ 75 Hz
- Peripheral interface: Four USB ports, powered; two serial ports; one RGB projector port; one port (DB15) for display input
- Networking: 10/100 Base-T
- Input devices: USB keyboard; USB mouse; smart card reader ISO-7816-1
- Audio: CD-quality audio in/out; microphone; headphone jacks
- Monitor: Integrated 17-inch TFT and LCD flat-panel display
- Adjustments: Monitor tilt; height

 Dimensions

- Width: 376.7 mm (14.8 in.)
- Depth: 211.4 mm (8.3 in.)
- Height: 406.8 mm (16 in.)
- Weight: 6.3 kg (13.9 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; 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.)

Sun Ray™ Ultra-Thin Clients

Power

- AC power
- Power consumption: 100-240 VAC auto-ranging power supply, 47-63 Hz, 1.8A
- System power consumption: 63W AC maximum, 40W AC typical

Acoustic emissions

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

Sun Ray Server Software 3.1

Minimum supported configuration:

- Server based on UltraSPARC® or x86 processors (Two or more CPUs recommended)
- Disk Space: 95 MB for installation; 50-100 MB per-user swap space
- Memory: 20-50 MB per user depending on applications
- At least one Ethernet interface installed on the Sun Ray server
- Sun Ray 1/1g, Sun Ray 100, Sun Ray 150, or Sun Ray 170 ultra-thin clients
- Monitor, keyboard, and mouse for each Sun Ray 1/1g, or keyboard and mouse for each Sun Ray 170 ultra-thin client
- Smart cards (optional)

Operating systems:

For UltraSPARC™ based servers:

- Solaris 8, 9, and 10 OS, Trusted Solaris™ 8 OS

For x86 based servers:

- Solaris 10 OS
- Sun Java Desktop System, Release 2
- Red Hat Enterprise Linux AS 3 (for 32-bit x86 systems)
- SUSE LINUX Enterprise Server 8, Service Pack 3 (for 32-bit, x86 systems)

Supported Languages:

- English, French, German, Japanese, Korean, Spanish, Simplified Chinese, Traditional Chinese

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, plus access to a wealth of resources. Register today at sun.com/joinic.