AMD Embedded Solutions

AMD Thin Client Solutions:

AMD Discrete Graphics
AMD Embedded Radeon™ Graphics
AMD Radeon™ Pro Graphics
for enhanced graphics and compute

AMD Embedded SOCs
AMD Ryzen™ Embedded V-Series and R-Series SOCs
optimized for exceptional, power-efficient processing and graphics performance with integrated CPU and GPU, multi-display support and advanced features

AMD Ryzen™ Embedded Series
processors target the emerging category of mobile thin clients with an optimal balance of portability and cloud accessibility.

Target Industries:

HEALTHCARE

FINANCE

GOVERNMENT

RETAIL

EDUCATION

Application Brief: AMD Thin Client

Thin Client Solutions Drive Workflow and Cost Efficiencies, with Uncompromising Multimedia Processing Performance

The evolution to cloud computing and virtual desktop infrastructure (VDI) has transformed the way data is stored, managed and accessed, accelerating the transition from legacy desktop PCs to thin clients across a wide range of use cases spanning healthcare, finance, government, retail, education and beyond. With increasing amounts of data and applications now residing in the cloud, thin clients enable secure "anytime, anywhere" access flexibility, with management and cost efficiencies that are hard to achieve with individually administered desktop PCs.

These benefits extend from traditional thin client environments to a new generation of mobile thin clients that offer the very same advantages to an increasingly hybrid and mobile workforce. Ultra-compact, power efficient mobile thin clients are designed for ease of portability with fast, flexible and secure accessibility to cloud applications.

Thin clients powered by AMD Ryzen™ Embedded V-Series and R-Series SoCs deliver high performance compute and graphics processing, multi-display configurability, enhanced power efficiency, and 4K HD video support. Delivering PC-caliber user experiences with an attractive total cost of ownership (TCO), Thin clients powered by AMD can increase workforce productivity for end users and IT administrators alike.

Thin Client Benefits:

Fast, Flexible Access
Thin clients provide users with credential-verified access to data and applications in the cloud, regardless of the system they're using. They're ideal for environments where users share multiple systems, and also for mobile usage by a hybrid workforce.

Ease of Management
Centralized, cloud-based data storage and administration precludes the need to configure, manage and backup individual PCs – cumbersome processes that consume valuable IT resources.

Energy Efficiency
Thin clients can be more energy efficient than desktops due to lower system power footprints, conserving energy at the device level which then ripples throughout the thin client network. Mobile thin clients can be optimized for low power consumption to enable longer uptime between charges.

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Security and Protection
With thin clients, all data is stored and protected centrally, helping minimize the risk of data loss and/or malicious data tampering and theft at the device level.

Regulatory Compliance
Thin clients are inherently easier than PCs to configure and update as regulatory mandates evolve – patches and updates are applied directly to the cloud or other centralized infrastructure, and automatically propagated to virtual desktops.

Reliability
Thin clients are typically fanless and do not have local hard disk drives, thereby minimizing moving parts that can fail and cause additional maintenance costs – industry reports state that on average, thin clients can last 2-3X longer than conventional desktop PCs.[1]

Ease of Deployment
Simplified, remotely-administered configuration and set up makes thin client deployment virtually effortless, and their compact form factors enable a wide range of configurations in space-constrained environments. Mobile thin clients enable on-the-go workforce flexibility and ease of portability.

The AMD Embedded Advantage:

AMD Embedded SoCs set the standard for performance and energy efficiency for thin clients targeting healthcare, finance, government, retail, and education applications. Organizations of all sizes can take advantage of Thin clients powered by AMD to help optimize workflow efficiency, improve data security capabilities and lower their operational costs for a more mobile, hybrid workforce.

AMD Embedded SoCs are available in a wide range of performance, power and security capabilities, and are renowned for their graphics processing capabilities. Supporting multi-display configurability, with 4K video support, AMD-based thin clients equip users with rich multimedia capabilities that rival conventional desktop PCs.

Key AMD Benefits:

4K Multimedia Performance
Full 4K support at 60Hz enables exceptional video and graphics quality, with hardware acceleration for 4K video leveraging video codecs like HEVC/H.265, VP9 and others[2], with support for multiple video streams. Ultra-high-resolution graphics enable large amounts of data to be displayed onscreen without compromising visual clarity or straining the eyes.

Optimal Performance and Power Profiles, in Small Form Factors
AMD Embedded SoCs provide single-chip CPU, GPU and I/O controller integration, and are available in a wide range of performance and thermal design power (TDP) profiles, helping designers achieve optimal performance-per-watt and enabling myriad deployment and configuration possibilities that can reduce system hardware footprints.

Multi-display Configurability
AMD Embedded SoCs enable designers to create a wide range of display configurations, allowing the display of different content on separate screens or the spanning of content across multiple screens in a number of different configurations in formats including DisplayPort™ 1.2, HDMI™, DVI and LVDS. A single AMD Ryzen™ Embedded V-Series SoC can power up to four independent displays in brilliant 4K resolution.

x86 Ecosystem Compatibility
AMD Embedded SoCs enable broad software support spanning VMware®, Citrix®, Windows®, Linux® and other platforms. Multithread processingfor VDI and cloud-based infrastructure helps ensure enhanced computing efficiency.

Scalable Solutions
AMD Embedded solutions enable a range of performance, power, and multi-display options for low-end, midrange, and high-end product designs, with pin compatible options and software stack compatibility for streamlined design cycles and low development costs.

Expansive I/O Options
AMD Embedded SoCs provide robust support for new and established interconnects, including PCIe®, GbE, USB-C®, and NVMe™.

Advanced Security
AMD Embedded processors feature an independent on-chip AMD Secure Processor designed to enable secure Hardware Validated Boot capabilities that help ensure systems are booted from trusted software, plus advanced capabilities including Memory Guard for defending against unauthorized memory access. Available with select AMD Embedded processing solutions, a one-time programmable key capability allows customers to manage their own encryption keys.

AMD.com/embedded

1. "Think green, think thin: Green IT saves energy and money" white paper. https://static.acer.com/up/Resource/Acer/Professional/Vertical%20Segmentation/How%20We%20Can%20Help/Documents/20130425/government_HWCH_GreenIT_Whitepaper.pdf#_ga=1.160212541.1844607993.1488298907

2. Some AMD security features must be enabled by system OEMs to operate. Check with your OEM to confirm support of these features.

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