

Cisco UCS 82598KR-CI 10 Gigabit Ethernet Adapter



Cisco Unified Computing System Overview

The Cisco® Unified Computing System is a next-generation data center platform that unites compute, network, storage access, and virtualization into a cohesive system designed to reduce total cost of ownership (TCO) and increase business agility. The system integrates a low-latency, lossless 10 Gigabit Ethernet unified network fabric with enterprise-class, x86-architecture servers. The system is an integrated, scalable, multichassis platform in which all resources participate in a unified management domain.

Product Overview

The Cisco UCS 82598KR-CI 10 Gigabit Ethernet Adapter is a mezzanine card designed for use with Cisco UCS B-Series Blade Servers as part of the Cisco Unified Computing System (Figure 1). The adapter is based on the Intel 82598 10 Gigabit Ethernet controller, which is designed for efficient high-performance Ethernet transport.

Figure 1. Cisco UCS 82598KR-CI 10 Gigabit Ethernet Adapter



Features and Benefits

The Cisco UCS 82598KR-CI provides a solution for data center environments that need low-latency 10 Gigabit Ethernet transport capability. Designed specifically for the Cisco UCS blades, the adapter provides a dual-port connection to the midplane of the blade server chassis (Figure 2).

The Cisco UCS 82598KR-CI supports Intel Input/Output Acceleration Technology (I/OAT) as well as virtual queues for I/O virtualization. The adapter is energy efficient and can also help reduce CPU utilization by providing large segment offload (LSO) and TCP segmentation offload (TSO). The Cisco UCS 82598KR-CI uses Intel Virtual Machine Device Queue (VMDq) technology for the efficient routing of packets to the appropriate virtual machine.

Figure 2. The Cisco UCS 82598KR-CI

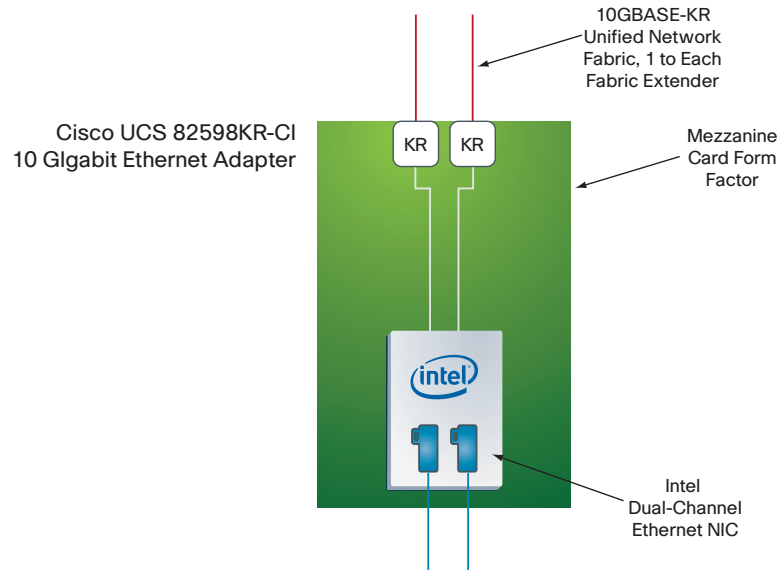


Table 1 summarizes the features and benefits of the Cisco UCS 82598KR-CI.

Table 1. Features and Benefits

Feature	Benefit
PCIe x8, Intel Virtualization Technology for Connectivity (VT-c) and I/OAT	An industry-standard, low-latency Ethernet card with broad support for virtualized and nonvirtualized environments
Support for up to 16 virtual device queues with MAC address and IEEE 802.1q sorting VMDq support	Allows up to 16 virtual machines to access the same card with built-in prioritization and quality of service (QoS)
Priority grouping (IEEE 802.1P)	Improves performance and reduces congestion
Enhanced I/O	Allows up to 32 queues per card on a dual-port card
Preboot execution environment (PXE) boot	Faster provisioning of compute nodes

Platform Support and Compatibility

The Cisco UCS 82598KR-CI is designed specifically for Cisco UCS blades and works in a dedicated environment with Cisco UCS Manager.

Table 2 summarizes the specifications for the Cisco UCS 82598KR-CI.

Table 2. Product Specifications

Item	Specification
Standards	10-Gbps Ethernet, IEEE 802.3ae (XAUI), IEEE 802.3, IEEE 802.1Q (VLAN), IEEE 802.1p, 1000BASE-BX, and jumbo frames up to 16 KB
Components	Intel 82598
Ports	2x 10 Gigabit Ethernet mezzanine connectors
Connectivity	1000BASE-BX, KR, Cisco Unified Computing System midplane
Memory	Receive buffer: 512 KB Transmit buffer: 320 KB
Performance	Latency 10 to 12 microseconds
Network management	Cisco UCS Manager v1.0.1 and host-based management
Network (or programming or other) interfaces	2x 10 Gigabit Ethernet
Physical dimensions	Length = 7.25 in. (18.4 cm) Width = 3.65 in. (9.3 cm)
Typical power	13 watts (W)
Inlet operating temperature range	50 to 95°F (10 to 35°C)

System Requirements

The Cisco UCS 82598KR-CI is designed to be used only on Cisco UCS B-Series Blade Servers. Each Cisco UCS B200 M1 2-Socket Blade Server can support one mezzanine adapter, and each Cisco UCS B250 M1 2-Socket Extended Memory Blade Server can support two adapters. The adapters are not designed or intended for other purposes.

Warranty Information

Find warranty information at Cisco.com on the [Product Warranties](#) page.

Cisco Unified Computing Services

Using a unified view of data center resources, Cisco and our industry-leading partners deliver services that accelerate your transition to a unified computing architecture. Cisco Unified Computing Services help you quickly deploy your data center resources, simplify ongoing operations, and optimize your infrastructure to better meet your business needs. For more information about these and other Cisco Data Center Services, visit <http://www.cisco.com/go/unifiedcomputingservices>.

Why Cisco?

The Cisco Unified Computing System continues Cisco's long history of innovation in delivering integrated systems for improved business results based on industry standards and using the network as the platform. Recent examples include IP telephony, LAN switching, unified communications, and unified I/O. Cisco began the unified computing phase of our Data Center 3.0 strategy several years ago by assembling an experienced team from the computing and virtualization industries to augment our own networking and storage access expertise. As a result, Cisco delivered foundational technologies, including the Cisco Nexus™ Family, supporting unified fabric and server virtualization. The Cisco Unified Computing System completes this phase, delivering innovation in architecture, technology, partnerships, and services. Cisco is well-positioned to deliver this innovation by taking a systems approach to computing that unifies

network intelligence and scalability with innovative ASICs, integrated management, and standard computing components.

For More Information

For more information about the Cisco UCS 82598KR-CI 10 Gigabit Ethernet Adapter, visit <http://www.cisco.com/en/US/products/ps10265/index.html> or contact your local Cisco representative.



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