PRODUCT BRIEF
Intel® Ethernet Controller I217
Network Connectivity/Ethernet Controllers

Intel® Ethernet Controller I217

High-performance gigabit network connectivity with support for Intel® vPro™ technology.

Overview

The Intel® Ethernet Controller I217 provides compact, single-port integrated physical layer devices that connect to the Intel® C220 Series Chipset and the network. The Intel® Ethernet Controller I217 is a gigabit copper networking component for mobile, desktop, workstation, and value-server designs that have critical space and power constraints.

Key Details

Design is Highly Compatible with the Intel® 82579 GbE Controller

The Intel® Ethernet Controller I217 is highly compatible with the Intel® 82579 GbE Controller, making new designs easy to generate while gaining the improvements of features now available on the Intel® Ethernet Controller I217.

Simplified Installation and Maintenance: The Intel® Ethernet Controller I217 also supports the Intel Stable Image Platform Program (SIPP), which provides system image stability (both hardware and software) and consistency for at least 12 months from the product launch date, helping IT better manage their client environment.

Performance-Enhancing Features: The Intel® Ethernet Controller I217 includes advanced interrupt-handling features to reduce CPU overheard. Other performance-enhancing features include offloading TCP/UDP (for both IPv4 and IPv6) checksum calculations and performing TCP segmentation. Advanced features such as Jumbo Frame support for extra-large packets and Receive Side Scaling are also supported.

Reduced Power and Energy Savings: With the addition of platform low power management support and the addition of a pin that will wake the Intel® Ethernet Controller I217 from low-power states, the Intel® Ethernet Controller I217 reduces power requirements, leading to energy savings.

Besides the savings from working with the platform power management feature, the Intel® Ethernet Controller I217 reduces the power consumption in all power states compared to previous generations of Intel controllers. While in active-idle, Intel® has implemented Energy Efficient Ethernet (EEE)[1], a new IEEE* standard. With EEE, Intel has reduced the idle power of the gigabit link from about 500 mW to just over 50 mW, providing a significant energy savings. For mobile designs, Intel's Auto Connect Battery Saver (ACBS) can help reduce the cable-disconnected power of the chip to about 30 mW while still maintaining full functionality. It also supports advanced link downshifting capabilities to provide additional power headroom for system regulatory compliance (such as Energy Star*) by lowering the link speed under certain conditions to save power.

Single-pin LAN disable enables easier BIOS implementation and Low-power Link-up (LPLU) enables the system to stay in low-power modes until a link is required.

Flexible, Low-Cost System Design: The Intel® Ethernet Controller I217 provides a small package (6 mm x 6 mm) networking option for convenient board layout. The Intel® Ethernet Controller I217 has an integrated switching voltage regulator (iSVR), removing the need for an external regulator and reducing both the overall cost and the board space required. Additionally, the Intel® Ethernet Controller I217 further helps to reduce board space requirements by using a shared FLASH design. Finally, low thermal design power (TDP) helps improve board placement flexibility.

Environmentally friendly design: The Intel® Ethernet Controller I217 family of products are all lead free[3] and halogen free[4] in their silicon and package design to reduce the potential for environmental impact.

Comparison of Controller Features

Features	I217V	I217LM
10 Base T (IEEE 802.3 specification conformance)	✓	✓
100 Base TX (IEEE 802.3 specification conformance)	✓	✓
1000 Base T (IEEE 802.3 specification conformance)	✓	✓
Auto-Negotiation (IEEE 802.3u)	✓	✓
Intel® vPro™ [2] technology		✓
Intel® Stable Image Platform Program (SIPP)		✓
Intel® Standard Manageablity	✓	✓
Power optimizer platform low-power management systems	✓	✓
Energy Efficient Ethernet[1] (IEEE 802.3az)	✓	✓
iSCSI Boot Support		✓
TCP/UDP checksum and segmentation offload (IPv4 and IPv6)	✓	✓
Receive Side Scaling	✓	✓
Dual TX and RX queues	✓	✓
Jumbo Frames (up to 9K)	✓	✓
Teaming	✓	✓
Integrated Auto Connect Battery Saver (ACBS) battery savings	✓	✓
Timing and Synchronization (802.1as / 1588)	✓	✓
Integrated Switched Voltage Regulator (iSVR)	✓	✓
Shared FLASH with system BIOS	✓	✓
Wake from Deep Sx	✓	✓
Server OS support		✓
Network proxy/ARP support	✓	✓

For more information on the Intel® Ethernet Controller I217, please visit **www.intel.com/go/connectivity.**

Component Summary

CONTROLLER[Δ]	DISTINGUISHING FEATURES	ORDER CODES
Intel® Ethernet Controller I217LM	▪ Corporate LAN product with support for Intel® vPro™ technology, Intel® AMT[2], Energy Efficient Ethernet (802.3AZ)[1], Intel® SIPP, iSCSI Boot, Server OS support. ▪ Intended for mobile, desktop, workstation, entry server and embedded designs.	WGI217LM
Intel® Ethernet Controller I217V	▪ Consumer LAN product with support for Energy Efficient Ethernet (802.3AZ)[1], Intel® Standard Manageablity, ACBS and standard Gigabit networking features ▪ Intended for mobile, desktop, and embedded design	WGI217V

1 Energy Efficient Ethernet (EEE) low-power idle requires that both link partners support IEEE802.3az.

2 Intel® Active Management Technology (AMT) requires specific Intel chipsets in addition to the Intel networking component. Intel Standard Manageability requires specific Intel chipsets in addition to the Intel networking component.

3 Lead has not been intentionally added, but lead may still exist as an impurity below 1000 ppm.

4 Lead and other materials banned in the RoHS Directive are either: (1) below all applicable substance thresholds as proposed by the EU or (2) an approved/pending exemption applies.

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