PRODUCT BRIEF
Intel® Ethernet Connection I218
Network Connectivity/Ethernet Connnections

Intel® Ethernet Connection I218

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

Overview

The Intel® Ethernet Connection I218 provides compact, single-port integrated physical layer devices that connect to the Intel® 8/C220 Series and follow on chipsets. The Intel® Ethernet Connection I218 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® I217 Ethernet Connection: The Intel® Ethernet Connection I218 is highly compatible with the Intel® Ethernet Connection I217, making new designs easy to generate while gaining the improvements of features now available on the Intel® Ethernet Controller I218.

Simplified Installation and Maintenance: The Intel® Ethernet Connection I218 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 Connection I218 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 (RSS) 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 Connection I218 from low-power states, the Intel® Ethernet Connection I218 reduces power requirements, leading to energy savings.

Besides the savings from working with the platform power management feature, the Intel® Ethernet Connection I218 reduces the power consumption in all power states compared to previous generations of Intel connections. 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. 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.

Additionally the Intel® Ethernet Connection I218 also adds additional wake-up flexibility to enable better power management in IT environments.

The 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 Connection I218 provides a small package (6 mm x 6 mm) networking option for convenient board layout. The Intel® Ethernet Connection I218 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 Connection I218 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 Connection I218 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 Connection Features

Features	I218V	I218LM
10BASE-T (IEEE 802.3 specification conformance)	✓	✓
100BASE-TX (IEEE 802.3 specification conformance)	✓	✓
1000BASE-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)	✓	✓
Support for IPv4 and IPv6 compliant networking, as well as TCP/UDP checksum and segmentation offload (IPv4 and IPv6)	✓	✓
Receive Side Scaling	✓	✓
Dual Tx and Rx queues	✓	✓
Jumbo Frames (up to 9 KB)	✓	✓
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 operating system support		✓
Network proxy/ARP support	✓	✓
32 wake filter support	✓	✓

For more information on the Intel® Ethernet Connection I218, please visit **www.intel.com/go/Ethernet**

Component Summary

CONTROLLER[Δ]	DISTINGUISHING FEATURES	ORDER CODES
Intel® Ethernet Connection I2189LM	• Corporate LAN product with support for Intel® vPro™ technology, Intel® AMT[2], Energy Efficient Ethernet (802.3az)[1], Intel® SIPP, Server operating system support, ACBS and standard gigabit networking features. • Intended for mobile, desktop, workstation, entry server and embedded designs.	WGI218LM
Intel® Ethernet Connection I218V	• Consumer LAN product with support for Energy Efficient Ethernet (802.3az)[1], ACBS and standard gigabit networking features. • Intended for mobile, desktop, and embedded designs.	WGI218V

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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