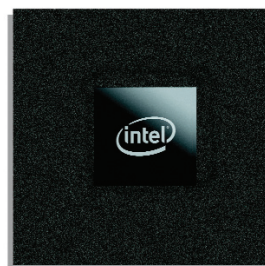# Intel® 82566 Gigabit Network Connections

High-performance Gigabit Network Connectivity with support for Intel® vPro™ technology and Intel® Viiv™ technology

- Intel® 82566DM/DC Gigabit Network Connections are for desktop platforms

- Intel® 82566MM/MC Gigabit Network Connections are for mobile platforms

- High-performing, PCI Express*-based Gigabit Ethernet connection

- Flexible board design options via shared LAN and BIOS Flash storage, 10/100 footprint compatibility (with the Intel® 82562V 10/100 Network Connection) and integrated voltage regulation circuitry

- High quality and reliability with Intel's world-class manufacturing and validation

- Simple installation and maintenance with Intel® SingleDriver™ technology and Intel® Stable Image Platform Program (SIPP)

- Supports Intel® Active Management Technology^ (Intel® AMT) and Intel® Virtualization Technology† (Intel 82566DM/MM only)

- Supports Intel® Viiv™ technology-based software and applications (Intel 82566DC only) for simple network setup and content sharing

- Enables improved battery life with additional features (Intel 82566MM/MC only); Intel® Auto Connect Battery Saver and reduced link speed when in battery mode

Overview

The Intel® 82566 Gigabit Ethernet Connections are compact, single-port integrated physical layer devices that connect to appropriate Intel® chipsets with an integrated Media Access Controller (MAC). The Intel 82566 Network Connections are copper networking components for desktop, mobile, work station, and basic-needs server designs with critical space constraints. The 82566DM/MM supports Intel AMT with System Defense to help IT better discover, heal and protect their PCs. The 82566DM/MM also supports Intel Virtualization Technology through the Intel® Virtual Gigabit Network Connection. The 82566DM/MM can also support legacy ASF2.0. The 82566DC supports Intel Viiv technology and the associated software and applications.

- **Flexible, low-cost system design:** The Intel 82566 network components provide a small-package (10x10 mm) networking option for convenient board layout. Additionally, the 82566 network components are designed to be footprint compatible with the Intel 82562V 10/100 Network Connection so that single-board designs can accommodate both Gigabit and 10/100 networking options. Also, to reduce the system BOM cost and space, the 82566 supports an integrated linear voltage regulator.

- **Intel® business client features:** The Intel 82566DM/MM are a key platform ingredient for enabling Intel® vPro™ technology, by providing always-available network connectivity and hardware filters. Intel vPro technology provides built-in manageability, strengthened security and energy-efficient performance. Intel vPro technology is also supported by a wide range of leading software vendors.

Component Summary

Controller	Distinguishing Feature	Order Code
82566DM	Support for Intel® vPro™ technology, ASF2.0 and enhanced performance features	RU82566DM
82566DC	Support for Intel® Viiv™ techology-based software and applications for the digital home	RU82566DC
82566MM	Support for Intel® vPro™ technology, ASF2.0 and enhanced performance features Improved battery savings features: • Intel® Auto Connect Battery Saver • Reduced link speed on battery	RU82566MM
82566MC	Support for Intel® Viiv™ software stack and applications for the digital home Improved battery savings features: • Intel Auto Connect Battery Saver • Reduced link speed on battery	RU82566MC

Feature Summary

Feature/Capability	82566 DM	82566 DC	82566 MM	82566 MC
Intel® vPro™ technology	▪		▪	
Intel® Viiv™ technology		▪		
Intel® Stable Image Platform Program (SIPP)	▪		▪	
ASF2.0	▪		▪	
Shared SPI Flash with system BIOS	▪	▪	▪	▪
Integrated linear voltage regulator	▪	▪	▪	▪
TCP/UDP checksum and segmentation offload (IPv4 and IPv6)	▪	▪	▪	▪
Receive side scaling	▪		▪	
Dual TX and RX queues	▪		▪	
Footprint compatible with the 10/100 82562V	▪	▪	▪	▪
802.1p and 802.1q	▪	▪	▪	▪
Intel® Auto Connect Battery Saver			▪	▪
Reduced link speed in battery mode			▪	▪

Overview, continued

- **Intel® digital home features:** Intel® 82566DC/MC Network Connection is a key ingredient for enabling Intel Viiv technology platforms. The 82566DC/MC has been validated with all Intel Viiv software and usage models to ensure seamless performance. The 82566DC/MC helps to enable the Intel® Viiv™ Network Management Software and Intel® Quick Resume Technology. Intel® 82566MC uniquely supports Intel® Viiv™ software stack to enhance the digital home network experience with Intel® Viiv™ platforms.

- **Performance-enhancing features:** Each of the Intel 82566 network components include 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. In addition, the 82566DM/MM supports two transmit and receive queues, and receive side scaling (Vista* ready).

- **Simplified installation and maintenance:** The Intel 82566 network components are supported by Intel SingleDriver technology, which allows one driver to work for all Intel® Gigabit Network Connections. Intel SingleDriver technology simplifies network connection installation, management, and maintenance. In addition to the SingleDriver technology, the 82566DM/MM also supports the Intel® SIPP, which guarantees that system images (both hardware and software) will remain consistent for 15 months from the launch date.

- **Improved Battery Savings:** The 82566MM/MC enables improved battery-life savings with:

  – Intel Auto Connect Battery Saver preserves battery when not connected to wired LAN and shuts off the PHY when no LAN cable is present and then automatically links when cable is re-inserted.

  – Reduced link speed in battery mode improves battery life when unplugged from AC power and downgrades speed to save power when using battery, it will link at highest speed when plugged into AC outlet.

Specifications: Intel® 82566DM/DC/MM/MC Gigabit Network Connections

Electrical	Power supply	3.3 V, 1.8 V, 1.0 V
	Typical targeted power dissipation	1.16 W at 1000 Mbps active
Packaging	Operating temperature	0° C to 70° C (maximum); simplified thermal design
	Storage temperature	–40° C to 125° C
	Package type	Lead-free[1] 81-pin BGA, 1.0 mm ball pitch, 10x10 mm (simplifies LOM board designs)
	RoHS[2]	Intel® 82566 conforms to the European Union's Restrictions on the use of Hazardous Substances (RoHs)

For more information, contact your Intel sales representative.