



Intel® Ethernet Controller X540 Feature Software Support Summary

LAN Access Division (LAD)

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Revisions

Date	Revision	Description
March 2012	1.0	Initial release (Intel Public).



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1. Intel® Ethernet Controller X540 Driver SW Release 16.6

The following tables detail feature and operating system support provided by driver **SW release 16.6**.

Note that the feature set for silicon does not change with every software release. A summary of changes contained in individual document revisions is provided in this document's revision history.

Table 1. Feature Support

Features	Windows* inf name: IXT	Linux* Driver name: ixgbe
Link Mode: Copper	10GBASE-T, 1000BASE-T, and 100BASE-TX (full duplex only for all speeds)	10GBASE-T, 1000BASE-T, and 100BASE-TX (full duplex only for all speeds)
Link Flow Control	Yes	Yes
Priority Flow Control	Yes	Yes
Checksum Offload	Yes (IPv4/IPv6,TCP,UDP,TX/RX)	Yes (IPv4/IPv6,TCP,UDP,TX/RX)
Large Send Offload (TSO)	Yes (up to 64 KB)	Yes (up to 64 KB)
SCTP Receive and Transmit Checksum Offload	No	Yes
Interrupt Moderation	Yes	Yes
Message Signaled Interrupts (MSI)	Yes	Yes
Message Signaled Interrupts (MSI-X)	Yes	Yes
IPSec	Yes	No
Header Data Split	Yes	Yes
Jumbo Packet	Yes	Yes
Receive Side Scaling (RSS)	Yes	Yes
RSS Receive Queues	16	16
OS2BMC	Yes	Yes
Management Controller Transport Protocols (MTCP)	Yes	Yes
Wake from S3/S4/S5 (WoL) ¹	Yes (device dependent)	Yes (device dependent)
Teaming	Yes	No (supported by channel bonding in kernel)

**Table 1. Feature Support (Continued)**

Features	Windows* inf name: IXT	Linux* Driver name: ixgbe
Virtualization: Single Root-IO (SR-IOV) PCI-Special Interest Group (PCI-SIG) Virtual Machine Device Queues (VMDq)	Yes Yes Yes	Yes Yes Yes
Unified Networking: Data Center Bridging (DCB) Fiber Channel over Ethernet (FCoE)	Yes Yes	Yes Yes
Receive Side Coalescing (RSC)	No	Yes
Time SYNC (IEEE 1588 and 802.1AS)	No	No
Temperature Thermal Sensors Logging	Yes	Yes
MACsec	No	No
Flow Director (FD)	No	Yes
Low Latency Interrupts (LLI)	Yes	Yes
Yes = Support provide in the driver		
No = No support provided in the driver		
N/A = Not supported in X540 silicon		

1. Requires a special NVM/EEPROM to support.

Table 2. X540 Software Support (Operating System Support)

Operating System	IA32	X64	IPF ¹
Windows XP Professional SP3	No	No	N/A
Windows Vista SP2	Yes	Yes	N/A
Windows 7	Yes	Yes	N/A
Windows Server 2003 SP2	Yes	Yes	Yes
Windows Server 2008 SP2	Yes	Yes	Yes
Windows Server 2008 SP2 Core	Yes	Yes	N/A

**Table 2. X540 Software Support (Operating System Support) (Continued)**

Windows Server 2008 SP2 (with Hyper-V role)	N/A	Yes	N/A
Operating System	IA32	X64	IPF ¹
Hyper-V Server 2008 SP2	N/A	Yes	N/A
Windows Server 2008 R2	N/A	Yes	Yes
Windows Server 2008 R2 Core	N/A	Yes	Yes
Windows Server 2008 R2 (with Hyper-V role)	N/A	Yes	N/A
Hyper-V Server 2008 R2	N/A	Yes	N/A
Linux Stable Kernel version 2.6 (driver is in kernel with version 2.6.36): Linux RHEL 5.6 - 2.6.18-194.el5 Linux RHEL 6.1 - 2.6.32.131.0.15.el6 Linux SLES 10 SP4 - 2.6.16.60-0.85.1 Linux SLES 11 SP1 - 2.6.32.12-0.7 FreeBSD 8-8	Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes	N/A Yes No Yes N/A
DOS NDIS ²	Tools only	N/A	N/A
DOS ODI	No	N/A	N/A
EFI 1.1	No	N/A	Yes
UEFI 2.1	No	Yes	Yes
VMware: ESX4.0/ESX4.0i ³ ESX4.1/ESX4.1i ³ ESX5.0i ³	N/A N/A N/A	Yes Yes Yes	N/A N/A N/A
XEN ⁴	N/A	Yes	N/A

Notes:

1. Itanium® Product Family.
2. Minimal validation.
3. VMware* ESX drivers are not included on LAD SW Releases, they are only available from VMware's web site and they are released on a separate schedule.
4. Contact your Intel representative for load parameters.



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