

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 |

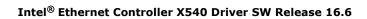


Table 2. X540 Software Support (Operating System Support) (Continued)

| 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 | 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/ESX4.01ii 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. 2. 3.
- Itanium® Product Family.
 Minimal validation.
 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.
 Contact your Intel representative for load parameters.
- 4.





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