


# MANDO Real-Time Network Supported Network Interface Cards (NICs)


This document provides a listing of NIC drivers that are provided for use with the MANDO Real-Time Network. These drivers are intended to be loaded by the Network Abstraction Layer (NAL). Note that you can write your own custom drivers for NICs that are not included in this document.

## Test Status Key


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 This Network Interface card (NIC) has been tested using MANDO. The card has been tested for both Internet Protocol version 4 (IPv4) and next generation Internet Protocol version 6 (IPv6).


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 This NIC has been tested using MANDO. The manufacturer has listed this chipset as End-Of-Life, and it will likely be deprecated in a future release of MANDO.


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 This NIC has not been tested, but based on its chipset it should work correctly with MANDO.

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 This NIC has not been tested, but based on its chipset it should work correctly with MANDO. The manufacturer has listed this chipset as End-Of-Life, and it will likely be deprecated in a future release of MANDO.

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 This NIC has been tested and confirmed not to work correctly with MANDO.

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## Notes

- Some devices may have more restrictive limits than what is documented or enforced by the driver. To see the most accurate limits, consult the appropriate specification guide for your device.
- For improved performance, we recommend you use MSI-X Single Vector instead of MSI for interrupts when possible.
- The RtNalRtl driver does not support transmitting multiple packets in one request.
- The RtNalE1000, RtNalIGC, RtNalRtl, and RtNalIPCH drivers do not support Receive (Rx) filtering.
- The RtNalE1000 and RtNalRtl drivers do not support Receive (Rx) or Transmit (Tx) timestamps.
- All drivers support Link Status monitoring.
- All tested drivers support Jumbo Packets.
- Windows uses the Device ID and Vendor ID when associating devices. The friendly name of a device in Windows may differ slightly from the corresponding name provided in this document.
- Enabling the RTSS Watchdog Timer may generate Watchdog Timeout exceptions when NIC drivers are loaded during MANDO NAL startup.









# Driver RtNaIRtl


**Note:** This driver does not support shared line-based interrupts, MSI-X, timestamps for Receive (Rx) or Transmit (Tx), interrupt moderation, receive filtering, receive (Rx) polling, or transmitting multiple packets in one request.

Maximum packet size for specific hardware revisions:

Revision	Driver limits	Device limits	Tested
0x8110	1514	1514	No
0x8168C/0x8111C, 0x8168CP/0x8111CP	6140	6140	No
0x8168C-SPIN2/0x8111C-SPIN2	6140	6140	Yes
0x8168B/0x8111B, 0x8110S, 0x8169	7436	7436	No
0x8168D/0x8168DP, 0x8168EP/0x8111EP	9212	9212	No
0x8168G/0x8111G	9212	9212	Yes
0x8168EVL/0x8111EVL, 0x8168H/0x8111H, 0x8168E/0x8111E, 0x8168F/0x8111F	9212	9212	Yes

## Supported devices:

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x1186	0X4300	D-Link DGE-528(T) Gigabit Ethernet Adapter (MANDO)	Rx: 1, Tx: 1	MANDO Beta	
0x1186	0X4302	D-Link DGE-530(T) Gigabit Ethernet Adapter (MANDO)	Rx: 1, Tx: 1	MANDO Beta	
0x10EC	0X8168	RealTek 8168/8111 B/C/CP/D/DP/E/F/G PCIe Gigabit Ethernet (MANDO)	Rx: 1, Tx: 1	MANDO Beta	
0x10EC	0X8168	RealTek StarTech Gigabit Ethernet Network Card – Low Profile	Rx: 1, Tx: 1	MANDO Beta	
0x10EC	0X8169	RealTek 8169/8169S/8169SB(L)/8110S/8110SB(L) Gigabit Ethernet (MANDO)	Rx: 1, Tx: 1	MANDO Beta	
0x10EC	0X8167	RealTek 8169SC/8110SC Single-chip Gigabit Ethernet (MANDO)	Rx: 1, Tx: 1	MANDO Beta	
0x1259	0XC107	Corega CG-LAPCIGT (RTL8169S) Gigabit Ethernet (MANDO)	Rx: 1, Tx: 1	MANDO Beta	
0x1737	0X1032	Linksys EG1032 (RTL8169S) Gigabit Ethernet (MANDO)	Rx: 1, Tx: 1	MANDO Beta	



Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x16EC	0X0116	US Robotics 997902 (RTL8169S) Gigabit Ethernet (MANDO)	Rx: 1, Tx: 1	MANDO Beta	

## Driver RtNallGC









Maximum packet size:

Devices	Driver limits	Device limits
All	1514-9212	1514-9212






Supported devices:

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0X15F2	Intel® I225 LM Ethernet Controller (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0X15F3	Intel® I225 V Ethernet Controller (MANDO)	Rx: 4, Tx: 4	MANDO Beta	

MANDO Supported Network Interface Cards

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0X3100	Intel® I225 K Ethernet Controller (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0X15F8	Intel® I225 I Ethernet Controller (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0X15F7	Intel® I220 V Ethernet Controller (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0X3101	Intel® I225 K2 Ethernet Controller (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0X5502	Intel® I225 LMVP Ethernet Controller (2) (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0X5504	Intel® I226 K Ethernet Controller (2) (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0X0D9F	Intel® I225 IT Ethernet Controller (2) (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0X125B	Intel® I226 LM Ethernet Controller (MANDO)	Rx: 4, Tx: 4	MANDO Beta	

MANDO Supported Network Interface Cards

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0X125C	Intel® I226 V Ethernet Controller (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0X125D	Intel® I226 IT Ethernet Controller (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0X125E	Intel® I221 V Ethernet Controller (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0X125F	Intel® I226 (blankNVM) Ethernet Controller (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0X15FD	Intel® I225 (blankNVM) Ethernet Controller (MANDO)	Rx: 4, Tx: 4	MANDO Beta	







# Driver RtNallPCH

**Note:** This driver does not support receive filtering or Transmit (Tx) timestamps.









Maximum packet size:

Devices	Driver limits	Device limits
All	1514-9014	1514-9212









Supported devices:

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0X550D	Intel® I219 V19 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X550C	Intel® I219 LM19 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X550B	Intel® I219 V18 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X550A	Intel® I219 LM18 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	









MANDO Supported Network Interface Cards

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0X15BB	Intel® I219 LM7 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X15BC	Intel® I219 V7 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X15BD	Intel® I219 LM6 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X15BE	Intel® I219 V6 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X15DF	Intel® I219 LM8 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X15D8	Intel® I219 V4 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X15E0	Intel® I219 V8 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X15E1	Intel® I219 LM9 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	

MANDO Supported Network Interface Cards

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0X15E2	Intel® I219 V9 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X15E3	Intel® I219 LM5 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X15F4	Intel® I219 LM15 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X15F5	Intel® I219 V15 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X15F9	Intel® I219 LM14 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X15FA	Intel® I219 V14 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X15FB	Intel® I219 LM13 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X15FC	Intel® I219 V13 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	









MANDO Supported Network Interface Cards

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0X1A1C	Intel® I219 LM17 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X1A1D	Intel® I219 V17 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X1A1E	Intel® I219 LM16 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X1A1F	Intel® I219 V16 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X0D4C	Intel® I219 LM11 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X0D4D	Intel® I219 V11 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X0D4E	Intel® I219 LM10 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X0D4F	Intel® I219 V10 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	









MANDO Supported Network Interface Cards

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0X0D53	Intel® I219 LM12 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X0D55	Intel® I219 V12 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X15D6	Intel® I219 V5 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X15E3	Intel® I219 LM5 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x1502	Intel® 82579LM Gigabit Network Adapter (MANDO)  <b>Note:</b> This controller does not work correctly on systems with the Intel® C200 PCH.	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x1503	Intel® 82579V Gigabit Network Adapter (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x153A	Intel® I217LM PHY 1000BASE with C220 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x153B	Intel® I217V PHY 1000BASE with C220 Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	









MANDO Supported Network Interface Cards

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0x155A	Intel® I218LM PHY 1000BASE with Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x1559	Intel® I218V PHY 1000BASE with Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x15A0	Intel® I218LM2 PHY 1000BASE with Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x15A1	Intel® I218V2 PHY 1000BASE with Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x15A2	Intel® I218LM3 PHY 1000BASE with Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x15A3	Intel® I218V3 PHY 1000BASE with Ethernet Controller (MANDO)	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x15D7	Intel® I219LM4 Ethernet Connection	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10BA	Intel® 80003ES2 Ethernet Controller Copper SPT	Rx: 1, Tx: 2	MANDO Beta	

MANDO Supported Network Interface Cards









Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0x10BB	Intel® 80003ES2 Ethernet Controller Serdes SPT	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x1096	Intel® 80003ES2 Ethernet Controller Copper DPT	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x1098	Intel® 80003ES2 Ethernet Controller Serdes DPT	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x1049	Intel® ICH8 IGP M AMT Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x104A	Intel® ICH8 IGP AMT Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0X104C	Intel® ICH8 IFE Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10C4	Intel® ICH8 IFE GT Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10C5	Intel® ICH8 IFE G Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	

MANDO Supported Network Interface Cards









Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0x104D	Intel® ICH8 IGP M Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x1501	Intel® ICH8 82567 V3 Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10F5	Intel® ICH9 IGP M AMT Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10F6	Intel® 82574LA Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10F6	Intel® 82574LA Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10BD	Intel® ICH9 IGP AMT Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x294C	Intel® ICH9 IGP C Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10BF	Intel® ICH9 IGP M Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	









MANDO Supported Network Interface Cards

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0x10C0	Intel® ICH9 IFE Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10C3	Intel® ICH9 IFE GT Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10C2	Intel® ICH9 IFE G Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10E5	Intel® ICH9 BM Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10CC	Intel® ICH10 R BM LM Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10CD	Intel® ICH10 R BM LF Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10CE	Intel® ICH10 R BM V Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10D5	Intel® 82571PT Ethernet Controller Copper Quad	Rx: 1, Tx: 2	MANDO Beta	

MANDO Supported Network Interface Cards

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0x10D9	Intel® 82571EB Ethernet Controller Serdes Dual	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10DA	Intel® 82571EB Ethernet Controller Serdes Quad	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10DE	Intel® ICH10 D BM LM Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10DF	Intel® ICH10 D BM LF Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x1525	Intel® ICH10 D BM V Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10EA	Intel® PCH M HV LM Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10EB	Intel® PCH M HV LC Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x10EF	Intel® PCH D HV DM Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	

MANDO Supported Network Interface Cards

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0x10F0	Intel® PCH D HV DC Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x156F	Intel® PCH SPT I219 LM Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x1570	Intel® PCH SPT I219 V Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x15B7	Intel® PCH SPT I219 LM2 Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x15B8	Intel® PCH SPT I219 V2 Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	
0x8086	0x15B9	Intel® PCH SPT I219 LM3 Ethernet Controller	Rx: 1, Tx: 2	MANDO Beta	

## Driver RtNall10GB




**Note:** This driver currently supports packet timestamps for Receive (Rx) and Transmit (Tx) read from registers.

**Note:** This driver does not support timestamps in packet buffers for Receive (Rx), or timestamps in DMA descriptors for transmit.









Maximum packet size:

Devices	Driver limits	Device limits
All	1514-15868	1514-15868









Supported devices:




Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0x10B6	Intel® 82598 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x10E1	Intel® 82598 SR DUAL PORT EM 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x10DB	Intel® 82598 EB SFP LOM 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	

MANDO Supported Network Interface Cards

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0x10F7	Intel® 82599 KX4 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x1514	Intel® 82599 KX4 MEZZ 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x10FB	Intel® 82599 SFP 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x10FC	Intel® 82599 XAUI LOM 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x10F9	Intel® 82599 CX4 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x151C	Intel® 82599 T3 LOM 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x10F8	Intel® 82599 COMBO BACKPLANE 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x152A	Intel® 82599 BACKPLANE FCOE 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	

MANDO Supported Network Interface Cards

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0x154D	Intel® 82599 SFP SF2 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x1529	Intel® 82599 SFP FCOE 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x1577	Intel® 82599 EN SFP 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x154A	Intel® 82599 SFP SF QP 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x1558	Intel® 82599 QSFP SF QP 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x1528	Intel® X540 T 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x1560	Intel® X540 T1 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x1563	Intel® X550 T 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0x15AB	Intel® X550 EM X KR 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x15AA	Intel® X550 EM X KX4 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x15AD	Intel® X550 EM X 10G T 10GB Network Connection	Rx: 16, Tx: 16	MANDO Beta	

## Driver RtNalIGB









**Note:** All devices support packet timestamps for Receive (Rx) and Transmit (Tx) read from registers, and support timestamps in packet buffers for receive.

**Note:** Only the I210 and I211 devices support timestamps in DMA descriptors for Transmit (Tx).

Maximum packet size:








Devices	Driver limits	Device limits
All	1514-9716	1514-9716

## Supported devices:









Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0x1520	Intel® I350 Ethernet Controller Virtual Function (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0x1522	Intel® I350 Gigabit Fiber Network Connection (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0x1524	Intel® I350 Gigabit Connection (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0x152f	Intel® I350 Virtual Function (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0x1531	Intel® I210 Gigabit Unprogrammed (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0x1536	Intel® I210 Gigabit Fiber Network Connection (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0x1537	Intel® I210 Gigabit Backplane Connection (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0x1538	Intel® I210 Gigabit Network Connection (MANDO)	Rx: 4, Tx: 4	MANDO Beta	






MANDO Supported Network Interface Cards

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0x157C	Intel® I210 Gigabit Backplane Connection (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0x15F6	Intel® I210 Gigabit Ethernet Connection (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0x157B	Intel® I210 Flash-less Copper-only Ethernet Controller (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0x1533	Intel® I210 Copper-only Ethernet Controller (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0x157B	Intel® I210 Flash-less Copper-only Ethernet Controller (MANDO)	Rx: 4, Tx: 4	MANDO Beta	
0x8086	0x1521	Intel® I350 Quad/Dual PCIe Copper Ethernet Controller (MANDO)	Rx: 8, Tx: 8	MANDO Beta	
		<b>Note:</b> This controller does not support timestamps in DMA descriptors for transmit.			
0x8086	0x1523	Intel® I350 Quad/Dual PCIe 1000BASE-KX/BX Ethernet Controller (MANDO)	Rx: 8, Tx: 8	MANDO Beta	
		<b>Note:</b> This controller does not support timestamps in DMA descriptors for transmit.			

MANDO Supported Network Interface Cards

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0x1539	Intel® I211 PCIe 1000BASE Ethernet Controller (MANDO)	Rx: 2, Tx: 2	MANDO Beta	
0x8086	0x10C9	Intel® 82576 Gigabit ET Dual Port Server Adapter	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x10E6	Intel® 82576 Gigabit Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x10E7	Intel® 82576 Gigabit Network Connection	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x1526	Intel® 82576 Gigabit ET2 Quad Port Server Adapter	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x150E	Intel® 82580 Quad Port 10/100/100 Mb/s Ethernet Controller, Copper	Rx: 8, Tx: 8	MANDO Beta	
0x8086	0x10A7	Intel® 82575EB Gigabit Ethernet Controller	Rx: 16, Tx: 16	MANDO Beta	
0x8086	0x150F	Intel® 82580 Quad port 10/100/1000 Mb/s Ethernet Controller, Fiber	Rx: 8, Tx: 8	MANDO Beta	

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0x1510	Intel® 82580 Quad port 10/100/1000 Mb/s Ethernet controller, 1000BASE-KX/1000BASE-BX backplane	Rx: 8, Tx: 8	MANDO Beta	
0x8086	0x1511	Intel® 82580 Quad port 10/100/1000 Mb/s Ethernet controller, External SGMII PHY	Rx: 8, Tx: 8	MANDO Beta	
0x8086	0x1516	Intel® 82580 Dual port 10/100/1000 Mb/s Ethernet controller, Copper	Rx: 8, Tx: 8	MANDO Beta	








## Driver RtNalE1000

**Note:** This driver does not support shared line-based interrupts, timestamps for Receive (Rx) or Transmit (Tx), Receive (Rx) filtering, Receive (Rx) or Transmit (Tx) packet callbacks, or Receive (Rx) polling.









### Maximum packet size:

Devices	Driver limits	Device limits
0x1000, 0x104B, 0x104D, 0x104C, 0x108B, 0x108C, 0x109A	1514-1514	1514-1514
All others	1514-9014	1514-9212




## Supported devices:

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0x109A	Intel® 82573L Intel® Motherboard D975XBX Intel® PRO/1000 PL Network Adaptor Found on IBM ThinkPads T60s and X60s	Rx: 1, Tx: 1	MANDO Beta	
0x8086	0x104B	Intel® 82566 DC Gigabit Ethernet Controller	Rx: 1, Tx: 1	MANDO Beta	
0x8086	0x10D3	Intel® 82574L Gigabit Ethernet Controller	Rx: 1, Tx: 1	MANDO Beta	
0x8086	0x10D4	Concord GE (customized Intel® 82574) Ethernet Controller	Rx: 1, Tx: 1	MANDO Beta	
0x8086	0x1003	Intel® 82543PC (COPPER)	Rx: 1, Tx: 1	MANDO Beta	
0x8086	0x100D	Intel® 82544GC LOM Gigabit Ethernet Controller (LOM), mostly found on motherboard	Rx: 1, Tx: 1	MANDO Beta	
0x8086	0x1015	Intel® 82540EM LOM Gigabit Ethernet Controller (LOM), mostly found on motherboard PRO/1000 MT Mobile Connection	Rx: 1, Tx: 1	MANDO Beta	

MANDO Supported Network Interface Cards

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0x1017	Intel® 82540EP Gigabit Ethernet Controller (LOM), mostly found on motherboard	Rx: 1, Tx: 1	MANDO Beta	
0x8086	0x1077	Intel® 82541GI MOBILE Gigabit Ethernet Controller 82541EI	Rx: 1, Tx: 1	MANDO Beta	
0x8086	0x10B9	Intel® 82571 PRO/1000 PT Desktop Adapter	Rx: 1, Tx: 1	MANDO Beta	
0x8086	0x1019	Intel® 82547EI Gigabit Ethernet Controller (LOM) PRO/1000 CT Network Connection	Rx: 1, Tx: 1	MANDO Beta	
0x8086	0x1051	Intel® 82801EB/ER PRO/100 VE Network Connection	Rx: 1, Tx: 1	MANDO Beta	
0x8086	0x108B	Intel® 82573E (PC82573V) Network Controller (PCIE Gigabit Ethernet)	Rx: 1, Tx: 1	MANDO Beta	
0x8086	0x108C	Intel® 82573E IAMT	Rx: 1, Tx: 1	MANDO Beta	
0x8086	0x10BC	Intel® 82571EB Ethernet Controller Copper Quad LP	Rx: 1, Tx: 1	MANDO Beta	

MANDO Supported Network Interface Cards

Vendor ID	Device ID	Device description	Supported queues (Rx, Tx)	Support added in	Test status
0x8086	0x105E	Intel® 82571 PRO/1000 PT Dual Port Network Connection Gigabit Ethernet Controller	Rx: 1, Tx: 1	MANDO Beta	
0x8086	0x105F	Intel® 82571EB FIBER	Rx: 1, Tx: 1	MANDO Beta	
0x8086	0x1060	Intel® 82571EB SERDES	Rx: 1, Tx: 1	MANDO Beta	
0x8086	0x150C	Intel® 82583 Gigabit Ethernet Controller	Rx: 1, Tx: 1	MANDO Beta	