

RTX64 Real-Time Network

Supported Network Interface Cards (NICs)

This document provides a listing of NIC drivers that are provided for use with the RTX64 Real-Time Network. These drivers are intended to be loaded by the Network Abstraction Layer (NAL) and are not compatible with versions of the RTX64 RT-TCP/IP Stack released prior to 4.0. Note that you can write your own custom drivers for NICs that are not included in this document.

Legend



This Network Interface card (NIC) has been tested using RTX64. The card has been tested for both Internet Protocol version 4 (IPv4) and next generation Internet Protocol version 6 (IPv6).



This NIC has been tested using RTX64. The manufacturer has listed this chipset as End-Of-Life, and it will likely be deprecated in a future release of RTX64.



This NIC has not been tested, but based on its chipset it should work correctly with RTX64.



This NIC has not been tested, but based on its chipset it should work correctly with RTX64. The manufacturer has listed this chipset as End-Of-Life, and it will likely be deprecated in a future release of RTX64.



This NIC has been tested and confirmed not to work correctly with RTX64.

NOTE: The RtNalE1000 and RtNalIPCH drivers do not support transmit timestamps or receive filtering.

NOTE: All drivers support Link Status monitoring.

NOTE: All tested ( , ) drivers support Jumbo Packets.

NOTE: 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.



Driver RtNalIPCH

NOTE: This driver does not support receive filtering or timestamps for Transmit (Tx).












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)	Minimum RTX64 Version	Status
0x8086	0x15d6	Intel® Ethernet Connection (5) I219-V5	Rx: 1, Tx: 2	Update 2 for RTX64 4.0	
0x8086	0x15e3	Intel® Ethernet Connection (5) I219-LM5	Rx: 1, Tx: 2	Update 2 for RTX64 4.0	
0x8086	0x1502	Intel® 82579LM Gigabit Network Adapter (RTX64)	Rx: 1, Tx: 2	4.0	
<p>NOTE: This controller does not work correctly on systems with the Intel® C200 PCH.</p>					
0x8086	0x1503	Intel® 82579V Gigabit Network Adapter (RTX64)	Rx: 1, Tx: 2	4.0	












RTX64 Supported Network Interface Cards

Vendor ID	Device ID	Device Description	Supported Queues (Rx, Tx)	Minimum RTX64 Version	Status
0x8086	0x153A	Intel® I217LM PHY 1000BASE with C220 Ethernet Controller (RTX64)	Rx: 1, Tx: 2	4.0	
0x8086	0x153B	Intel® I217V PHY 1000BASE with C220 Ethernet Controller (RTX64)	Rx: 1, Tx: 2	4.0	
0x8086	0x155A	Intel® I218LM PHY 1000BASE with Ethernet Controller (RTX64)	Rx: 1, Tx: 2	4.0	
0x8086	0x1559	Intel® I218V PHY 1000BASE with Ethernet Controller (RTX64)	Rx: 1, Tx: 2	4.0	
0x8086	0x15A0	Intel® I218LM2 PHY 1000BASE with Ethernet Controller (RTX64)	Rx: 1, Tx: 2	4.0	
0x8086	0x15A1	Intel® I218V2 PHY 1000BASE with Ethernet Controller (RTX64)	Rx: 1, Tx: 2	4.0	
0x8086	0x15A2	Intel® I218LM3 PHY 1000BASE with Ethernet Controller (RTX64)	Rx: 1, Tx: 2	4.0	
0x8086	0x15A3	Intel® I218V3 PHY 1000BASE with Ethernet Controller (RTX64)	Rx: 1, Tx: 2	4.0	
0x8086	0x15D7	Intel® I219LM4 Ethernet Connection	Rx: 1, Tx: 2	4.0	
0x8086	0x10BA	Intel® 80003ES2 Ethernet Controller Copper SPT	Rx: 1, Tx: 2	4.0	
0x8086	0x10BB	Intel® 80003ES2 Ethernet Controller Serdes SPT	Rx: 1, Tx: 2	4.0	











RTX64 Supported Network Interface Cards

Vendor ID	Device ID	Device Description	Supported Queues (Rx, Tx)	Minimum RTX64 Version	Status
0x8086	0x1096	Intel® 80003ES2 Ethernet Controller Copper DPT	Rx: 1, Tx: 2	4.0	
0x8086	0x1098	Intel® 80003ES2 Ethernet Controller Serdes DPT	Rx: 1, Tx: 2	4.0	
0x8086	0x1049	Intel® ICH8 IGP M AMT Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x104A	Intel® ICH8 IGP AMT Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0X104C	Intel® ICH8 IFE Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10C4	Intel® ICH8 IFE GT Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10C5	Intel® ICH8 IFE G Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x104D	Intel® ICH8 IGP M Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x1501	Intel® ICH8 82567 V3 Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10F5	Intel® ICH9 IGP M AMT Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10BD	Intel® ICH9 IGP AMT Ethernet Controller	Rx: 1, Tx: 2	4.0	

RTX64 Supported Network Interface Cards

Vendor ID	Device ID	Device Description	Supported Queues (Rx, Tx)	Minimum RTX64 Version	Status
0x8086	0x294C	Intel® ICH9 IGP C Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10BF	Intel® ICH9 IGP M Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10C0	Intel® ICH9 IFE Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10C3	Intel® ICH9 IFE GT Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10C2	Intel® ICH9 IFE G Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10E5	Intel® ICH9 BM Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10CC	Intel® ICH10 R BM LM Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10CD	Intel® ICH10 R BM LF Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10CE	Intel® ICH10 R BM V Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10DE	Intel® ICH10 D BM LM Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10DF	Intel® ICH10 D BM LF Ethernet Controller	Rx: 1, Tx: 2	4.0	

RTX64 Supported Network Interface Cards

Vendor ID	Device ID	Device Description	Supported Queues (Rx, Tx)	Minimum RTX64 Version	Status
0x8086	0x1525	Intel® ICH10 D BM V Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10EA	Intel® PCH M HV LM Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10EB	Intel® PCH M HV LC Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10EF	Intel® PCH D HV DM Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x10F0	Intel® PCH D HV DC Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x156F	Intel® PCH SPT I219 LM Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x1570	Intel® PCH SPT I219 V Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x15B7	Intel® PCH SPT I219 LM2 Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x15B8	Intel® PCH SPT I219 V2 Ethernet Controller	Rx: 1, Tx: 2	4.0	
0x8086	0x15B9	Intel® PCH SPT I219 LM3 Ethernet Controller	Rx: 1, Tx: 2	4.0	

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, 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)	Minimum RTX64 Version	Status
0x8086	0x10B6	Intel® 82598 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x10E1	Intel® 82598 SR DUAL PORT EM 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x10DB	Intel® 82598 EB SFP LOM 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x10F7	Intel® 82599 KX4 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x1514	Intel® 82599 KX4 MEZZ 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x10FB	Intel® 82599 SFP 10GB Network Connection	Rx: 16, Tx: 16	4.0	

RTX64 Supported Network Interface Cards

Vendor ID	Device ID	Device Description	Supported Queues (Rx, Tx)	Minimum RTX64 Version	Status
0x8086	0x10FC	Intel® 82599 XAUI LOM 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x10F9	Intel® 82599 CX4 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x151C	Intel® 82599 T3 LOM 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x10F8	Intel® 82599 COMBO BACKPLANE 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x152A	Intel® 82599 BACKPLANE FCOE 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x154D	Intel® 82599 SFP SF2 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x1529	Intel® 82599 SFP FCOE 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x1577	Intel® 82599 EN SFP 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x154A	Intel® 82599 SFP SF QP 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x1558	Intel® 82599 QSFP SF QP 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x1528	Intel® X540 T 10GB Network Connection	Rx: 16, Tx: 16	4.0	

Vendor ID	Device ID	Device Description	Supported Queues (Rx, Tx)	Minimum RTX64 Version	Status
0x8086	0x1560	Intel® X540 T1 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x1563	Intel® X550 T 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x15AB	Intel® X550 EM X KR 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x15AA	Intel® X550 EM X KX4 10GB Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x15AD	Intel® X550 EM X 10G T 10GB Network Connection	Rx: 16, Tx: 16	4.0	

Driver RtNalIGB









NOTE: All devices support packet timestamps for receive and transmit 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.








Maximum packet size:

Devices	Driver limits	Device limits
All	1514-9724	1514-9724

Supported devices:

Vendor ID	Device ID	Device Description	Supported Queues (Rx, Tx)	Minimum RTX64 Version	Status
0x8086	0x1533	Intel® I210 Copper-only Ethernet Controller (RTX64)	Rx: 4, Tx: 4	4.0	
0x8086	0x157B	Intel® I210 Flash-less Copper-only Ethernet Controller (RTX64)	Rx: 4, Tx: 4	4.0	
0x8086	0x1521	Intel® I350 Quad/Dual PCIe Copper Ethernet Controller (RTX64)	Rx: 8, Tx: 8	4.0	
NOTE: This controller does not support timestamps in DMA descriptors for transmit.					
0x8086	0x1523	Intel® I350 Quad/Dual PCIe 1000BASE-KX/BX Ethernet Controller (RTX64)	Rx: 8, Tx: 8	4.0	
NOTE: This controller does not support timestamps in DMA descriptors for transmit.					
0x8086	0x1539	Intel® I211 PCIe 1000BASE Ethernet Controller (RTX64)	Rx: 2, Tx: 2	4.0	
0x8086	0x10C9	Intel® 82576 Gigabit ET Dual Port Server Adapter	Rx: 16, Tx: 16	4.0	
0x8086	0x10E6	Intel® 82576 Gigabit Network Connection	Rx: 16, Tx: 16	4.0	
0x8086	0x10E7	Intel® 82576 Gigabit Network Connection	Rx: 16, Tx: 16	4.0	

RTX64 Supported Network Interface Cards

Vendor ID	Device ID	Device Description	Supported Queues (Rx, Tx)	Minimum RTX64 Version	Status
0x8086	0x1526	Intel® 82576 Gigabit ET2 Quad Port Server Adapter	Rx: 16, Tx: 16	4.0	
0x8086	0x150E	Intel® 82580 Quad Port 10/100/100 Mb/s Ethernet Controller, Copper	Rx: 8, Tx: 8	4.0	
0x8086	0x10A7	Intel® 82575EB Gigabit Ethernet Controller	Rx: 16, Tx: 16	4.0	
0x8086	0x150F	Intel® 82580 Quad port 10/100/1000 Mb/s Ethernet Controller, Fiber	Rx: 8, Tx: 8	4.0	
0x8086	0x1510	Intel® 82580 Quad port 10/100/1000 Mb/s Ethernet controller, 1000BASE-KX/1000BASE-BX backplane	Rx: 8, Tx: 8	4.0	
0x8086	0x1511	Intel® 82580 Quad port 10/100/1000 Mb/s Ethernet controller, External SGMII PHY	Rx: 8, Tx: 8	4.0	
0x8086	0x1516	Intel® 82580 Dual port 10/100/1000 Mb/s Ethernet controller, Copper	Rx: 8, Tx: 8	4.0	





Driver RtNaIE1000

NOTE: This driver does not support shared line-based interrupts, timestamps for receive or transmit, receive filtering or receive or transmit packet callbacks, receive polling, and transmitting multiple packets in one request.












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)	Minimum RTX64 Version	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	4.0	
0x8086	0x104B	Intel® 82566 DC Gigabit Ethernet Controller	Rx: 1, Tx: 1	4.0	
0x8086	0x10D3	Intel® 82574L Gigabit Ethernet Controller	Rx: 1, Tx: 1	4.0	
0x8086	0x10F6	Intel® 82574LA Ethernet Controller	Rx: 1, Tx: 1	4.0	

RTX64 Supported Network Interface Cards

Vendor ID	Device ID	Device Description	Supported Queues (Rx, Tx)	Minimum RTX64 Version	Status
0x8086	0x10D4	Concord GE (customized Intel® 82574) Ethernet Controller	Rx: 1, Tx: 1	4.0	
0x8086	0x1003	Intel® 82543PC (COPPER)	Rx: 1, Tx: 1	4.0	
0x8086	0x100D	Intel® 82544GC LOM Gigabit Ethernet Controller (LOM), mostly found on motherboard	Rx: 1, Tx: 1	4.0	
0x8086	0x1015	Intel® 82540EM LOM Gigabit Ethernet Controller (LOM), mostly found on motherboard PRO/1000 MT Mobile Connection	Rx: 1, Tx: 1	4.0	
0x8086	0x1017	Intel® 82540EP Gigabit Ethernet Controller (LOM), mostly found on motherboard	Rx: 1, Tx: 1	4.0	
0x8086	0x1077	Intel® 82541GI MOBILE Gigabit Ethernet Controller 82541EI	Rx: 1, Tx: 1	4.0	
0x8086	0x10B9	Intel® 82571 PRO/1000 PT Desktop Adapter	Rx: 1, Tx: 1	4.0	
0x8086	0x1019	Intel® 82547EI Gigabit Ethernet Controller (LOM) PRO/1000 CT Network Connection	Rx: 1, Tx: 1	4.0	
0x8086	0x1051	Intel® 82801EB/ER PRO/100 VE Network Connection	Rx: 1, Tx: 1	4.0	
0x8086	0x108B	Intel® 82573E (PC82573V) Network Controller (PCIE Gigabit Ethernet)	Rx: 1, Tx: 1	4.0	
0x8086	0x108C	Intel® 82573E IAMT	Rx: 1, Tx: 1	4.0	

RTX64 Supported Network Interface Cards

Vendor ID	Device ID	Device Description	Supported Queues (Rx, Tx)	Minimum RTX64 Version	Status
0x8086	0x10D9	Intel® 82571EB Ethernet Controller Serdes Dual	Rx: 1, Tx: 1	4.0	
0x8086	0x10DA	Intel® 82571EB Ethernet Controller Serdes Quad	Rx: 1, Tx: 1	4.0	
0x8086	0x10BC	Intel® 82571EB Ethernet Controller Copper Quad LP	Rx: 1, Tx: 1	4.0	
0x8086	0x10D5	Intel® 82571PT Ethernet Controller Copper Quad	Rx: 1, Tx: 1	4.0	
0x8086	0x105E	Intel® 82571 PRO/1000 PT Dual Port Network Connection Gigabit Ethernet Controller	Rx: 1, Tx: 1	4.0	
0x8086	0x105F	Intel® 82571EB FIBER	Rx: 1, Tx: 1	4.0	
0x8086	0x1060	Intel® 82571EB SERDES	Rx: 1, Tx: 1	4.0	
0x8086	0x150C	Intel® 82583 Gigabit Ethernet Controller	Rx: 1, Tx: 1	4.0	