Intel® Ethernet Controller E810

Feature Support Matrix

Ethernet Products Group (EPG)

Rev. 3.4

September 2022

Doc. No.: 630155, Rev.: 3.4

Contents

Tables

Revision History

Revision	Date	Comments
3.4	September 16, 2022	Updates include the following: • General updates in support of Software Release 27.6.1).
3.3	August 8, 2022	Updates include the following: • General updates in support of Software Release 27.5.
3.2	June 23, 2022	Updates include the following: • Changed ice (Linux) Kernel Driver to 1.8.9 in Table 7 and Table 9.
3.1	May 11, 2022	Updates include the following: • General updates in support of Software Release 27.2.1.
3.0	April 11, 2022	Updates include the following: • General updates in support of Software Release 27.1 and NVM 3.20/3.22.
2.9	January 21, 2022	Updates include the following: • General updates in support of Software Release 26.8 and NVM 3.10/3.12.
2.8	September 8, 2021	Updates include the following: • Added PAM4 for QSFP28 Direct Attach Copper cables under "50 GbE Media Supported" in Table, "Media Types Supported for the E810". • Updated Linux *ice* driver version in Table, "Software/NVM Compatibility for the E810"
2.7	July 26, 2021	Updates include the following: • General updates in support of Software Release 26.4 and NVM 3.00/3.02.
2.6	May 19, 2021	Updates include the following: • General updates in support of Software Release 26.3 and NVM 2.50/2.52.
2.5	March 24, 2021	Updates include the following: • General updates in support of Software Release 26.1 and NVM 2.40/2.42.
2.4	December 21, 2020	Updates include the following: • General updates in support of Software Release 25.6 and NVM 2.30/2.32.
2.3	November 16, 2020	Updates include the following: • General updates in support of Software Release 25.5 and NVM 2.20/2.22.
2.2	September 30, 2020	Updates include the following: • General updates in support of Software Release 25.4 and NVM 2.15/2.14.
2.1	September 17, 2020	Updates include the following:

continued...

Revision	Date	Comments
		• General updates in support of Software Release 25.3 and NVM 2.10/2.12.
2.0[1]	July 23, 2020	Initial public release.
Note: 1. There are no previous publicly-available versions of this document.		

1.0 Features Supported

The following tables list the feature support provided by the NVM and software drivers for a given release starting with the production release (Release 25.2, NVM 2.00/2.02). The *Intel® Ethernet Controller E810 Datasheet* reflects the silicon device capability, while this document reflects what is actually supported in the NVM and software for a given release.

- Throughout this document:
  - The Intel® Ethernet Controller E810 is represented as "E810".
  - "X" = Supported with Intel® NVM and software driver.
  - "---" = Not supported with Intel® NVM and software driver.
  - "SNV" = Supported but Not Validated
- The following table lists software releases and associated NVMs:

Software Release Version	NVM Version	Silicon Stepping	SRev
Targeted[1]	1.02	B0	1
25.2	2.00	C0	2
	2.02	B0	
25.3	2.10	C0	2
	2.12	B0	
25.4	2.15	C0	2
	2.14	B0	
25.5	2.20	C0	2
	2.22	B0	
25.6	2.30	C0	3
	2.32	B0	
26.1	2.40	C0	3
	2.42	B0	
26.3	2.50	C0	4
	2.52	B0	
26.4	3.00	C0	5
	3.02	B0	
26.8	3.10	C0	6
	3.12	B0	
27.1	3.20	C0	6
	3.22	B0	
27.2.1	3.20	C0	6

continued...

Software Release Version	NVM Version	Silicon Stepping	SRev
	3.22	B0	
27.5	4.00	C0	6
	4.02	B0	
27.6	4.01	C0	6
	4.02	B0	

Note: 1. This was a targeted production release.

- Features not listed in this document are not officially supported.

Table 1. Interfaces Supported for the E810

Feature	Supported in Release			
	Targeted[2]	25.2 through 25.5	25.6 through 27.2.1	27.5 through 27.6.1
Link Modes 2x100 Port Option				
2x QSFP:				
100GBASE-CR4	X	X	X	X
100GBASE-CR2	X	X	X	X
100G-CAUI4 C2C/C2M	X	X	X	X
100GBASE-SR4/LR4[3]	X	X	X	X
50G-LAUI2 C2C/C2M	X	X	X	X
50GBASE-CR2	X	X	X	X
50GBASE-CR	X	X	X	X
25G-AUI	X	X	X	X
25GBASE-CR/CR1/CR-S	X	X	X	X
10GBASE-SR/LR	X	X	X	X
10G-SFI	X	X	X	X
BACKPLANE:				
100GBASE-KR4	X	X	X	X
100GBASE-KR2	---	---	X	X
50GBASE-KR2	X	X	X	X
50GBASE-KR	---	---	---	---
25GBASE-KR/KR1	X	X	X	X
10GBASE-KR	X	X	X	X
1000BASE-KX	X	X	X	X

continued...

Feature	Supported in Release			
	Targeted[2]	25.2 through 25.5	25.6 through 27.2.1	27.5 through 27.6.1
Link Modes 4x25 Port Option				
QSFP/SFP:				
25GBASE-CR1/CR/CR-S	X	X	X	X
25GBASE-SR/LR	X	X	X	X
25G-AUI	X	X	X	X
10G-SFI	X	X	X	X
1000BASE-LX/SX	X	X	X	X
SGMII	X	X	X	X
BACKPLANE:				
25GBASE-KR/KR1	X	X	X	X
10GBASE-KR	X	X	X	X
1000BASE-KX	X	X	X	X
Link Modes 8x10 Port Option				
QSFP/SFP:				
10G-SFI	X	X	X	X
1000BASE-SX/LX	X	X	X	X
SGMII	X	X	X	X
BACKPLANE:				
10GBASE-KR	X	X	X	X
1000BASE-KX	X	X	X	X

Notes: 1. FEC is supported in the modes as it is required by the specification.
2. This was a targeted production release.
3. Added support for higher power modules on select Intel® Ethernet Network Adapters.

Table 2. Media Types Supported for the E810

Feature	Supported in Release					
	Targeted[1]	25.2 through 25.4	25.5	25.6 through 26.3	26.4 through 27.2.1	27.5 through 27.6.1
100 GbE Media Supported						
QSFP28 Direct Attach Copper cables (NRZ/ PAM4)	X	X	X	X	X	X
QSFP28 100G PAM4 Optics	---	SNV	SNV	SNV	SNV	SNV
QSFP28 100GBASE-LR4 optics[2]	X	X	X	X	X	X
QSFP28 100GBASE-SR4 optics	X	X	X	X	X	X
QSFP28 100G SRBD[3]	---	SNV	SNV	SNV	X	X
QSFP28 100G CWDM4	---	X	X	X	X	X
QSFP28 100G PSM4	---	X	X	X	X	X
QSFP28 AOCs (Active Optical Cables)	X	X	X	X	X	X
50 GbE Media Supported						
QSFP28 Direct Attach Copper cables (NRZ/ PAM4)	X	X	X	X	X	X
QSFP28 Direct Attach Copper breakout cables (NRZ)	---	SNV	SNV	SNV	SNV	SNV
SFP28 Direct Attach Copper cables (PAM4)	---	---	---	---	---	---
QSFP28 100G PAM4 Optics	---	---	---	---	---	---
SFP28 50G PAM4 Optics	---	---	---	---	---	---
QSFP28 AOCs (Active Optical Cables) (NRZ)	---	SNV	SNV	SNV	SNV	SNV
QSFP28 AOC breakout cables (NRZ)	---	SNV	X	X	X	X
SFP28 AOCs (Active Optical Cables) (PAM4)	---	---	---	---	---	---
25 GbE Media Supported						
QSFP28 Direct Attach Copper cables	X	X	X	X	X	X
QSFP28 Direct Attach Copper breakout cables	X	X	X	X	X	X
SFP28 25GBASE-LR optics	X	X	X	X	X	X
SFP28 25GBASE-SR optics	X	X	X	X	X	X
SFP28 25GBASE-CR Direct Attach Copper cables (CA-N, CA-S and CA-L)	X	X	X	X	X	X
SFP28 AOCs (Active Optical Cables)	X	X	X	X	X	X
QSFP28 AOC breakout cables	X	X	X	X	X	X
QSFP28 to SFP28 Adapter (QSA)	---	---	---	X	X	X

continued...

Feature	Supported in Release					
	Targeted[1]	25.2 through 25.4	25.5	25.6 through 26.3	26.4 through 27.2.1	27.5 through 27.6.1
10 GbE Media Supported						
SFP+ Direct Attach Copper cables	X	X	X	X	X	X
QSFP+ Direct Attach Copper breakout cables	X	X	X	X	X	X
SFP+ 10GBASE-LR optics	X	X	X	X	X	X
SFP+ 10GBASE-SR optics	X	X	X	X	X	X
SFP+ AOCs (Active Optical Cables)	X	X	X	X	X	X
QSFP+ AOC breakout cables	X	X	X	X	X	X
QSFP28 to SFP28 Adapter (QSA)	---	---	---	X	X	X
1 GbE Media Supported						
SFP 1000BASE-T Transceiver (supporting SGMII to the host)	X	X	X	X	X	X
SFP 1000BASE-LX optics	X	X	X	X	X	X
SFP 1000BASE-SX optics	X	X	X	X	X	X
SFF specifications supported: • 8024 rev 4.5 • 8436 rev 4.8 • 8472 rev 12.2 • 8636 rev 2.7						
Notes: 1. This was a targeted production release. 2. Current module support implemented for modules at Power Class 4 and lower. 3. Current module functions with "Lenient Mode" only. Not fully validated. For more information, see Specification Clarification #11 in the *Intel® Ethernet Controller E810 Specification Update*.						

Table 3. General Features for the E810

Feature	Supported in Release									
	Targeted [1]	25.2 through 25.4	25.5	25.6	26.1	26.3	26.4	26.8	27.1 through 27.2.1	27.5 through 27.6.1
Link Flow Control	X	X	X	X	X	X	X	X	X	X
Priority Flow Control	X	X	X	X	X	X	X	X	X	X
Transmit Allocation Buffers Driver Uses (Range 128-4096, default is 512)	X	X	X	X	X	X	X	X	X	X
Checksum Offload (IPv4/IPv6, SCTP, TCP, UDP, Tx/Rx)	X	X	X	X	X	X	X	X	X	X
Large Send Offload (TSO) (Up to 64 KB)	X	X	X	X	X	X	X	X	X	X
2K Tx Queues	X	X	X	X	X	X	X	X	X	X
2K Rx Queues	X	X	X	X	X	X	X	X	X	X
16K Tx Queues	---	---	---	---	---	---	---	---	---	---
Header split	---	---	---	---	---	---	---	---	---	---
VLANs	X	X	X	X	X	X	X	X	X	X
Teaming	X	X	X	X	X	X	X	X	X	X
Interrupt Moderation Rate	X	X	X	X	X	X	X	X	X	X
Message Signaled Interrupts (MSI)	---	---	---	---	---	---	---	---	---	---
Message Signaled Interrupts (MSI-X)	X	X	X	X	X	X	X	X	X	X
Jumbo Packet (9 K max)	X	X	X	X	X	X	X	X	X	X
Receive Side Scaling (RSS)	X	X	X	X	X	X	X	X	X	X
RSS Receive Queues (Number of PF RSS queues can vary based on OS and number of cores supported in the system. For the operating systems that support VFs, 4 queues per VF are supported.)	X	X	X	X	X	X	X	X	X	X
Wake from S5	X[2]	X[2]	X[2]	X[2]	X[2]	X[2]	X[2]	X[2]	X[2]	X[2]
Receive Side Coalescing (RSC) Linux GRO (Done by software)	X	X	X	X	X	X	X	X	X	X
IEEE 1588 – Precision Time Protocol (Linux)	---	X	X	X	X	X	X	X	X	X
IEEE 1588 – Precision Time Protocol (Windows)	---	X	X	X	X	X	X	X	X	X
IEEE 1588 – Precision Time Protocol (FreeBSD)	---	---	---	---	---	---	---	---	---	---
IEEE 1588 - Precision Time Protocol (VMware ESXi)	---	---	---	---	---	---	X	X	X	X
Intel® Ethernet Flow Director (Intel® Ethernet FD) (SW ATR not supported)	X	X	X	X	X	X	X	X	X	X
Legacy PXE	X	X	X	X	X	X	X	X	X	X
Remote Boot: PXE (UEFI)	X	X	X	X	X	X	X	X	X	X
Remote Boot: iSCSI (UEFI)	X	X	X	X	X	X	X	X	X	X
Flat NVM	X	X	X	X	X	X	X	X	X	X
FW Recovery and Rollback Mode	X	X	X	X	X	X	X	X	X	X
FMP Update	---	X	X	X	X	X	X	X	X	X
PCIe 3.0	X	X	X	X	X	X	X	X	X	X

continued...

Feature	Supported in Release									
	Targeted [1]	25.2 through 25.4	25.5	25.6	26.1	26.3	26.4	26.8	27.1 through 27.2.1	27.5 through 27.6.1
PCIe 4.0	---	X	X	X	X	X	X	X	X	X
Low Power Link Up (LPLU)	---	---	---	---	---	---	---	---	---	---
Energy Efficient Ethernet (EEE)	---	---	---	---	---	---	---	---	---	---
Malicious Driver Detection (MDD)	X	X	X	X	X	X	X	X	X	X
Locally Administered Address (LAA)	X	X	X	X	X	X	X	X	X	X
Access Control Lists (ACL) rules configured by Device Control plane Function (DCF)	---	---	X	X	X	X	X	X	X	X
Linux: Application Device Queues (ADQ) support [3]	---	X	X	X	X	X	X	X	X	X
Linux: ADQ with ADQ Configuration Script [3]	---	---	---	---	---	---	---	---	---	X
Linux: ADQ with Independent Pollers [3]	---	---	---	---	---	---	---	---	---	X
Linux: ADQ with GTP support [3]	---	---	---	---	---	---	---	X	X	X
Linux: ADQ in VF [3]	---	X	X	X	X	X	X	X	X	X
Linux: eXpress Data Path (XDP) support	X	X	X	X	X	X	X	X	X	X
Linux: AF_XDP support	X	X	X	X	X	X	X	X	X	X
Linux: NVMe over iWARP	X	X	X	X	X	X	X	X	X	X
Linux: NVMe over RoCEv2	X	X	X	X	X	X	X	X	X	X
Linux: NVMe over TCP without ADQ	X	X	X	X	X	X	X	X	X	X
Linux: NVMe over TCP with ADQ	---	---	X [4]	X [4]	X [4]	X [4]	X [4]	X [4]	X [4]	X [4]
Linux: L3 DSCP QoS Support (non-RDMA)	---	---	---	---	---	---	X	X	X	X
Linux: L3 DSCP QoS Support (RDMA)	---	---	---	---	---	---	---	X	X	X
RDMA (iWARP and RoCEv2) support [5]	---	X	X	X	X	X	X	X	X	X
RDMA VMware support	---	---	---	---	X	---	X	X	X	X
VMware: vSAN over RoCEv2 support	---	---	---	---	X	---	X [6]	X [6]	X [6]	X
VMware: NVMe over RDMA (RoCEv2)	---	---	---	---	---	---	---	---	X	X
RDMA VF for Windows support	---	X	X	X	X	X	X	X	X	X
RDMA VF for Linux support	---	---	---	---	---	---	---	X	X	X
RDMA FreeBSD (iWARP) support	---	---	---	---	X	X	X	X	X	X
RDMA FreeBSD (RoCEv2) support	---	---	---	---	X [7]	X [7]	X [7]	X	X	X
RDMA - Userspace Direct Access (UDA)	---	---	---	---	---	---	---	---	---	---
Intel® Ethernet Adaptive Virtual Function support	X	X	X	X	X	X	X	X	X	X
Accelerated Receive Flow Steering (aRFS)	X	X	X	X	X	X	X	X	X	X
MACVLAN	X	X	X	X	X	X	X	X	X	X
VF Support up to 16 Queues (Linux and ESXi AVF, Linux PF)	---	X	X	X	X	X	X	X	X	X
VF Support up to 16 Queues (Windows AVF only)	---	---	X	X	X	X	X	X	X	X
Large VF Support up to 256 Queues (DPDK AVF only)	---	---	---	X	X	X	X	X	X	X

continued...

Feature	Supported in Release									
	Targeted [1]	25.2 through 25.4	25.5	25.6	26.1	26.3	26.4	26.8	27.1 through 27.2.1	27.5 through 27.6.1
SW DCB Agent	X	X	X	X	X	X	X	X	X	X
Multi-Protocol Label Switching offload (MPLS)[8]	---	---	X	X	X	X	X	X	X	X
Q in Q support (Linux)	---	---	---	---	X	X	X	X	X	X
Q in Q support for VF (VMware ESXi)	---	---	---	---	---	---	---	---	---	X
NVM Update using Devlink interface	---	---	X	X	X[9]	X[9]	X[9]	X[9]	X[9]	X[9]
Health Status Message Reporting	---	---	---	---	---	X	X	X	X	X
FW Logging	---	---	---	---	---	---	X	X	X	X
Data Center Bridging (DCB)[5]:										
DCBx in FW	X	X	X	X	X	X	X	X	X	X
DCBx in SW (Linux only)	---	X	X	X	X	X	X	X	X	X
DCBx in SW (VMware ESXi only)	---	---	X	X	X	X	X	X	X	X
DCBx in SW (FreeBSD only)	---	---	---	---	---	---	---	X	X	X
Virtualization:										
Virtual Machine Device Queues (VMDQ)/ Layer 2 Forwarding (L2FWD)	X	X	X	X	X	X	X	X	X	X
Single Root-Input Output Virtualization (SR-IOV)	X	X	X	X	X	X	X	X	X	X
Receive Side Scaling (RSS) in VF	X	X	X	X	X	X	X	X	X	X
Switchdev mode support (Linux only)	---	---	---	---	---	X	X	X	X	X
IEEE 1588 - Precision Time Protocol (PTP) support in VF	---	---	---	---	---	---	X	X	X	X
Trusted VF (VMware ESXi)	---	---	---	---	---	---	---	---	X	X
Cloud Offloads (supported by driver):										
Virtual eXtensible LAN (VxLAN) (All operating systems except FreeBSD)	X	X	X	X	X	X	X	X	X	X
Network Virtualization using Generic Routing Encapsulation (NVGRE) (Windows only)	X	X	X	X	X	X	X	X	X	X
Generic Routing Encapsulation (GRE) (Linux)	X	X	X	X	X	X	X	X	X	X
GEneric NEtworking Virtualization Encapsulation (GENEVE) (Linux, ESXi)	X	X	X	X	X	X	X	X	X	X
Manageability Support[10]:										
Network Controller-Sideband Interface (NC-SI)	X	X	X	X	X	X	X	X	X	X
Management Component Transport Protocol (MCTP)	X	X	X	X	X	X	X	X	X	X
Platform Level Data Model (PLDM) Type 0 - Messaging Control and Discovery	X	X	X	X	X	X	X	X	X	X
PLDM Type 2 - Platform Monitoring and Control	---	X	X	X	X	X	X	X	X	X
PLDM Type 5 - Firmware Update[11]	---	X	X	X	X	X	X	X	X	X
PLDM Type 6 - Redfish Device Enablement	---	X[12]	X[12]	X	X	X	X	X	X	X
Operating System to Baseboard Management Controller (OS2BMC)	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV

continued...

Feature	Supported in Release									
	Targeted [1]	25.2 through 25.4	25.5	25.6	26.1	26.3	26.4	26.8	27.1 through 27.2.1	27.5 through 27.6.1
Legacy System Management Bus (SMBus)	---	---	---	---	---	---	---	---	---	---
Network to Baseboard Management Controller (NET2BMC)	X	X	X	X	X	X	X	X	X	X

Notes:
1. This was a targeted production release.
2. Limited support on selected boards.
3. Link to *Intel® Ethernet Controller E810 Application Device Queues (ADQ) Configuration Guide*.
4. Link to *NVM Express over TCP with SPDK for Intel® Ethernet Products with ADQ Configuration Guide* and *NVM Express over TCP with Linux Kernel for Intel® Ethernet Products with ADQ Configuration Guide*.
5. Should not be used in 8x10 GbE mode. Supported in configurations of 4 PFs or less.
6. Certification will be post-release.
7. Limited support. DCB and Priority Flow Control (PFC) are not supported on earlier releases.
8. Link to *Intel® Ethernet Controller E810 Dynamic Device Personalization (DDP) Technology Guide*.
9. Kernel versions 5.10 and later are needed for full support.
10. Intel® updated the E810 FW to align the sensor ID design as defined by DMTF DSP2054 starting from Release 26.4. Previous versions of the E810 FW were based on draft version of the specification. As a result, updating to the newer NVM with this FW will result in updating numbering for the thermal sensorsIDs and PDR handlers. Anyone using hard coded values for these will see changes. A proper description of the system through PLDM type 2 PDRs shall give a BMC enough information to understand what sensors are available, what they are monitoring, and what their ID is.
11. Support on PCIe interface only.
12. Supports read-only operation.

2.0 Operating Systems Supported

The following tables list the supported operating systems and virtualized operating systems. For the latest OS support, see http://intel.com/support/ethernetos.

Table 4. Operating Systems Supported for Physical Function Driver for the E810

Operating System	In-box/ In-distro/ In-kernel	Out-of-tree/ Async[1]	Supported in Release											Notes
			Targeted[2]	25.2 through 25.4	25.5	25.6	26.1	26.3	26.4	26.8	27.1 and 27.2.1	27.5	27.6.1	
Azure Stack HCI 21H2	No	Yes	---	---	---	---	---	---	---	---	---	X	X	a
Azure Stack HCI 20H2	No	Yes	---	---	---	X	X	X	X	X	X	X	X	a
Windows Server 2022	No	Yes	---	---	---	---	---	---	---	X	X	X	X	a
Windows Server 2019 (20H1)	No	Yes	---	X	X	X	X	X	X	X	X	SNV	SNV	a
Windows Server 2019 (19H1)	No	Yes	X	X	X	X	X	X	X	X	X	SNV	SNV	a
Windows Server 2019	No	Yes	X	X	X	X	X	X	X	X	X	SNV	SNV	a
Windows Server 2016	No	Yes	X	X	X	X	X	X	X	X	X	SNV	SNV	a
Windows 11	No	Yes	---	---	---	---	---	---	---	---	---	---	X	a
Windows PE	No	Yes	X	X	X	X	X	X	X	X	X	X	X	a
Linux Kernel 5.12.x	No	Yes[3]	---	---	---	---	---	---	SNV	SNV	SNV	SNV	SNV	a
Linux Kernel 5.11.x	No	Yes[3]	---	---	---	---	---	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux Kernel LTS 5.10.x/5.4.x/ 4.19.x/4.14.x	No	Yes[3]	X	X	X	X	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux: Debian 11	Yes[4]	Yes	---	---	---	---	---	---	---	---	X	X	X	a
Linux: RHEL 9	Yes[4]	Yes	---	---	---	---	---	---	---	---	---	X	X	a
Linux: RHEL 8.6	Yes[4]	Yes	---	---	---	---	---	---	---	---	---	X	X	a
Linux: RHEL 8.5	Yes[4]	Yes	---	---	---	---	---	---	---	X	X	X	X	a
Linux: RHEL 8.4	Yes[4]	Yes	---	---	---	---	---	---	SNV	X	X	X	X	a
Linux: RHEL 8.3	Yes[4]	Yes	---	---	---	X	X	X	SNV	SNV	SNV	SNV	SNV	a
Linux: RHEL 8.2	Yes[4]	Yes	---	X	X	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux: RHEL 8.1	No	Yes	---	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux: RHEL 8	No	Yes	X	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux: RHEL 7.9	No	Yes	---	---	X	X	X	X	X	SNV	X	SNV	SNV	a
Linux: RHEL 7.8	No	Yes	---	X	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux: RHEL 7.7	No	Yes	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux: RHEL 7.6/7.5	No	Yes	X	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux: SLES 15 SP4	Yes[4]	Yes	---	---	---	---	---	---	---	---	---	X	X	a
Linux: SLES 15 SP3	Yes[4]	Yes	---	---	---	---	---	---	---	X	X	X	X	a

continued...

Operating System	In-box/ In-distro/ In-kernel	Out-of-tree/ Async[1]	Supported in Release											Notes
			Targeted[2]	25.2 through 25.4	25.5	25.6	26.1	26.3	26.4	26.8	27.1 and 27.2.1	27.5	27.6.1	
Linux: SLES 15 SP2	Yes[4]	Yes	---	X	X	X	X	X	X	SNV	SNV	SNV	SNV	a
Linux: SLES 15 SP1	No	Yes	X	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux: SLES 15	No	Yes	X	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux: SLES 12 SP5	No	Yes	---	X	X	X	X	X	X	X	X	SNV	SNV	a
Linux: SLES 12 SP4	No	Yes	X	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux: Ubuntu 22.04 LTS	Yes[4]	Yes	---	---	---	---	---	---	---	---	---	SNV	SNV	a
Linux: Ubuntu 20.04 LTS	Yes[4]	Yes	---	SNV	SNV	SNV	SNV	SNV	SNV	SNV	X	X	X	a
Linux: Ubuntu 18.04 LTS	No	Yes	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux: CentOS 8.3/8.2	Yes[4]	Yes	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux: CentOS 8.1/8	No	Yes	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux: CentOS 7.9/7.8/7.7/7.6/7.4	No	Yes	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux: CentOS 7.2	No	Yes	---	---	---	---	---	---	X[5]	X[5]	X[5]	X[5]	X[5]	a
VMware vSphere 7 (ESXi 7.0[6])	Yes	Yes	X	X	X	X	X	X	X	X	X	X	X	a,b
VMware vSphere 6.7 (ESXi 6.7[6])	No	Yes	X	X	X	X	X	X	X	X	X	SNV	SNV	a,b
VMware vSphere 6.5 (ESXi 6.5)	No	Yes	X	X	X	X	X	X	X	X	SNV	SNV	SNV	a,b
FreeBSD 13	No	Yes[7]	---	---	---	---	---	---	X	X	X	X	X	a
FreeBSD 12.2	No	Yes[7]	---	---	---	---	---	---	---	---	---	X	X	a
FreeBSD 12.2	No	Yes[7]	---	X	X	X	X	X	X	X	X	X	X	a
FreeBSD 12.1/12/11.4/11.3 / 11.2	No	Yes[7]	X	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
UEFI 2.9/2.8/2.7/2.6/ 2.4/2.3	N/A	N/A	X	X	X	X	X	X	X	X	X	X	X	
Option ROM support (Legacy PXE, x64 UEFI driver)	N/A	N/A	X	X	X	X	X	X	X	X	X	X	X	

Note: a. 64 bit only.
b. Driver available at VMware website.

Notes: 1. The VMware ESXi async drivers are developed by Intel. They are certified, signed, and officially supported by VMware. Releases of these drivers can be obtained through the VMware Compatibility Guide, "IO Devices" section.
2. This was a targeted production release.
3. The out-of-tree Linux driver(s) are only officially supported on the Kernels listed above. The driver(s) might compile successfully on an older kernel back to 3.10, but such configurations are not officially supported.
4. Refer to kernel documentation for detailed information on features supported.
5. RDMA and ADQ are not supported on the same E810 interface. Please refer to Release 26.4 Release Notes for details on current limitations.
6. The VMware ESXi 6.7 and 7.0 icen driver can operate in either Native Mode or Enhanced Network Stack (ENS) Mode starting with CVL 2.0.
7. The FreeBSD ice driver for the E810 utilizes the iflib API.

Table 5. Virtualized Operating Systems Supported for the E810

Virtualized OS	Host OS	PF Driver	Guest OS	Guest OS VF Driver
VMware	ESXi 7.0 (vSphere 7): GA, U1, U2, U3 ESXi 6.7 (vSphere 6.7): GA, U1, U2, U3 ESXi 6.5 (vSphere 6.5): GA, U1, U2, U3	ESXi icen	RHEL 9 RHEL 8.6/8.5/8.4/8.3/8.2/8.1/8 RHEL 7.9/7.8/7.7/7.6/7.5 SLES 15 SP4/SP3/SP2/SP1 SLES 15 SLES 12 SP5/SP4 Ubuntu 20.04/18.04	iavf (Linux)
			Azure Stack HCI (20H2) Windows Server 2019 (20H1) Windows Server 2019 (19H1) Windows Server 2019 Windows Server 2016 Windows Server 2012 R2	iavf (Windows)
Linux	RHEL 9/KVM RHEL 8.6/KVM RHEL 8.5/KVM RHEL 8.4/KVM RHEL 8.3/KVM RHEL 8.2/KVM RHEL 8.1/KVM RHEL 8/KVM RHEL 7.9/KVM RHEL 7.8/KVM RHEL 7.7/KVM RHEL 7.6/KVM RHEL 7.5/KVM SLES 15 SP4/KVM SLES 15 SP3/KVM SLES 15 SP2/KVM SLES 15 SP1/KVM SLES 15/KVM SLES 12 SP5/KVM SLES 12 SP4/KVM Ubuntu 20.04/KVM Ubuntu 18.04/KVM	Linux ice	RHEL 9 RHEL 8.6/8.5/8.4/8.3/8.2/8.1/8 RHEL 7.9/7.8/7.7/7.6/7.5 SLES 15 SP4/SP3/SP2/SP1 SLES 15 SLES 12 SP5/SP4 Ubuntu 20.04/18.04	iavf (Linux)
			Azure Stack HCI (20H2) Windows Server 2019 (20H1) Windows Server 2019 (19H1) Windows Server 2019 Windows Server 2016 Windows Server 2012 R2	iavf (Windows)
			FreeBSD 13 FreeBSD 12.2/12.1/12 FreeBSD 11.4/11.3/11.2	iavf (FreeBSD)

continued...

Virtualized OS	Host OS	PF Driver	Guest OS	Guest OS VF Driver
Windows Hyper-V	Windows Server 2022	Windows icea	RHEL 9 RHEL 8.6/8.5/8.4/8.3/8.2/8.1/8 RHEL 7.9/7.8/7.7/7.6/7.5 SLES 15 SP4/SP3/SP2/SP1 SLES 15 SLES 12 SP5/SP4 Ubuntu 20.04/18.04	iavf (Linux)
			Azure Stack HCI (20H2) Windows Server 2019 (20H1) Windows Server 2019 (19H1) Windows Server 2019 Windows Server 2016 Windows Server 2012 R2	iavf (Windows)
	Windows Server 2019	Windows icea	RHEL 9 RHEL 8.6/8.5/8.4/8.3/8.2/8.1/8 RHEL 7.9/7.8/7.7/7.6/7.5 SLES 15 SP4/SP3/SP2/SP1 SLES 15 SLES 12 SP5/SP4 Ubuntu 20.04/18.04	iavf (Linux)
			Azure Stack HCI (20H2) Windows Server 2019 (20H1) Windows Server 2019 (19H1) Windows Server 2019 Windows Server 2016 Windows Server 2012 R2	iavf (Windows)
	Windows Server 2016	Windows icea	Azure Stack HCI (20H2) Windows Server 2019 (20H1) Windows Server 2019 (19H1) Windows Server 2019 Windows Server 2016 Windows Server 2012 R2	iavf (Windows)

Table 6. Operating Systems Supported for RDMA with the E810

Operating System	In-box/ In-distro	Out-of-tree[1]/ Async[2]	Supported in Release										Notes
			Targeted[3]	25.2 through 25.4	25.5	25.6	26.1	26.3	26.4	26.8	27.1 and 27.2.1	27.5 and 27.6.1	
Azure Stack HCI (20H2)	No	Yes	---	---	---	X	X	X	X	X	X	X	a
Windows Server 2022	No	Yes	---	---	---	---	---	---	---	X	X	X	a
Windows Server 2019 (20H1)	No	Yes	---	---	---	X	X	X	X	X	X	X	a
Windows Server 2019 (19H1)	No	Yes	X	X	X	X	X	X	X	X	X	X	a
Windows Server 2019	No	Yes	X	X	X	X	X	X	X	X	X	X	a
Windows Server 2016	No	Yes	X	X	X	X	X	X	X	X	X	X	a
Linux Kernel LTS 5.15.x/5.10.x/5.4.x/ 4.19.x/4.14.x	No	Yes	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	b
Linux Kernel 5.17.x	Yes	Yes	---	---	---	---	---	---	---	---	---	SNV	b
Linux Kernel 5.12.x	No	Yes	---	---	---	---	---	---	SNV	SNV	SNV	---	b
Linux Kernel 5.11.x	No	Yes	---	---	---	---	---	SNV	SNV	---	---	---	b
Linux: RHEL 9	Yes	Yes	---	---	---	---	---	---	---	---	---	X	b
Linux: RHEL 8.6	Yes	Yes	---	---	---	---	---	---	---	---	---	X	b
Linux: RHEL 8.5	No	Yes	---	---	---	---	---	---	---	SNV	X	X	b
Linux: RHEL 8.4	No	Yes	---	---	---	---	---	---	X	X	X	SNV	b
Linux: RHEL 8.3	No	Yes	---	---	---	X	X	X	X	X	SNV	SNV	b
Linux: RHEL 8.2	No	Yes	SNV	X	X	SNV	SNV	SNV	SNV	SNV	SNV	SNV	b
Linux: RHEL 8.1	No	Yes	SNV	X	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	b
Linux: RHEL 8	No	Yes	X	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	b
Linux: RHEL 7.9	No	Yes	---	---	X	X	X	X	SNV	SNV	SNV	SNV	b
Linux: RHEL 7.8	No	Yes	---	X	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	b
Linux: RHEL 7.7	No	Yes	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	b
Linux: RHEL 7.6 (with OFED 4.17-1 installed)	No	Yes	X	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux: RHEL 7.5 (with OFED 4.17-1 installed)	No	Yes	X	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux: RHEL 7.4 (with OFED 4.17-1 installed)	No	Yes	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	a
Linux: SLES 15 SP4	Yes	Yes	---	---	---	---	---	---	---	---	---	X	b
Linux: SLES 15 SP3	No	Yes	---	---	---	---	---	---	---	SNV	X	SNV	b
Linux: SLES 15 SP2	No	Yes	---	---	X	X	X	X	X	X	SNV	SNV	b
Linux: SLES 15 SP1	No	Yes	X	X	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	b
Linux: SLES 15	No	Yes	X	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	b
Linux: SLES 15 (with OFED 4.17-1 installed)	No	Yes	---	---	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	b
Linux: SLES 12 SP5	No	Yes	---	X	X	X	X	X	SNV	SNV	SNV	SNV	b
Linux: SLES 12 SP4 (with OFED 4.17-1 installed)	No	Yes	---	---	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	b
Linux: SLES 12 SP3 (with OFED 4.17-1 installed)	No	Yes	---	---	SNV	SNV	SNV	SNV	SNV	SNV	SNV	SNV	b

continued...

Operating System	In-box/ In-distro	Out-of-tree[1]/ Async[2]	Supported in Release										Notes
			Targeted[3]	25.2 through 25.4	25.5	25.6	26.1	26.3	26.4	26.8	27.1 and 27.2.1	27.5 and 27.6.1	
Linux: Ubuntu 20.04.4 LTS	No	Yes	---	---	---	---	---	---	---	---	---	X	b
Linux: Ubuntu 20.04.0-3 LTS	No	Yes	---	---	SNV	X	X	X	X	X	X	SNV	b
Linux: Ubuntu 18.04 LTS	No	Yes	X	SNV	SNV	X	X	X	SNV	SNV	SNV	SNV	b
FreeBSD 13/12.2/11.4	No	No	---	---	---	---	X[4]	X[4]	X[4]	X	X	X	a
VMware vSphere 7 (ESXi 7.0 & ESXi 7.0 U1)	No	No	---	---	---	---	X	X	X	X	X	X	a
Debian 11	No	Yes	---	---	---	---	---	---	---	---	---	X	a

Notes:

a. 64 bit only.

b. 64 bit only. Apply the *librdma* patch included in the release to *rdma-core* version mentioned in the irdma README.

1. The out-of-tree Linux driver(s) are only officially supported on the Kernels and distros listed above. The driver(s) might compile successfully on an older kernel back to 3.10, but such configurations are not officially supported.
2. The VMware ESXi async drivers are developed by Intel. They are certified, signed, and officially supported by VMware. Releases of these drivers can be obtained through the VMware Compatibility Guide, "IO Devices" section.
3. This was a targeted production release.
4. Limited Support. DCB and PFC are not supported on earlier releases.

3.0 NVM and Software Compatibility

With Intel® Ethernet Network Adapters, both the firmware (device NVM image) and network drivers are field-serviceable, and the NVM image and network driver are updated as a matched set. Updating the device image and driver together can increase key features including performance, manageability, media types, physical port counts, virtualization, offloads, remote boot options, VLAN support, teaming, and Receive Side Scaling.

The following table lists the sets of NVM images and Intel® Ethernet Controllers software releases that go together, including the DDP package. Intel recommends that you update the NVM and Software Driver to compatible versions.

NOTE

Update to the device driver for given release prior to running the NVM Update tool.

Table 7. Software/NVM Compatibility for the E810

Version	Software Release Version													
	Targeted[1]	25.2	25.3	25.4	25.5	25.6	26.1	26.3	26.4	26.8	27.1	27.2.1	27.5	27.6.1
NVM Version	1.02	2.00/ 2.02	2.10/ 2.12	2.15/ 2.14	2.20/ 2.22	2.30 / 2.32	2.40/ 2.42	2.50/ 2.52	3.00/ 3.02	3.10/ 3.12	3.20/ 3.22	3.20/ 3.22	4.00/ 4.02	4.01/ 4.02
Firmware Version	1.1.16.40	1.4.1.13	1.5.1.5/ 1.5.1.9	1.5.1.5/ 1.5.1.9	1.5.2.8	1.5.3.7	1.5.4.5	1.5.5.6	1.6.0.6	1.6.1.9	1.6.2.9	1.6.2.9	1.7.0.7	1.7.0.7
NVM Update Tool Version	1.34.23.0	1.35.33.4	1.35.42.5	1.35.42.5	1.35.49.2	1.35.57.1	1.35.62.7	1.37.5.1	1.37.13.5	1.37.34.4	1.38.3.7	1.38.3.7	1.39.5.5	1.39.5.5
DDP Default Pipeline Package Version	1.3.4.0	1.3.13.0	1.3.16.0	1.3.16.0	1.3.18.0	1.3.20.0	1.3.24.0	1.3.26.0	1.3.26.0	1.3.27.0	1.3.28.0	1.3.28.0	1.3.30.0	1.3.30.0
icea (Windows)	1.0.128.0	1.4.29.0	1.4.38.0	1.4.38.0	1.5.74.0	1.6.21.0	1.7.29.0	1.8.39.0	1.9.65.0	1.9.65.0	1.9.65.0	1.11.44.0	1.12.144.0	1.12.144.0 For Windows 11: 1.12.145.0
iavf (Windows)[2]	---	1.11.14.1	1.11.14.1	1.11.14.1	1.12.9.0	1.12.9.0	1.12.9.0	1.12.9.0	1.12.9.0	1.12.9.0	1.13.8.0	1.13.8.0	1.13.8.0	1.13.8.0
ice (Linux)	0.12.34	1.0.4	1.1.4	1.1.4	1.2.1	1.3.2	1.4.11	1.5.8	1.6.4/1.6.7	1.7.16	1.8.3	1.8.9	1.9.11	1.9.11
iavf (Linux)[2]	3.9.1	4.0.1	4.0.1	4.0.1	4.0.1	4.0.2	4.1.1	4.1.1	4.2.7	4.3.19	4.4.2	4.4.2.1	4.5.3	4.5.3
irdma (RDMA Linux)	---	1.0.13	1.1.21	1.1.21	1.2.21	1.3.19	1.4.22	1.5.2	1.6.28	1.7.72	1.8.45	1.8.45	1.9.30	1.9.30
icen (ESXi)[3]	1.0.6	1.2.1.0	1.3.3.0	1.3.3.0	1.4.2.0	1.4.2.0[4]	1.5.5.0	1.5.5.0[5]	1.6.2.0	For ESXi 7.0 U2 and U36: 1.7.5.0 For ESXi 7.0 GA and U16 and ESXi 6.7 GA and Updates: 1.7.4.0	For ESXi 7.0 U2 and U3[6]: 1.8.5.0 For ESXi 7.0 GA and U1[6] and ESXi 6.7 GA and Updates: 1.8.4.0	For ESXi 7.0 U2 and U3[6]: 1.8.5.0 For ESXi 7.0 GA and U1[6] and ESXi 6.7 GA and Updates: 1.8.4.0	For ESXi 7.0 U2 and U3[6]: 1.9.3.0 For ESXi 7.0 GA and U1[6] and ESXi 6.7 GA and Updates: 1.9.2.0	For ESXi 7.0 U2 and U3[6]: 1.9.3.0 For ESXi 7.0 GA and U1[6] and ESXi 6.7 GA and Updates: 1.9.2.0

continued...

Version	Software Release Version													
	Targeted[1]	25.2	25.3	25.4	25.5	25.6	26.1	26.3	26.4	26.8	27.1	27.2.1	27.5	27.6.1
										For ESXi 6.5 GA and Updates: 1.7.3.0	For ESXi 6.5 GA and Updates: 1.7.3.0	For ESXi 6.5 GA and Updates: 1.7.3.0	For ESXi 6.5 GA and Updates: 1.9.0.51	For ESXi 6.5 GA and Updates: 1.9.0.51
irdma (RDMA ESXi)	---	---	---	---	1.3.1.20[7]	1.3.1.20[4,7]	1.3.3.0[8]	1.3.3.0[8]	1.3.4.23[8]	1.3.6.0[7]	1.3.8.0	1.3.8.0	1.4.1.0	1.4.1.0
ice (FreeBSD)	0.22.17	0.26.10	0.26.16	0.26.16	0.27.2	0.28.1	0.28.6	0.29.4	1.30.3	1.34.2	1.34.5	1.34.6	1.35.5	1.35.5
irdma (RDMA FreeBSD)	---	---	---	---	---	---	0.0.18[9]	0.0.26[9]	0.0.31[9]	0.0.50[8]	1.0.0	1.0.0	1.0.9	1.0.9
iavf (FreeBSD)	3.0.16	3.0.24	3.0.25	3.0.25	3.0.25	3.0.25	3.0.26	3.0.26	3.0.26	3.0.26	3.0.26	3.0.29	3.0.30	3.0.30
EPCT Version	1.34.23.0	1.35.33.3	1.35.42.0	1.35.42.0	1.35.49.0	1.35.57.1	1.35.62.1	1.37.5.3	1.37.13.3	1.37.34.3	1.38.3.6	1.38.3.6	1.39.5.5	1.39.5.5

Notes:
1. This was a targeted production release.
2. For devices that are AVF compliant as described here (https://www.intel.com/content/www/us/en/products/docs/network-io/ethernet/controllers/ethernet-adaptive-virtual-function-hardware-spec.html), AVF base mode features are supported across
   NVM/PF combinations. Advanced features for VF drivers might require an update to NVM and PF/AVF drivers.
3. Drivers posted in VCG (VMware Compatibility Guide) might differ in version from drivers listed in this document at publication.
4. ESXi drivers have not been updated. No new driver versions are available for Release 25.6.
5. ESXi drivers have not been updated. No new driver versions are available for Release 26.3.
6. A different VMware Native Driver Developer Development Kit (NDDK) was used for the "icen" build starting with VMware ESXi 7.0 U2 and U3.
   To distinguish the drivers using different NDDKs, "icen" builds for VMware 7.0 U2 and U3 are incremented to a higher version compared to VMware 7.0 GA and U1.
7. The driver has not been certified and should only be used for validation purposes.
8. RDMA driver certification and vSAN certification will be post-release.
9. Limited Support. DCB and PFC are not currently supported.

Additionally, the NVM update package that comes with the Intel® Ethernet Controllers Software Release allows updates from older NVM versions. The followng table indicates the version of NVM from which the tool allows updates.

Table 8. NVM Transition Support for the E810

Current (Old) NVM	New NVM (with Associated Tools, and Base Driver Version)[1,2]										
	2.00/ 2.02[3]	2.10/ 2.12[4]	2.15/ 2.14[5]	2.20/ 2.22[6]	2.30/ 2.32[7]	2.40/ 2.42[8]	2.50/ 2.52[9]	3.00/ 3.02[10]	3.10/ 3.12[11]	3.20/ 3.22[12]	4.00/ 4.01/ 4.02[13]
2.00/ 2.02[3]	N/A[14]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2.10/ 2.12[4]	Yes	N/A[14]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2.15/ 2.14[5]	Yes	Yes	N/A[14]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2.20/ 2.22[6]	Yes	Yes	Yes	N/A[14]	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2.30/ 2.32[7]	Yes	Yes	Yes	Yes	N/A[14]	Yes	Yes	Yes	Yes	Yes	Yes
2.40/ 2.42[8]	Yes	Yes	Yes	Yes	Yes	N/A[14]	Yes	Yes	Yes	Yes	Yes
2.50/ 2.52[9]	Yes	Yes	Yes	Yes	Yes	Yes	N/A[14]	Yes	Yes	Yes	Yes
3.00/ 3.02[10]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A[14]	Yes	Yes	Yes
3.10/ 3.12[11]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A[14]	Yes	Yes
3.20/ 3.22[12]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A[14]	Yes
4.00/ 4.01/ 4.02[13]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A[14]

Notes:
1. NVM transition must be done with the Tools and Base Driver from the latest release. Refer to Table 7 on page 22 for supported NVM, Tools, and Base Driver versions.
2. Each step of a NVM transition requires a reboot (PCIe reset).
3. Downgrade from NVM 2.02 to NVM 1.02 is available only on selected devices.
4. Downgrade from NVM 2.12 to NVM 1.02 is available only on selected devices.
5. Downgrade from NVM 2.14 to NVM 1.02 is available only on selected devices.
6. Downgrade from NVM 2.22 to NVM 1.02 is available only on selected devices.
7. Downgrade from NVM 2.32 to NVM 1.02 is available only on selected devices.
8. Downgrade from NVM 2.42 to NVM 1.02 is available only on selected devices.
9. Downgrade from NVM 2.52 to NVM 1.02 is available only on selected devices.
10. Downgrade from NVM 3.02 to NVM 1.02 is available only on selected devices.
11. Downgrade from NVM 3.12 to NVM 1.02 is available only on selected devices.
12. Downgrade from NVM 3.22 to NVM 1.02 is available only on selected devices.
13. Downgrade from NVM 4.02 to NVM 1.02 is available only on selected devices.
14. Updating to same image again is allowed.

NOTE

The MinSRev on your device determines if you can downgrade to an older SRev. For details on how this works, see the *Minimum Security Revision Control for Intel® Ethernet Products Application Note* (Doc ID: 635205).

4.0 DPDK Compatibility

The following table lists the driver, firmware, and package versions recommended for use with the supported DPDK version.

Table 9. DPDK Recommended Matching List

DPDK	Software Release	ice Kernel Driver	iavf Kernel Driver	NVM Version	Firmware	DDP OS Package	DDP Comms Package	DDP Wireless Edge Package
20.05	25.2	1.0.4	4.0.1	2.00	1.4.1.13	1.3.13.0	1.3.17.0	N/A
20.08	25.3 25.4	1.1.4	4.0.1	2.10/2.12 2.15/2.14	1.5.1.5/ 1.5.1.9	1.3.16.0	1.3.20.0	N/A
20.08/20.11[1]	25.5	1.21	4.0.1	2.20/2.22	1.5.2.8	1.3.18.0	1.3.22.0	N/A
20.11[1]/21.02	25.6	1.3.2	4.0.2	2.30/2.32	1.5.3.7	1.3.20.0	1.3.24.0	N/A
	26.1	1.4.11	4.1.1	2.40/2.42	1.5.4.5	1.3.24.0	1.3.28.0	1.3.4.0
21.02[1]/21.05[1]	26.3	1.5.8	4.1.1	2.50/2.52	1.5.5.6	1.3.26.0	1.3.30.0	1.3.6.0
21.05/21.08[1]	26.4	1.6.4/ 1.6.7	4.2.7	3.00/3.02	1.6.0.6	1.3.26.0	1.3.30.0	1.3.6.0
21.11	26.8	1.7.16	4.3.19	3.10/3.12	1.6.1.9	1.3.27.0	1.3.31.0	1.3.7.0
22.03/21.11[1]	27.1/ 27.2.1	1.8.3/ 1.8.9	4.4.2/ 4.4.2.1	3.20/3.22	1.6.2.9	1.3.28.0	1.3.35.0	1.3.8.0
22.03/22.07[1]	27.5/ 27.6.1	1.9.11	4.5.3	4.00/4.01/ 4.02	1.7.0.7	1.3.30.0	1.3.37.0	1.3.10.0

Note: 1. Compatibility testing (basic use case testing including VF).

5.0 Validation - Configuration Maximums

E810 product validation has been limited to the following configuration maximum values. Configurations that operate the device beyond these limits is not supported.

Enterprise Use Cases:

- 1 port: 16 VMs, 16 VF, 1 VF per VM
- 2 ports: 16 VMs total on host, 8 VMs per port, 1 VF per VM

Comms Use Cases:

Use case assumes up to 64 VMs per port, each VM has 2 VFs, bi-directional traffic on these 2 VFs

- 1 port: 64 VMs, 128 VFs, 2 VFs per VM
- 2 ports: 64 VMs total on host, 32 VMs per port, 2 VFs per VM
- 4 ports: 64 VMs total on host, 16 VMs per port, 2 VFs per VM
- 8 ports: 64 VMs total on host, 8 VMs per port, 2 VFs per VM

Cloud Service Provider (CSP) with containers Use Cases:

- Use case assumes up to 256 VFs with SR-IOV, assign them to containers, 1 VF per container

Table 10. Configuration Maximums

Host OS	Max VFs Advertised by Device	Max VFs Validated	Max VMs Validated	Max Containers Validated	Guest OS
Windows	256	128	64	---	Linux, Windows
Linux	256	128	64	256	Linux
ESXi	256	256	28	---	Linux, Windows