



2019 Marvell Product Selector Guide

TOTAL SOLUTIONS FROM MARVELL

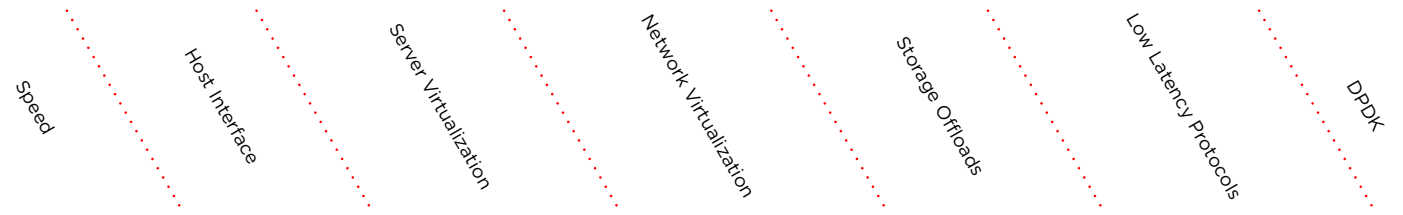
Providing a broad spectrum of solutions across a wide range of market segments.

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FastLinQ Adapters

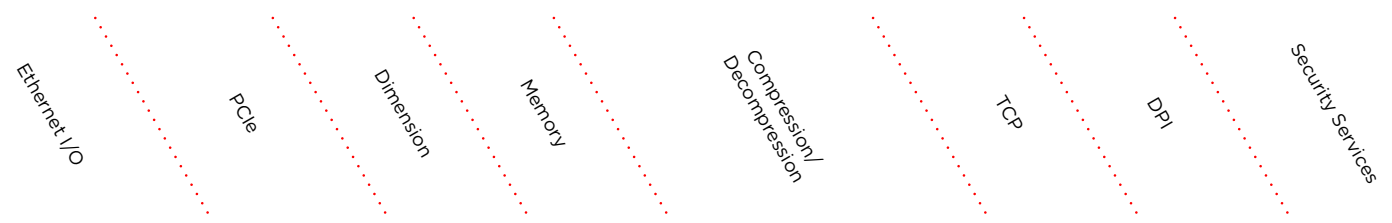
Ethernet Adapters And Controllers



Ethernet NICs							
QLE3400 Series	10	PCIe 3.0	NPAR, SR-IOV	VXLAN, NVGRE, Geneve	N/A	N/A	Yes
QLE8400 Series	10	PCIe 3.0	NPAR, SR-IOV	VXLAN, NVGRE, Geneve	ISCSI, FCoE	N/A	Yes
QLE45000 Series	10, 25, 40, 100	PCIe 3.0	NPAR, SR-IOV	VXLAN, NVGRE, Geneve	ISCSI, FCoE	RoCE, RoCE v2	Yes
QLE41000 Series	10, 25	PCIe 3.0	NPAR, SR-IOV	VXLAN, NVGRE, Geneve	ISCSI, FCoE	RoCE, RoCE v2, iWARP	Yes

LiquidIO

Ethernet Adapters And Controllers



Smart NICs								
CN23XX-210SVPN	2x10GbE SFP+	PCIe Gen 3.0 x8	2.7" x 6.6"	4GB	N/A	N/A	N/A	N/A
CN23XX-210SVPT	2x10GBASE-T	PCIe Gen 3.0 x8	2.7" x 6.6"	4GB	N/A	N/A	N/A	N/A
CN23XX-225SVPN	2x25GbE SFP28	PCIe Gen 3.0 x8	2.7" x 7.25"	8GB	N/A	N/A	N/A	N/A

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Ethernet Adapters And Controllers

Network Appliance Smart NICs

	Ethernet I/O	PCIe	Dimension	Memory	Compression/Decompression	TCP	DPI	Security Services
CN68XX-NIC	4x10GbE / 2x10GbE	PCIe Gen 2.0 x8	4.2" x 10.8"	8GB - 16GB	20 - 40Gbps	20 - 40Gbps	20 - 40Gbps	20 - 40Gbps
CN78XX-NIC	2x40GbE	PCIe Gen 3.0 x8	4.2" x 10.8"	8GB	80 Gbps	80 Gbps	80 Gbps	80 Gbps

Aqion Controllers

Ethernet Adapters And Controllers

	Ports	Speed	Network Interface	Host Interface	Drivers	Energy Efficient Ethernet (EEE)	WakeOnLAN	MACSec@02.1AE	SecureBoot	Package Size	Industrial Temp
AQC100 PCI Express 10G SFI Ethernet MAC controller	1	10G	XFI		Windows, Linux, FreeBSD	Yes	Yes	Yes	No	14x12	No
AQC100S PCI Express 10G SFI Ethernet MAC controller, secure boot enabled	1	10G	XFI		Windows, Linux, FreeBSD, MAC OS	Yes	Yes	Yes	Yes	14x12	No
AQC107 10G/5G/2.5G/1G/100M Ethernet controller	1	10G, 5G, 2.5G, 1G, 100M	BASE-T	PCIe 3.0	Windows, Linux, FreeBSD	Yes	Yes	Yes	No	14x12	Yes
AQC107S 10G/5G/2.5G/1G/100M Ethernet controller, secure boot enabled	1	10G, 5G, 2.5G, 1G, 100M	BASE-T		Windows, Linux, FreeBSD, MAC OS	Yes	Yes	Yes	Yes	14x12	No
AQC108 5G/2.5G/1G/100M Ethernet controller	1	5G, 2.5G, 1G, 100M	BASE-T	PCIe 3.0	Windows, Linux, FreeBSD	Yes	Yes	No	No	14x12	No

Aqtion Controllers

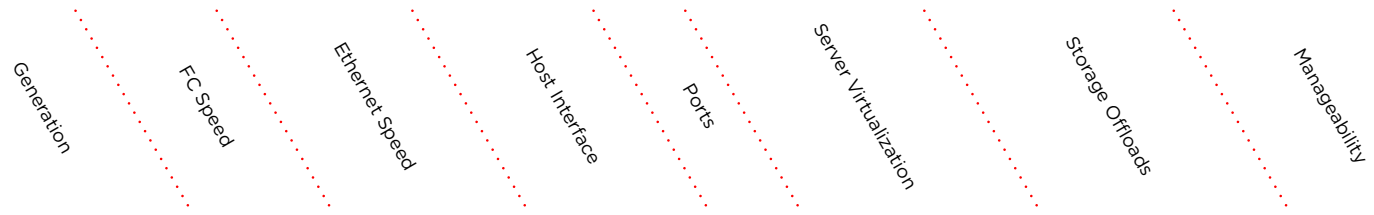
Ethernet Adapters And Controllers		Ports	Speed	Network Interface	Host Interface	Drivers	Energy Efficient Ethernet (EEE)	WakeOnLAN	MACsec(802.1AE)	SecureBoot	Package Size	Industrial Temp
AQC111C	5G/2.5G/1G/100M Ethernet controller	1	5G, 2.5G, 1G, 100M	BASE-T	PCIe 3.0	Windows, Linux, FreeBSD	Yes	Yes	No	No	9x9	No
AQC112C	2.5G/1G/100M Ethernet controller	1	2.5G, 1G, 100M	BASE-T	PCIe 3.0	Windows, Linux, FreeBSD	Yes	Yes	No	No	9x9	No
AQC111U-B0-C	5G/2.5G/1G/100M USB controller	1	5G, 2.5G, 1G, 100M	BASE-T	USB 3.1, Gen 1	Windows, Linux, FreeBSD, MAC OS	Yes	Yes	No	No	14x12	No
AQC112U-B0-C	2.5G/1G/100M USB controller	1	2.5G, 1G, 100M	BASE-T	USB 3.1, Gen 1	Windows, Linux, FreeBSD, MAC OS	Yes	Yes	No	No	14x12	No

Aqtion Adapters

Ethernet Adapters And Controllers		Ports	Speed	Network Interface	Host Interface	Drivers	WakeOnLAN	Dimension (w/o bracket)
AQN-100-104-SFA	x4 PCIe SFP+ 10G adapter (full height with spare half height bracket)	1	10G	BASE-T	PCIe 3.0	Windows, Linux, FreeBSD	Yes	3.23 in x 2.43 in
AQN-107-124-SBA	x4 PCIe 10G/5G/2.5G/1G/100M adapter (full height with spare half height bracket)	1	10G, 5G, 2.5G, 1G, 100M	BASE-T	PCIe 3.0	Windows, Linux, FreeBSD	Yes	2.72 in x 3.18 in
AQN-108-121-SBA	x1 PCIe 5G/2.5G/1G/100M adapter (full height bracket with spare half height bracket)	1	5G, 2.5G, 1G, 100M	BASE-T	PCIe 3.0	Windows, Linux, FreeBSD	Yes	2.72 in x 3.18 in

Adapters

Fibre Channel

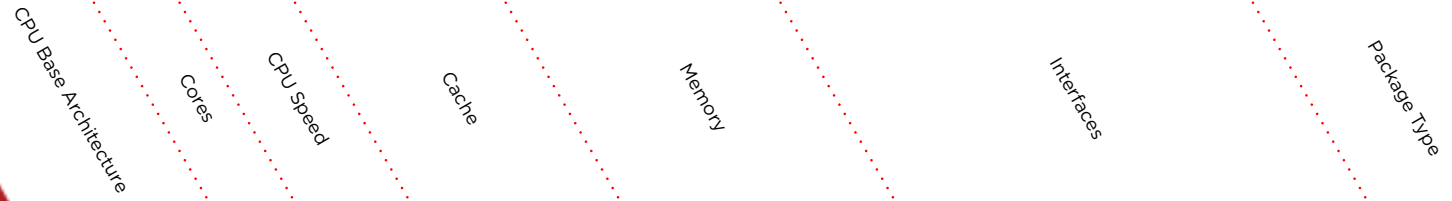


QLogic Adapters

	Generation	FC Speed	Ethernet Speed	Host Interface	Ports	Server Virtualization	Storage Offloads	Manageability
2500 Series	N/A	8/4/2	N/A	PCIe 2.0	1, 2, 4	NPIV	FCP, FC-VI	QCC
2670 Series	Gen5	16/8/4	N/A	PCIe 3.0	1, 2	NPIV	FCP, FC-VI	QCC
2690 Series	Enhanced Gen5	16/8/4	N/A	PCIe 3.0	1, 2, 4	NPIV	FCP, FC-VI	QCC, StorFusion
2700 Series	Gen6	32/16/8	N/A	PCIe 3.0	1, 2, 4	NPIV	FCP, FC-VI	QCC, StorFusion
1800 Series	Gen5	16/8/4	10	PCIe 2.0	1, 2	NPIV	FCP, FC-VI, FCoE	QCC
8300 Series	Gen5	16/8/4	10	PCIe 3.0	1, 2	NPIV, NPAR, SRIOV	FCP, FC-VI, FCoE, ISCSI	QCC

Embedded Processors

Infrastructure Processors



Octeon-TX							
	CPU Base Architecture	Cores	CPU Speed	Cache	Memory	Interfaces	Package Type
Octeon-TX CN83XX	ARM®v8 Octeon TX	8-24	Up to 2.0 GHz	L1: 78K/32K; L2: 8MB	2 x 72-bit DDR3/4 + ECC	XLAUI; XFI, 10G-KR, XAUI; QSGMII; PCIe3; USB 3.0; UART; SATA 3.0	2601 FCBGA
Octeon-TX CN82XX	ARM®v8 Octeon TX	8-12	Up to 1.8 GHz	L1: 78K/32K; L2: 8MB	72-bit DDR3/4 + ECC	XLAUI; XFI, 10G-KR, XAUI; QSGMII; PCIe3; USB 3.0; UART; SATA 3.0	2601 FCBGA
Octeon-TX CN81XX	ARM®v8 Octeon TX	2-4	Up to 2.0 GHz	L1: 78K/32K; L2: 2MB	36 or 72-bit DDR3/4 with ECC	XFI; KR; Q/SGMII; RXAUI; SATA 3.0; USB 3.0; PCIe Gen3	676 FCBGA
Octeon-TX CN80XX	ARM®v8 Octeon TX	2-4	Up to 1.5 GHz	L1: 78K/32K; L2: 2MB	36-bit DDR3/4 with ECC	XFI; KR; Q/SGMII; RXAUI; SATA 3.0; USB 3.0; PCIe Gen3	676 FCBGA / 555 FCBGA
Octeon III							
Octeon III CN78XX	onMIPS	24-48	Up to 2.0 GHz	L1: 78K/32K; L2: 16MB	4 x 72-bit DDR3 2133 MHz/DDR4 2400 MHz	XLAUI; XAUI/Dual XAUI; KR/XFI; SGMII; PCIe3; USB 3.0; UART; SATA 3.0	2601 FCBGA
Octeon III CN77XX	onMIPS	16-24	Up to 2.0 GHz	L1: 78K/32K; L2: 16MB	2 x 72-bit DDR3 2133 MHz/DDR4 2400 MHz	XLAUI; XAUI/Dual XAUI; KR/XFI; SGMII; PCIe3; USB 3.0; UART; SATA 3.0	2601 FCBGA
Octeon III CN73XX	onMIPS	8-16	Up to 2.0 GHz	L1: 78K/32K; L2: 4MB	2 x 64-bit DDR3/DDR4 at max 2400 MTS	XLAUI, XAUI/Dual XAUI, RXAUI, KR/XFI, SGMII, RGMII; PCIe3; USB 3.0; UART; SATA 3.0	1676 FCBGA
Octeon III CN72XX	onMIPS	4-8	Up to 2.0 GHz	L1: 78K/32K; L2: 4MB	1 or 2 x 64-bit DDR3/DDR4 at max 2400 MTS	XLAUI, XAUI/Dual XAUI, RXAUI, KR/XFI, SGMII, RGMII; PCIe3; USB 3.0; UART; SATA 3.0	1676 FCBGA
Octeon III CN71XX	onMIPS	2-4	Up to 1.6 GHz	L1: 78K/32K; L2: 512KB	36 - bit DDR3/4 with ECC	QSGMII, SGMII, RGMII; PCIe3.0; USB 3.0; UART; SATA 3.0	640 PBGA
Octeon III CN70XX	onMIPS	1-2	Up to 1.2 GHz	L1: 78K/32K; L2: 512KB	36 - bit DDR3/4 with ECC	QSGMII, SGMII, RGMII; PCIe3.0; USB 3.0; UART; SATA 3.0	640 PBGA
ARMADA							
ARMADA 7K	ARM®v8 Cortex A72	4	Up to 1.4 GHz	L1: 48KB/32KB; L2: 1MB; L3: 1MB	32-bit DDR4 with ECC	SGMII/HSGMII/RGMII; XAUI/RXAUI/KR/XFI; PCIe3; USB 3.0; UART; SATA 3.0	429L-FCBGA

Embedded Processors

Infrastructure Processors	CPU Base Architecture	Cores	CPU Speed	Cache	Memory	Interfaces	Package Type
	ARMADA 38x	ARM®v7 Cortex A9	1-2	Up to 2.0 GHz	L1: 32KB/32KB; L2: 1MB	16/32-bit DDR3/ DDR4 + ECC	SGMII/QSGMII/RGMII/MII; PCIev2; USB 3.0; UART; SATA 3.0
ARMADA 3700	ARM®v8 Cortex A53	1-2	Up to 1.2 GHz	L1: 32KB/32KB; L2: 256KB	8/16 bit DDR3/3L/4	SGMII/QSGMII; PCIev2; USB 3.0; UART; SATA 3.0	271L TFBGA

Base Station Processors

Infrastructure Processors	Cores	CPU Speed	L2 Cache	Interfaces	Package
	Octeon Fusion-M				
CNF7130	4	450MHz - 1.4GHz	1MB	SGMII/PCIe 2.0/USB/JESD 207p	772 HFCBGA
CNF73XX	8	1GHz - 1.2GHz	4MB	CPRI, JESD204B, JESD207P, 10GE, SRIO, SGMII, PCIe v3.0	1681 HFCBGA
CNF74XX	8	1GHz - 1.8GHz	4MB	CPRI, JESD204B, JESD207P, 10GE, SRIO, SGMII, PCIe v3.0	1681 HFCBGA
CNF75XX	16	1GHz - 1.8GHz	4MB	CPRI, JESD204B, JESD207P, 10GE, SRIO, SGMII, PCIe v3.0	1681 HFCBGA

LiquidSecurity

Security

Part Numbers
Form Factor
FIPS Boundary
Supported Partitions
2048b RSA ops/sec
Key Store

Hardware Security Modules						
CNL35XX-APL-HSM	CNL35XX-APL-HSM	1U Appliance	At Chassis	16 - 32	10K - 35K	20K - 100K
CNL35XX-APL-Sec	CNL35XX-APL-Sec	1U Appliance	At PCIe Adapter	16 - 32	10K - 35K	20K - 100K
CNL35XX-NFBE	CNL35XX-NFBE	PCIe Adapter	At PCIe Adapter	16 - 32	10K - 35K	20K - 100K

NITROX

Security

Part Numbers
Interface
Dimensions
Package
Bulk Throughput
RSA 2048-bit EXP
ECC p256 Ops
Compression

NITROX XL Adapters								
CNN55XX-NHB	CNN55XX-NHB	Up to PCIe Gen 3 x16	2.1" x 6.6"	N/A	15Gbps - 100Gbps	20K - 130K	45K - 300K	15Gbps - 100Gbps
CNN35XX-NHB4	CNN35XX-NHB4	PCIe Gen 3.0 x8	2.1" x 12.1"	N/A	60Gbps	140K	50K	60Gbps
CNN35XX-NHB	CNN35XX-NHB	PCIe Gen 2.0 x8	2.1" x 6.6"	N/A	5Gbps - 40Gbps	6K - 41K	2K - 12K	5Gbps - 20Gbps
NITROX XL FIPS Adapters								
CNN35XX-NFBE	CNN35XX-NFBE	PCIe Gen 2.0 x8	2.1" x 6.6"	N/A	10Gbps	10K - 35K	3.5K - 12K	N/A

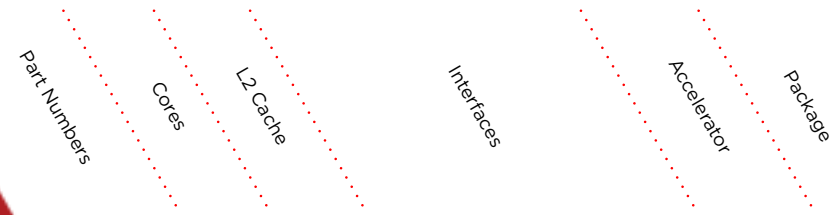
NITROX

Security

	Part Numbers	Interface	Dimensions	Package	Bulk Throughput	RSA 2048-bit EXP	ECC p256 Ops	Compression
CN16XX-NFBE	CN16XX-NFBE	PCIe Gen 2.0 x4	2.1" x 6.6"	N/A	5Gbps	2K - 9K	750 - 3K	N/A
NITROX Security Processors								
CNN55XX	CNN55XX	Up to 2 PCIe Gen 3 x8; Up to 2 8x 10G ILK	N/A	676 FCBGA	15Gbps - 100Gbps	20K - 130K	45K - 300K	15Gbps - 100Gbps
CNN35XX	CNN35XX	Up to PCIe Gen 2 x16	N/A	676 FCBGA	5Gbps - 40Gbps	6K - 41K	2K - 12K	5Gbps - 20Gbps

ThunderX

Server Processors



ThunderX ARMv8 Processors

<p>ThunderX_CP Workload Optimized® ARMv8 Processors - High Performance Compute - ThunderX_CP™ Family of Workload Optimized Compute Processors</p>
<p>ThunderX_NT Workload Optimized® ARMv8 Processors - High Performance Networking - ThunderX_NT™ Family of Network Centric Workload Optimized Processors</p>
<p>ThunderX_ST Workload Optimized® ARMv8 Processors - Storage - ThunderX_ST™ Family of Workload Optimized Storage Processors</p>
<p>ThunderX_SC Workload Optimized® ARMv8 Processors - Secure Compute & Secure Networking - ThunderX_SC™ Family of Workload Optimized Secure Processors</p>

CN88XX-CP	Up to 96	16MB	10G/40G, SATA3, PCIe Gen3	Compute	2601 BGA
CN88XX-NT	Up to 96	16MB	10G/40G, SATA3, PCIe Gen3, Network fabric	Networking	2601 BGA
CN88XX-ST	Up to 96	16MB	10G/40G, SATA3, PCIe Gen3	Storage	2601 BGA
CN88XX-SC	Up to 96	16MB	10G/40G, SATA3, PCIe Gen3	Security	2601 BGA

ThunderX Evaluation/Reference Boards

CN8800-1S-128G-CDK
CN8800-2S1N-128G-CDK
CN8800-2S4N-128G-CDK

SATA Storage Controllers

Storage Switching

Part Numbers
Port Count
Bus Type
Queuing
Port Multiplier Support
Flash
Marvell Firmware
Power
Package Size
Package Type
I-Temp
Ball Pitch
Evaluation Board Part Number

<p>88SE9345 PCIe 2.0x4 to 4 SATA 6Gb/s Ports Without RAID</p>	88SE9345	4S	PCI-Express 2.0x4	Tag and Native Command	Yes	Flash BIOS I/F	N/A	-5W	19mm x 19mm	481-TFBGA	No	0.8mm	EV1-88SE9345
<p>88SE9230 PCIe 2.0x2 to 4 SATA 6Gb/s Ports RAID Controller</p>	88SE9230	4S	PCI-Express 2.0x2	Tag and Native Command	FIS-Based	Flash BIOS I/F	HW RAID 0/1	1w	9mm x 9mm	76-QFN	No	0.4mm	EV1-88SE9230
<p>88SE9235 PCIe 2.0x2 to 4 SATA 6Gb/s Ports Without RAID</p>	88SE9235	4S	PCI-Express 2.0x2	Tag and Native Command	FIS-Based	Flash BIOS I/F	N/A	1w	9mm x 9mm	76-QFN	Yes	0.4mm	EV1-88SE9235
<p>88SE9215 PCIe 2.0x1 to 4 SATA 6Gb/s Ports Without RAID</p>	88SE9215	4S	PCI-Express 2.0x1	Tag and Native Command	FIS-Based	Flash BIOS I/F	N/A	1w	9mm x 9mm	76-QFN	Yes	0.4mm	EV1-88SE9215
<p>88SE9170 PCIe 2.0x1 to 2 SATA 6Gb/s Ports Without RAID</p>	88SE9170	2S	PCI Express 2.0 x1	Tag and Native Command	FIS-Based	Flash BIOS I/F	N/A	0.8w	7mm x 7mm	56-QFN	Yes	0.4mm	EV1-88SE9170
<p>88SE9182 PCIe 2.0x2 to 2 SATA 6Gb/s Ports Without RAID</p>	88SE9182	2S	PCI-Express 2.0x2	Tag and Native Command	FIS-Based	Flash BIOS I/F	N/A	0.8w	7mm x 7mm	56-QFN	Yes	0.4mm	EV1-88SE9182
<p>88SE1475 PCIe 3.0x8 to 16 SATA 6Gb/s Ports Without RAID</p>	88SE1475	16S	PCI-Express 3.0 x8	Tag and Native Command	FIS-Based	Flash BIOS I/F	N/A	9W	21mm x 21mm	625 HFCBGA	No	0.8mm	EV1-88SE1475
<p>88SE9171 PCIe 2.0x1 to 1 SATA 6Gb/s Port</p>	88SE9171	1S	PCI-Express 2.0x1	Tag and Native Command	FIS-Based	Flash BIOS I/F	N/A	0.8w	7mm x 7mm	56-QFN	Yes	0.4mm	EV1-88SE9171

SAS/SATA Storage Controllers

Storage Switching

	Part Numbers	Port Count	Bus Type	Queueing	SAS Expander Support	Flash	Target Mode	Marvell RAID Software	Power	Package Size	Package Type	I-Temp	Ball Pitch	Evaluation Board Part Number
88RC9580 PCIe 2.0x8 to 8 SAS/SATA 6Gb/s Ports RAID Controller	88RC9580	8	PCI-Express 2.0 x8	Tag and Native Command	Yes	Flash BIOS I/F	Yes	N/A	-8W	27mm x 27mm	676-FCBGA	No	1.0mm	DB1-88RC9580
88SE9485 PCIe 2.0 x8 to 8 SAS/SATA 6Gb/s Ports I/O Controller	88SE9485	8	PCI-Express 2.0 x8	Tag and Native Command	Yes	Flash BIOS I/F	No	N/A	-6W	23mm x 23mm	484-HSBGA	No	1.0mm	HA2VA6800m-RC1Vxx
88SE9445 PCIe 2.0 x4 to 4 SAS/SATA 6Gb/s Ports I/O Controller	88SE9445	4	PCI-Express 2.0 x4	Tag and Native Command	Yes	Flash BIOS I/F	Yes	N/A	-5W	19mm x 19mm	481-TFBGA	No	0.8mm	EV1-88SE9445
88SE1495 PCIe 3.0x8 to 16 Ports 12Gb/s SAS or 6Gb/s SATA Without RAID	88SE1495	16	PCI-Express 3.0 x8	Tag and Native Command	Yes	Flash BIOS I/F	Yes	N/A	9.5W	21mm x 21mm	625 HFCBGA	No	0.8mm	EV1-88SE1485
88SE1485 PCIe 3.0x8 to 8 Ports 12Gb/s SAS or 6Gb/s SATA Without RAID	88SE1485	8	PCI-Express 3.0 x8	Tag and Native Command	Yes	Flash BIOS I/F	Yes	N/A	7.5W	21mm x 21mm	625 HFCBGA	No	0.8mm	EV1-88SE1485

SATA Port Multiplier/Multiplexer

Storage Switching

	Part Numbers	Port Count	Data Rate	Power	Package Size	Package Type	I-Temp	Evaluation Board Part Number
88SM9715 1 Port to 5 Port 6Gb/s SATA Port Multiplier With Enclosure Management	88SM9715	6	SATA 6Gb/s	0.88W	10mm x 10mm	84-QFN	Yes	EV1-88SM9715

SATA Port Multiplier/Multiplexer

Storage Switching

	Part Numbers	Port Count	Data Rate	Power	Package Size	Package Type	I-Temp	Evaluation Board Part Number
88SM9705 1 Port to 5 Port 6Gb/s SATA Port Multiplier	88SM9705	6	SATA 6Gb/s	0.88W	10mm x 10mm	84-QFN	Yes	EV1-88SM9705
88SM9602 1 Port to 2 Port 6Gb/s SATA Port	88SM9602	3	SATA 6Gb/s	0.50W	6mm x 6mm	48-MQFN	No	EV1-88SM9602
88SM4140 1:4 Serial ATA 3Gb/s Port Multiplier	88SM4140	5	SATA 3Gb/s	1.6W	12mm x 12mm	80-LQFP	No	DB1-88SM4140C1-8087

SATA Bridge

Storage Switching

	Part Numbers	Port Count	Data Rate	Power	Package Size	Package Type	I-Temp	Evaluation Board Part Number
88SA8052 SATA/PATA Bridge	88SA8052	Host or Device	SATA 3Gb/s to PATA 133	0.25W	9mm x 9mm	64-QFN	Yes (QFN)	DB-88SA8052-D, DB-88SA8052-H

SAS to SATA Protocol Converter

Storage Switching

	Part Number	SAS Port	SATA port	Data Rate	Internal Flash	Power	Package Size	Package Type	I-Temp	Evaluation Board Part Number
88SF9210 6Gb/s SAS to SATA Protocol Converter	88SF9210	2	2	SAS/SATA 6.0 Gb/s	N/A	1.35W	10mm x 10mm	84-QFN	No	DB1-88SF9210
88SF9110 6Gb/s SAS to SATA Protocol Converter	88SF9110	2	1	SAS/SATA 6.0 Gb/s	N/A	1.20W	10mm x 10mm	84-QFN	No	DB1-88SF9110

Link Street® - Fast Ethernet Switches

SOHO Switching	Port Configuration	Number of Ports	USXGMII / XFI	2.5G	Number of (R)XAUI	SGMII / 100Base X	GMI	RGMI	MII	RMII	100Base T	100Base T	100Base FX
88E6020 4-Port FE Switch	2 PHYs 2 MII/RMII	4	0	0	0	0	0	1	2	2	2	0	1
88E6070 5-Port FE Switch	5 PHYs	5	0	0	0	0	0	0	0	0	5	0	1
88E6071 5-Port FE Switch	5 PHYs 2 RMII (or 1 MII/RGMII)	7	0	0	0	0	0	2	1	2	5	0	1
88E6085 10-Port FE Switch	8 PHYs 2 MII	10	0	0	0	0	0	0	2	0	8	0	0
88E6065/B 6-Port FE Switch	5 PHYs 1 MII or 4 PHYs 2 MII	6	0	0	0	0	0	0	2	2	5	0	2

Link Street® - Fast Gigabit Ethernet Switches

SOHO Switching	Port Configuration	Number of Ports	USXGMII / XFI	2.5G	Number of (R)XAUI	SGMII / 100Base X	GMI	RGMI	MII	RMII	100Base T	100Base T	100Base FX
88E6046 6-Port FE+GE Switch	4 FE PHYs GMII/RGMII/SGMII	6	0	0	0	2	1	0	2	0	4	0	0

Link Street® - Fast Gigabit Ethernet Switches

SOHO Switching

Port Configuration	Number of Ports	USXGMII / XFI	2.5G	Number of (R)XAUI	SGMII / 100Base X	GMII	RGMII	MII	RMII	100Base T	100Base T	100Base FX	
88E6240 7-Port FE+GE Switch	4 FE PHYs 1 GE PHY 1 SerDes 1 RGMII/MII/RMII 1 GMII/RGMII/MII/RMII	7	0	0	0	1	1	2	2	2	5	1	1
88E6097 11-Port FE+GE Switch	8 FE PHYs GMII/RGMII/SGMII	11	0	0	0	3	1	1	2	0	8	0	0
88E6097F 11-Port FE+GE Switch	8 FE PHYs GMII/RGMII/SGMII	11	0	0	0	3	2	1	2	0	8	0	8
88E6290 11-Port AVB FE+GE Switch	8 FE PHYs 1 RGMII/MII/RMII 2 2.5G SerDes/SGMII	11	0	2	0	2	0	1	1	1	8	0	0

Link Street® - Gigabit Ethernet Switches

SOHO Switching

Port Configuration	Number of Ports	USXGMII / XFI	2.5G	Number of (R)XAUI	SGMII / 100Base X	GMII	RGMII	MII	RMII	100Base T	100Base T	100Base FX	
88E6341 6-Port AVB GE Switch	4 GE PHYs 1 RGMII/MII/RMII 1 2.5G/1G SERDES	6	0	1	0	1	0	1	1	1	4	4	0
88E6155 6-Port GE Switch	6 SerDes or 5 SerDes 1 GMII	6	0	0	0	6	1	0	1	0	0	0	0

Link Street® - Gigabit Ethernet Switches

SOHO Switching

Port Configuration
Number of Ports
USXGMII / XFI
2.5G
Number of (R)XAUI
SGMII / 100Base X
GMII
RGMII
MII
RMII
100Base T
1000Base T
100Base FX

88E6352 7-Port AVB GE Switch	5 GE PHYs 1 SerDes 1 RGMII/MII/RMII 1 GMII/ RGMII/MII/RMII	7	0	0	0	1	1	2	2	2	5	5	1
88E6321 7-Port AVB GE Switch	2 GE PHYs 3 RGMII/MII/ RGMII 2 SerDes/SGMII	7	0	0	0	2	1	3	3	3	2	2	2
88E6185 10-Port GE Switch	10 SerDes or 9 SerDes 1 GMII	10	0	0	0	10	1	0	1	0	0	0	0
88E6390 11-Port AVB GE Switch, 8 GE PHYs + 1 RGMII/MII/RMII + 2 2.5G SerDes/SGMII	8 GE PHYs 1 RGMII/MII/ RMII 2 2.5G SerDes/SGMII	11	0	2	0	2	0	1	1	1	8	8	0
88E6122 6-Port GE Switch	2 GE PHYs 3 SerDes 1 GMII	6	0	0	0	3	1	0	1	0	2	2	3
88E6131 8-Port GE Switch	3 GE PHYs 4 SerDes 1 GMII	8	0	0	0	4	1	0	1	0	3	3	4

Link Street® - Gigabit 10G Ethernet Switches

SOHO Switching

Port Configuration
Number of Ports
USXGMII / XFI
5G SerDes
2.5G
Number of (R)XAUI
SGMII / 100Base X
GMII
RGMII
MII
RMII
100Base T
1000Base T
100Base FX

88E6390X 11-Port AVB GE+10G Switch	8 GE PHYs 1 RGMII/ MII/RMII 2 XAUI/ RXAUI	11	0		2	2	8	0	1	1	1	8	8	0
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Presteria DX

Switching

Part Numbers
 Port Configuration
 Type
 Evaluation Boards
 Number of Ports
 Package Size
 Package Type
 I-Temp

DX Series

Presteria-DX107 10-Port Gigabit Ethernet Packet Processor	98DX107-xx-LKJ	10 SGMII	Layer 2/3	DB-DX107-10G, RD-DX107-48F4G	10	14mm x 20mm	128-LQFP	Yes
Presteria-DX160 16-Port Gigabit Ethernet Packet Processor	98DX160-xx	16 SGMII	Layer 2	RD-DX240-24G	16	31mm x 31mm	458-HSBGA	
Presteria-DX167 16-Port Gigabit Ethernet Packet Processor	98DX167-xx	16 SGMII	Layer 2/3	RD-DX247-24G	16	31mm x 31mm	458-HSBGA	Yes
Presteria-DX240 24-Port Gigabit Ethernet Packet Processor	98DX240-xx	24 SGMII	Layer 2	RD-DX240-24G	24	31mm x 31mm	458-HSBGA	
Presteria-DX249 24-Port Gigabit Ethernet with 2 HX Ports Packet Processor	98DX249-xx	24 SGMII, 2 HX	Layer 2	DB-DX249-24G-2HX	26	31mm x 31mm	480-HSBGA	
Presteria-DX253 24-Port Gigabit Ethernet Packet Processor	98DX253-xx	24 SGMII	Layer 2/3	DB-DX273-24G3XG, RD-DX273-48G2XG	24	37.5mm x 37.5mm	788-HSBGA	Yes
Presteria-DX269 24-Port Gigabit Ethernet with 2 HX/HGS Ports Packet Processor	98DX269-xx	24 SGMII, 3 HX/XAUI	Layer 2	DB-DX269-24G-2HX-IB	27	37.5mm x 37.5mm	788-HSBGA	
Presteria-DX273 24-Port Gigabit Ethernet with 3 HGS Ports Packet Processor	98DX273-xx	24 SGMII, 3 XAUI	Layer 2/3	DB-DX273-24G3XG, RD-DX273-48G2XG	27	37.5mm x 37.5mm	788-HSBGA	
Presteria-DX5128 24-Port Gigabit Ethernet with 4 10GE Ports Packet Processor	98DX5128-xx	24 SGMII, 4 XAUI	Layer 3	DB-DX3-6XG-4HGS, RD-DX3-48GE-4HGS	28	35mm x 35mm	1138-FCBGA	-

Presteria DX

Switching

Part Numbers
 Port Configuration
 Type
 Evaluation Boards
 Number of Ports
 Package Size
 Package Type
 I-Temp

<p>Presteria-DX8110 10-Port 10Gigabit Ethernet Packet Processor</p>	98DX8110-xx	10 XAU1	Layer 3	DB-DX3-6XG-4HGS, RD-DX3-48GE-4HGS	10	35mm x 35mm	1138-FCBGA	
<p>Presteria-DXx24 24-Port Gigabit Ethernet Packet Processor</p>	98DX324-A0-LKJ2C000, 98DX224-A0-LKJ2C000	6 QSGMII	Layer 2	RD-DX-24G-A RD-DX-22GE2C-A	24	14mm x 20mm	LQFP	No
<p>Presteria-DXx16 16-Port Gigabit Ethernet Packet Processor</p>	98DX316-A0-LKJ2C000, 98DX216-A0-LKJ2C000	4 QSGMII	Layer 2	RD-DX-16UNM	16	14mm x 20mm	LQFP	No
<p>Presteria-DXx08 8-Port Gigabit Ethernet Packet Processor</p>	98DX308-A0-LKJ2C000, 98DX208-A0-LKJ2C000	2 QSGMII	Layer 2	RD-DX-8G-A	8	14mm x 20mm	LQFP	No

Alaska C Ethernet

Transceivers

Number of Ports
Optical (Line)
MACSec (LinkCrypt)
1-Temp
1-Step PTP (1588 v2)
2-Step PTP
SyncE
Supported Speeds
Host Interfaces
Optical Interface
Optical Module Types
Direct Attach Copper
Energy Efficient Ethernet
Core Voltage
Digital I/O
Analog Voltage
Reference Clock
JTAG
Package Type

Alaska C 88X5113

1	Yes	No	Yes	No	No	Yes	100G, 50G, 25G, 10G, 1G	CAUI-4, XLAUI, XFI	100G, 40G, 25G, 10G, 1G	BASE-R, BASE-R4, 40GBASE-R	Yes	No	0.9V (C-temp), 0.9V (I-temp)	1.0V	1.0V/1.5V/1.8V/2.5V/3.3V	156.25 MHz	Yes	169-FCBGA
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Alaska C 88X5123

2	Yes	No	Yes	No	No	Yes	100G, 50G, 25G, 10G, 1G	CAUI-4, XLAUI, XFI	100G, 40G, 25G, 10G, 1G	BASE-R, BASE-R4, 40GBASE-R	Yes	No	1.0V	1.2V/1.8V/2.5V	1.0V	156.25 MHz	Yes	256-HFCBGA
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Alaska M Multi-Gigabit Ethernet

Transceivers

Number of Ports
Optical (Line)
MACSec (LinkCrypt)
1-Temp
1-Step PTP (1588 v2)
2-Step PTP
SyncE
BASE-T Speeds (Copper)
Host Interfaces
Optical Interface
Optical Module Types
Direct Attach Copper
Energy Efficient Ethernet
Core Voltage
Digital I/O
Analog Voltage
Reference Clock
JTAG
Package Type

88E2180

Octal EEE 10/100/1G/2.5G/5GBASE-T PHY

8	No	No	Yes	No	No	Yes	5G, 2.5G, 1G, 100M, 10M	USXGMII-M, XFI, 5GBASE-R, 2500BASE-X, SGMII	No	No	No	Yes	0.80V	1.2V/1.5V/1.8V/2.5V/3.3V	1.5V, 1.8V, 3.3V	50, 156.25 MHz	Yes	529-HFCBGA
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88E2110

Single EEE 10/100/1G/2.5G/5GBASE-T PHY

1	No	No	Yes	No	No	Yes	5G, 2.5G, 1G, 100M, 10M	USXGMII-M, XFI, 5GBASE-R, 2500BASE-X, SGMII	No	No	No	Yes	0.80V	1.2V/1.5V/1.8V/2.5V/3.3V	1.5V, 1.8V, 3.3V	50, 156.25 MHz	Yes	104-HFCBGA
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88E2040P

Quad EEE 10/100/1G/2.5G/5GBASE-T PHY with MACSec, PTP

4	No	Yes	Yes	Yes	Yes	Yes	5G, 2.5G, 1G, 100M, 10M	USXGMII, XFI, RXAUI, 5GBASE-R, 2500BASE-X, SGMII	No	No	No	Yes	0.80V	1.2V/1.5V/1.8V/2.5V/3.3V	1.5V, 1.8V/2.0V, 2.3V/2.5V	50, 156.25 MHz	Yes	484-HFCBGA
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88E2040L

Quad EEE 10/100/1G/2.5G/5GBASE-T PHY

4	No	No	Yes	No	No	Yes	5G, 2.5G, 1G, 100M, 10M	USXGMII, XFI, RXAUI, 5GBASE-R, 2500BASE-X, SGMII	No	No	No	Yes	0.80V	1.2V/1.5V/1.8V/2.5V/3.3V	1.5V, 1.8V/2.0V, 2.3V/2.5V	50, 156.25 MHz	Yes	484-HFCBGA
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Alaska M Multi-Gigabit Ethernet

Transceivers

Number of Ports
Optical (Line)
MACSec (LinkCrypt®)
I-Temp
1-Step PTP (1588 v2)
2-Step PTP
SyncE
BASE-T Speeds (Copper)
Host Interfaces
Optical Interface
Optical Module Types
Direct Attach Copper
Energy Efficient Ethernet
Core Voltage
Digital I/O
Analog Voltage
Reference Clock
JTAG
Package Type

88E2010P
Single EEE 10/100/1G/2.5G/5GBASE-T PHY with MACSec, PTP

1	No	Yes	Yes	Yes	Yes	Yes	Yes	5G, 2.5G, 1G, 100M, 10M	USXGMII, XFI, RXAUI, 5GBASE-R, 2500BASE-X, SGMII	No	No	No	Yes	0.80V	1.2V/1.5V/1.8V/2.5V/3.3V	1.5V, 1.8V/2.0V, 2.3V/2.5V	50, 156.25 MHz	Yes	168-HFCBGA
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88E2010
Single EEE 10/100/1G/2.5G/5GBASE-T PHY

1	No	No	Yes	No	No	Yes	Yes	5G, 2.5G, 1G, 100M, 10M	USXGMII, XFI, RXAUI, 5GBASE-R, 2500BASE-X, SGMII	No	No	No	Yes	0.80V	1.2V/1.5V/1.8V/2.5V/3.3V	1.5V, 1.8V/2.0V, 2.3V/2.5V	50, 156.25 MHz	Yes	168-HFCBGA
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Alaska 1-Gigabit Ethernet

Transceivers

Number of Ports
Optical (Line)
MACSec (LinkCrypt®)
I-Temp
1-Step PTP (1588 v2)
2-Step PTP
SyncE
BASE-T Speeds (Cu)
Optical Line Interfaces (SGMII)
Mac Interfaces
Energy Efficient Ethernet
Core Voltage
Digital I/O
Analog Voltage
Internal Regulator
Integrated Passives
Reference Clock
JTAG
Package Type

Single Port Devices

Alaska 88E1518
EEE 10/100/1000BASE-T PHY with RGMII

1	No	No	No	No	Yes	Yes	Yes	10M/100M/1G	No	RGMII	Yes	1.0V	1.8V	1.8V/3.3V	Switch-cap Regulator	Yes	25 MHz	No	48-QFN
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Alaska 88E1514P
EEE 10/100/1000BASE-T PHY with SGMII, Copper/Fiber Autotmedia Detect and Low-Latency (1Step-PTP) 1588 v2 support

1	No	No	No	Yes	Yes	Yes	Yes	10M/100M/1G	No	SGMII	Yes	1.0V	1.8V/2.5V/3.3V	1.8V/3.3V	Switch-cap Regulator	Yes	25 MHz	No	56-QFN
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Alaska 88E1514
EEE 10/100/1000BASE-T PHY with SGMII, Copper/Fiber Autotmedia Detect

1	No	No	No	No	Yes	Yes	Yes	10M/100M/1G	No	SGMII	Yes	1.0V	1.8V/2.5V/3.3V	1.8V/3.3V	Switch-cap Regulator	Yes	25 MHz	No	56-QFN
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Alaska 1-Gigabit Ethernet

Transceivers

Number of Ports
Optical (Line)
MACSec (LinkCrypt)
1-Temp
1-Step PTP (1588 v2)
2-Step PTP
SyncE
BASE-T Speeds (CU)
Optical Line Interfaces (SGMI)
Mac Interfaces
Energy Efficient Ethernet
Core Voltage
Digital I/O
Analog Voltage
Internal Regulator
Integrated Passives
Reference Clock
JTAG
Package Type

Alaska 88E1512P EEE 10/100/1000BASE-T PHY with RGMII, SGMII, Copper/Fiber Autotmedia Detect and Low-Latency (1Step-PTP) 1588 v2 support	1	Yes	No	Yes	Yes	Yes	Yes	10M/100M/1G	SGMII, 100BASE-FX, 1000BASE-X, SFP	RGMII, SGMII, MII	Yes	1.0V	1.8V/2.5V/3.3V	1.8V/3.3V	Switch-cap Regulator	Yes	25 MHz	No	56-QFN
Alaska 88E1512 EEE 10/100/1000BASE-T PHY with RGMII, SGMII Copper/Fiber Autotmedia Detect	1	Yes	No	Yes	No	Yes	Yes	10M/100M/1G	SGMII, 100BASE-FX, 1000BASE-X, SFP	RGMII, SGMII	Yes	1.0V	1.8V/2.5V/3.3V	1.8V/3.3V	Switch-cap Regulator	Yes	25 MHz	No	56-QFN
Alaska 88E1510Q EEE 10/100/1000BASE-T PHY with RGMII and Low-Latency (1Step-PTP) 1588 v2 support	1	No	No	Yes	Yes	Yes	Yes	10M/100M/1G	No	RGMII	Yes	1.0V	1.8V/2.5V/3.3V	1.8V/3.3V	Switch-cap Regulator	Yes	25 MHz	No	48-QFN
Alaska 88E1510P EEE 10/100/1000BASE-T PHY with RGMII and Low-Latency (1Step-PTP) 1588 v2 support	1	No	No	Yes	Yes	Yes	Yes	10M/100M/1G	No	RGMII, MII	Yes	1.0V	1.8V/2.5V/3.3V	1.8V/3.3V	Switch-cap Regulator	Yes	25 MHz	No	48-QFN
Alaska 88E1510 EEE 10/100/1000BASE-T PHY with RGMII	1	No	No	Yes	No	Yes	Yes	10M/100M/1G	No	RGMII	Yes	1.0V	2.5V/3.3V	1.8V/3.3V	Switch-cap Regulator	Yes	25 MHz	No	48-QFN
Alaska 88E1112 10/100/1000BASE-T PHY with Dual SERDES/SGMII	1	Yes	No	Yes	No	No	No	10M/100M/1G	100BASE-FX, 1000BASE-X, SFP	SGMII	No	1.2V	2.5V	2.5V	No	No	25 MHz	No	64-QFN
Alaska 88E1111 10/100/1000BASE-T PHY with multiple MAC Interfaces	1	Yes	No	Yes	No	No	No	10M/100M/1G	SGMII, 100BASE-FX, 1000BASE-X, SFP	RGMII, SGMII, GMII, MII, TBI, RTBI	No	1.0V/1.2V	2.5V	2.5V	No	No	25, 125 MHz	Yes	Multiple Packages
Quad-Port Devices																			
Alaska 88E1548P EEE 100/100/1000BASE-T PHY with QSGMII	4	Yes	Yes	Yes	Yes	Yes	Yes	10M/100M/1G	SGMII, 100BASE-FX, 1000BASE-X, SFP	SGMII, QSGMII	Yes	1.0V	1.2V/1.8V/2.5V/3.3V	1.8V/3.3V	No	Yes	25, 125, 156.25 MHz	Yes	15mm x 15mm 196-pin TFBGA

Alaska 1-Gigabit Ethernet

Transceivers

Number of Ports
Optical (Line)
MACSec (LinkCrypt)
I-Temp
1-Step PTP (1588 v2)
2-Step PTP
SyncE
BASE-T Speeds (CU)
Optical Line Interfaces (SGMI)
Mac Interfaces
Energy Efficient Ethernet
Core Voltage
Digital I/O
Analog Voltage
Internal Regulator
Integrated Passives
Reference Clock
JTAG
Package Type

Alaska 88E1548M EEE 100/100/1000BASE-T PHY with SGMII plus MACSec, Automedia Detect	4	Yes	Yes	No	No	Yes	Yes	10M/100M/1G	SGMII, 100BASE-FX, 1000BASE-X, SFP	SGMII, QSGMII	Yes	1.0V	1.2V/1.8V/2.5V/3.3V	1.8V/3.3V	No	Yes	25, 125, 156.25 MHz	Yes	196-TFBGA
Alaska 88E1548 EEE 100/100/1000BASE-T PHY with QSGMII	4	Yes	No	No	No	No	No	10M/100M/1G	SGMII, 100BASE-FX, 1000BASE-X, SFP	SGMII, QSGMII	Yes	1.0V	1.2V/1.8V/2.5V/3.3V	1.8V/3.3V	No	Yes	25, 125, 156.25 MHz	Yes	15mm x 15mm 196-pin TFBGA
Alaska 88E1545M EEE 100/100/1000BASE-T PHY with QSGMII plus MACSec	4	No	Yes	No	No	No	No	10M/100M/1G	No	QSGMII	Yes	1.0V	1.2V/1.8V/2.5V/3.3V	1.8V/3.3V	No	Yes	25, 125, 156.25 MHz	Yes	128-LQFP
Alaska 88E1545 EEE 100/100/1000BASE-T PHY with QSGMII	4	No	No	No	No	No	No	10M/100M/1G	No	QSGMII	Yes	1.0V	1.2V/1.8V/2.5V/3.3V	1.8V/3.3V	No	Yes	25, 125, 156.25 MHz	Yes	128-LQFP
Alaska 88E1543M EEE 100/100/1000BASE-T PHY with SGMII plus MACSec	4	Yes	Yes	No	No	No	No	10M/100M/1G	SGMII, 100BASE-FX, 1000BASE-X, SFP	SGMII	Yes	1.0V	2.5V/3.3V	1.8V/3.3V	No	Yes	25, 125, 156.25 MHz	Yes	128-LQFP
Alaska 88E1543 EEE 100/100/1000BASE-T PHY with SGMII	4	Yes	No	No	No	No	No	10M/100M/1G	SGMII, 100BASE-FX, 1000BASE-X, SFP	SGMII	Yes	1.0V	2.5V/3.3V	1.8V/3.3V	No	Yes	25, 125, 156.25 MHz	Yes	128-LQFP
Alaska 88E1540M EEE 100/100/1000BASE-T PHY with QSGMII plus MACSec	4	No	Yes	No	No	Yes	Yes	10M/100M/1G	No	QSGMII	Yes	1.0V	1.2V/1.8V/2.5V/3.3V	1.8V/3.3V	No	Yes		Yes	196-TFBGA
Octal-Port-Devices																			
Alaska 88E1685 EEE 10/100/1000BASE-T PHY with QSGMII	8	No	No	No	No	No	No	10M/100M/1G	No	QSGMII	Yes	0.9V	1.2V/1.8V/2.5V/3.3V	1.5V/1.8V	No	Yes	125 MHz	Yes	128-LQFP
Alaska 88E1680M EEE 10/100/1000BASE-T PHY with QSGMII plus MACSec, PTP, SyncE	8	No	Yes	No	Yes	Yes	Yes	10M/100M/1G	No	QSGMII	Yes	0.9V	1.2V/1.8V/2.5V/3.3V	1.5V/1.8V	No	Yes	125, 156.25 MHz	Yes	128-LQFP

Alaska 1-Gigabit Ethernet

Transceivers

Alaska 88E1680
EEE 10/100/1000BASE-T PHY with QSGMII, MACSec, PTP, SyncE

Number of Ports	Optical (Line)	MACSec (LinkCrypt)	I-Temp	1-Step PTP (1588 v2)	2-Step PTP	SyncE	BASE-T Speeds (CU)	Optical Line Interfaces (SGMI)	Mac. Interfaces	Energy Efficient Ethernet	Core Voltage	Digital I/O	Analog Voltage	Internal Regulator	Integrated Passives	Reference Clock	JTAG	Package Type
8	No	No	Yes	No	Yes	Yes	10M/100M/1G	No	QSGMII	Yes	0.9V	1.2V/1.8V/ 2.5V/3.3V	1.5V/1.8V	No	Yes	125, 156.25 MHz	Yes	128-LQFP

Alaska X 10-Gigabit Ethernet

Transceivers

Copper (Base-T) PHYs

Alaska X 88X3340P
Quad EEE 10/100/1G/2.5G/5G/10GBASE-T PHY with XFI, MACSec, PTP

Alaska X 88X3340
Quad EEE 10/100/1G/2.5G/5G/10GBASE-T PHY with XFI

Alaska X 88X3310P
Single EEE 10/100/1G/2.5G/5G/10GBASE-T PHY with XFI, MACSec, PTP

Alaska X 88X3310
Single EEE 10/100/1G/2.5G/5G/10GBASE-T PHY with XFI

Number of Ports	Optical (Line)	MACSec (LinkCrypt)	I-Temp	1-Step PTP (1588 v2)	2-Step PTP	SyncE	Supported Speeds	Host Interfaces	Optical Interface	Optical Module Types	Direct Attach Copper	Energy Efficient Ethernet	Core Voltage	Digital I/O	Analog Voltage	Reference Clock	JTAG	Package Type
4	Yes	Yes	Yes	Yes	Yes	Yes	10G, 5G, 2.5G, 1G, 100M, 10M	USXGMII, XFI, RXAUI, 5GBASE-R, 2500BASE-X, SGMII	XFI/SFI	10GBASE-SR/ER/LR, 1000BASE-SX/LX	Yes	Yes	0.80V	1.2V/1.5V/ 1.8V/2.5V /3.3V	1.5V, 1.8V/2.0V, 2.3V/2.5V	50, 156.25 MHz	Yes	484-HFCBGA
4	Yes	No	Yes	No	No	Yes	10G, 5G, 2.5G, 1G, 100M, 10M	USXGMII, XFI, RXAUI, 5GBASE-R, 2500BASE-X, SGMII	XFI/SFI	10GBASE-SR/ER/LR, 1000BASE-SX/LX	Yes	Yes	0.80V	1.2V/1.5V/ 1.8V/2.5V /3.3V	1.5V, 1.8V/2.0V, 2.3V/2.5V	50, 156.25 MHz	Yes	484-HFCBGA
1	Yes	Yes	Yes	Yes	Yes	Yes	10G, 5G, 2.5G, 1G, 100M, 10M	USXGMII, XFI, RXAUI, XAUI, 5GBASE-R, 2500BASE-X, SGMII	XFI/SFI	10GBASE-SR/ER/LR, 1000BASE-SX/LX	Yes	Yes	0.80V	1.2V/1.5V/ 1.8V/2.5V /3.3V	1.5V, 1.8V/2.0V, 2.3V/2.5V	50, 156.25 MHz	Yes	168-HFCBGA
1	Yes	No	Yes	No	No	Yes	10G, 5G, 2.5G, 1G, 100M, 10M	USXGMII, XFI, RXAUI, XAUI, 5GBASE-R, 2500BASE-X, SGMII	XFI/SFI	10GBASE-SR/ER/LR, 1000BASE-SX/LX	Yes	Yes	0.80V	1.2V/1.5V/ 1.8V/2.5V /3.3V	1.5V, 1.8V/2.0V, 2.3V/2.5V	50, 156.25 MHz	Yes	168-HFCBGA

Alaska X 10-Gigabit Ethernet

Transceivers

Number of Ports
Optical (Line)
MACSec (LinkCrypt)
1-Temp
1-Step PTP (1588 v2)
2-Step PTP
SyncE
Supported Speeds
Host Interfaces
Optical Interface
Optical Module Types
Direct Attach Copper
Energy Efficient Ethernet
Core Voltage
Digital I/O
Analog Voltage
Reference Clock
JTAG
Package Type

Alaska X 88X3240P Quad EEE 10/100/1G/10GBASE-T PHY with XFI, MACSec, PTP	4	Yes	Yes	No	Yes	Yes	Yes	10G, 1G, 100M, 10M	XFI, RXAUI, SGMII	XFI/SFI	10GBASE-SR/ER/LR, 1000BASE-SX/LX	Yes	Yes	0.80V	1.2V/1.5V/1.8V/2.5V/3.3V	1.5V, 2.0V, 2.5V	50, 156.25 MHz	Yes	484-HFCBGA
Alaska X 88X3240 Dual EEE 10/100/1G/10GBASE-T PHY with XFI	4	Yes	No	No	No	No	Yes	10G, 1G, 100M, 10M	XFI, RXAUI, SGMII	XFI/SFI	10GBASE-SR/ER/LR, 1000BASE-SX/LX	Yes	Yes	0.80V	1.2V/1.5V/1.8V/2.5V/3.3V	1.5V, 2.0V, 2.5V	50, 156.25 MHz	Yes	484-HFCBGA
Alaska X 88X3220P Dual EEE 10/100/1G/10GBASE-T PHY with XFI, MACSec, PTP	2	Yes	Yes	No	Yes	Yes	Yes	10G, 1G, 100M, 10M	XFI, RXAUI, SGMII	XFI/SFI	10GBASE-SR/ER/LR, 1000BASE-SX/LX	Yes	Yes	0.80V	1.2V/1.5V/1.8V/2.5V/3.3V	1.5V, 2.0V, 2.5V	50, 156.25 MHz	Yes	256-HFCBGA
Alaska X 88X3220 Dual EEE 10/100/1G/10GBASE-T PHY with XFI	2	Yes	No	No	No	No	Yes	10G, 1G, 100M, 10M	XFI, RXAUI, SGMII	XFI/SFI	10GBASE-SR/ER/LR, 1000BASE-SX/LX	Yes	Yes	0.80V	1.2V/1.5V/1.8V/2.5V/3.3V	1.5V, 2.0V, 2.5V	50, 156.25 MHz	Yes	256-HFCBGA
Fiber/Backplane PHYs																			
Alaska X 88X2340P Quad-10G PHY with MacSec and PTP	4	Yes	Yes	Yes	Yes	Yes	No	10G, 1G	XFI	XFI/SFI	10GBASE-SR/ER/LR, 1000BASE-SX/LX	Yes	No	0.80V	1.2V/1.5V/1.8V/2.5V/3.3V	1.5V, 1.8V/2.0V, 2.3V/2.5V	50, 156.25 MHz	Yes	484-HFCBGA
Alaska X 88X2320P Dual-10G PHY with MacSec and PTP	2	Yes	Yes	No	Yes	Yes	No	10G, 1G	XFI	XFI/SFI	10GBASE-SR/ER/LR, 1000BASE-SX/LX	Yes	No	0.80V	1.2V/1.5V/1.8V/2.5V/3.3V	1.5V, 1.8V/2.0V, 2.3V/2.5V	50, 156.25 MHz	Yes	256-HFCBGA
Alaska X 88X2242 40G/Quad-10G EDC PHY	4	Yes	No	No	No	Yes	Yes	40G, 10G, 1G	XLAI, XFI, XAUI, RXAUI	SFI, XLPP1	40GBASE-SR4/LR4, 10GBASE-SR/ER/LR, 10GBASE-SW/EW/LW, 10GBASE-LRM, 1000BASE-SX/LX	Yes	No	1.0V	1.5V/1.8V/2.5V/3.3V	1.1V/1.5V	156.25, 155.52 MHz	Yes	324-FCBGA
Alaska X 88X2222 Dual-10G EDC PHY with MacSec	2	Yes	No	No	No	No	Yes	10G, 1G	XAUI, RXAUI, XFI	SFI	10GBASE-SR/ER/LR, 10GBASE-SW/EW/LW, 10GBASE-LRM, 1000BASE-X	Yes	No	1.0V	1.5V/1.8V/2.5V/3.3V	1.1V/1.5V	156.25, 155.52 MHz	Yes	324-FCBGA

Alaska X 10-Gigabit Ethernet

Transceivers

Number of Ports
Optical (Line)
MACSec (LinkCrypt)
1-Temp
1-Step PTP (1588 v2)
2-Step PTP
SyncE
Supported Speeds
Host Interfaces
Optical Interface
Optical Module Types
Direct Attach Copper
Energy Efficient Ethernet
Core Voltage
Digital I/O
Analog Voltage
Reference Clock
JTAG
Package Type

Alaska X 88X2242M 40G/Quad-10G EDC PHY with MacSec	4	Yes	Yes	No	No	No	Yes	40G, 10G, 1G	XLAUI, XFI, XAUI, RXAUI	SFI, XLPP1	40GBASE-SR4/LR4, 10GBASE-SR/ER/LR, 10GBASE-SW/EW/LW, 10GBASE-LRM, 1000BASE-SX/LX	Yes	No	1.0V	1.5V/1.8V/2.5V/3.3V	1.1V/1.5V	156.25, 155.52 MHz	Yes	324-FCBGA
Alaska X 88X2222M Dual-10G EDC PHY with MacSec	2	Yes	Yes	No	No	No	Yes	10G, 1G	XAUI, RXAUI, XFI	SFI	10GBASE-SR/ER/LR, 10GBASE-SW/EW/LW, 10GBASE-LRM, 1000BASE-X	Yes	No	1.0V	1.5V/1.8V/2.5V/3.3V	1.1V/1.5V	156.25, 155.52 MHz	Yes	324-FCBGA
Alaska X 88X2242P 40G/Quad-10G EDC PHY with MacSec and PTP	4	Yes	Yes	No	Yes	Yes	Yes	10G, 1G	XAUI, RXAUI, XFI, KR	SFI	10GBASE-SR/ER/LR, 10GBASE-SW/EW/LW, 10GBASE-LRM, 1000BASE-X	Yes	No	1.0V	1.5V/1.8V/2.5V/3.3V	1.1V/1.5V	156.25, 155.52 MHz	Yes	324-FCBGA
Alaska X 88X2222P Dual-10G EDC PHY with MacSec, and PTP	2	Yes	Yes	No	Yes	Yes	Yes	10G, 1G	XAUI, RXAUI, XFI, KR	SFI	10GBASE-SR/ER/LR, 10GBASE-SW/EW/LW, 10GBASE-LRM, 1000BASE-X	Yes	No	1.0V	1.5V/1.8V/2.5V/3.3V	1.1V/1.5V	156.25, 155.52 MHz	Yes	324-FCBGA

Fast Ethernet (FE) PHY

Transceivers

Number of Ports
Optical (Line)
MACSec (LinkCrypt)
1-Temp
1-Step PTP (1588 v2)
10/100BASE-T
100BASE-FX
Mac Interfaces
Core Voltage
Digital I/O
Analog Voltage
Internal Regulator
Virtual Cable Tester
Programmable LED
RoHS 6/6, Green*
JTAG
Package Type

Single-Port Devices																				
88E3015 10/100BASE-T Fast Ethernet PHY	1	Yes	No	No	No	Yes	Yes			MII, RGMII		1.2V	2.5V/3.3V	2.5V	Yes	Yes	Yes	R	No	56-QFN
88E3016 10/100BASE-T Fast Ethernet PHY	1	Yes	No	No	No	Yes	Yes			RGMII		1.2V	2.5V/3.3V	2.5V	Yes	Yes	Yes	R	Yes	64-QFN

Fast Ethernet (FE) PHY

Transceivers

Number of Ports
Optical (Line)
MACSec (LinkCrypt)
I-Temp
1-Step PTP (1588 v2)
10/100BASE-T
100BASE-FX
Mac Interfaces
Core Voltage
Digital I/O
Analog Voltage
Internal Regulator
Virtual Cable Tester
Programmable LED
RoHS 6/6, Green*
JTAG
Package Type

88E3018
10/100BASE-T Fast Ethernet PHY

1 Yes No Yes No Yes Yes MII, RGMII 1.2V 2.5V/3.3V 2.5V Yes Yes Yes R Yes 64-QFN

88E3019
10/100BASE-T Fast Ethernet PHY

1 No No No No Yes No MII, RMII, RGMII 1.2V 2.5V/3.3V 2.5V No Yes Yes G No 32-QFN

Octal-Port Devices

88E3082
10/100BASE-T Octal PHY

8 Yes No Yes No Yes Yes RMII, SMII, SSSMII, DDR-SSSMII 1.5V 2.5V/3.3V 2.5V Yes Yes Yes R Yes 224-TFBGA

88E3083
10/100BASE-T Octal PHY

8 Yes No No No Yes Yes SMII, SSSMII, DDR-SSSMII 1.5V 2.5V/3.3V 2.5V Yes Yes Yes R Yes 128-LQFP

AQrate Multi-Gig PHYs

Transceivers

Number of Ports
Optical (line)
MACSec (G021AE)
Supported Speeds
Host Interfaces
Dual Media
Energy Efficient Ethernet (EEE)
IEEE 1588/PTP
1 Gbps Over 2-Pair
Package Size (mm)
Package Type
Industrial Temperature (°C)

Single-Port

AQR109
Single port 2.5G/1G/100M AQrate PHY (Gen2)

1 No Yes 2.5Gbps USXGMII, 10GBase-KR, XFI, 5000BASE-R, 2500BASE-X, 1000BASE-X, SGMII No Yes Yes No 7x11 BGA Yes

AQR108
Single port 5G/2.5G/1G/100M AQrate PHY (Gen2)

1 No Yes 5Gbps USXGMII, 10GBase-KR, XFI, 5000BASE-R, 2500BASE-X, 1000BASE-X, SGMII No Yes Yes No 7x11 BGA Yes

AQrate Multi-Gig PHYs

Transceivers

Number of Ports
Optical (line)
MACsec (802.1AE)
Supported Speeds
Host Interfaces
Dual Media
Energy Efficient Ethernet (EEE)
IEEE 1588/PTP
1 Gbps Over 2-Pair
Package Size (mm)
Package Type
Industrial Temperature (°C)

AQR107 Single port 10G/5G/2.5G/1G/100M AQrate PHY (Gen2)	1	No	Yes	10Gbps	USXGMII, 10GBase-KR, XFI, 5000BASE-R, 2500BASE-X, 1000BASE-X, SGMII	No	Yes	Yes	No	7x11	BGA	Yes
AQR105 Single port 10G/5G/2.5G/1G/100M AQrate PHY (Gen1)	1	No	Yes	10Gbps	RXAUI, MUSXGMII, 10GBase-KR, XFI, 5000BASE-R, 2500BASE-X, 1000BASE-X, SGMII	Yes	Yes	Yes	No	19x19	BGA	Yes
Dual-Port												
AQR205 Dual port 10G/5G/2.5G/1G/100M AQrate PHY (Gen1)	2	No	Yes	10Gbps	RXAUI, MUSXGMII, 10GBase-KR, XFI, XAUI, RXAUI, 5000BASE-R, 2500BASE-X, 1000BASE-X, SGMII	Yes	Yes	Yes	Yes	19x19	BGA	No
Quad-Port												
AQR409 Quad port 2.5G/1G/100M AQrate PHY (Gen2)	4	No	Yes	2.5Gbps	USXGMII, 10GBase-KR, XFI, 5000BASE-R, 2500BASE-X, 1000BASE-X, SGMII	No	Yes	Yes	No	19x19	BGA	No
AQR408 Quad port 5G/2.5G/1G/100M AQrate PHY (Gen2)	4	No	Yes	5Gbps	USXGMII, 10GBase-KR, XFI, 5000BASE-R, 2500BASE-X, 1000BASE-X, SGMII	No	Yes	Yes	No	19x19	BGA	No
AQR407 Quad port 10G/5G/2.5G/1G/100M AQrate PHY (Gen2)	4	No	Yes	10Gbps	USXGMII, 10GBase-KR, XFI, 5000BASE-R, 2500BASE-X, 1000BASE-X, SGMII	No	Yes	Yes	No	19x19	BGA	No
AQR405 Quad port 10G/5G/2.5G/1G/100M AQrate PHY (Gen1)	4	No	Yes	10Gbps	USXGMII, 10GBase-KR, XFI, RXAUI, 5000BASE-R, 2500BASE-X, 1000BASE-X, SGMII	Yes	Yes	Yes	No	25x25	BGA	No

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