

# Network Visibility

Network packet broker (NPB) comparison table

# Aggregation and Intelligent Edge NPBs

	Vision E1S	Vision E10S	Vision E40	Vision E50	Vision E100	Vision 7816	Vision E400S	Vision E400P	Vision Edge OS
Best for	Intelligent Edge	Intelligent Edge	Intelligent Aggregation	Intelligent Aggregation	High-density Intelligent Aggregation	High-density Intelligent Aggregation	Intelligent Aggregation / Edge	Ultra-density Intelligent Aggregation	Intelligent Aggregation
<b>System specifications</b>									
System height	1RU	1RU	1RU	1RU	1RU	2RU	1RU	1RU	- <sup>1</sup>
System design	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
AC/DC redundant power (hot swap)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Backplane capacity	46Gbps	480Gbps	720Gbps	2Tbps	3.2Tbps	6.4Tbps	9.2Tbps	12.8Tbps	- <sup>1</sup>
Front panel interfaces	4x1/10G 10x1G RJ-45	48x1/10G	48x1/10G 6x40G	48x1/10/25G 8x40/100G	32x40/100G	64x40/100G	24x 10/25/50G 16x 40/100/400G	32x 40/100/400G	- <sup>1</sup>
Feature processing elements	CPU	Silicon, FPGA	Silicon	Silicon	Silicon	Silicon	P4 Silicon	P4 Silicon	Silicon
<b>Visibility Intelligence</b>									
NetStack	✓	✓	✓	✓	✓	✓	✓	✓	✓
PacketStack	✓	✓	-	-	-	-	-	-	-
PacketStack+	-	-	-	-	-	-	✓	✓	-
FlowStack	-	-	-	-	-	-	-	-	-
SecureStack	-	-	-	-	-	-	-	-	-
AppStack	✓	-	-	-	-	-	-	-	-
MobileStack	-	-	-	-	-	-	-	-	-
<b>Maximum port densities (fan in/out)</b>									
1G ports	10	48	48	48	-	-	-	-	- <sup>1</sup>
10G ports	4	48	72	80	128	128	152	256	- <sup>1</sup>
25G ports	-	-	-	80	128	128	152	256	- <sup>1</sup>
40G ports	-	12	18	8	32	64	32	64	- <sup>1</sup>
50G ports	-	-	-	16	64	128	152	256	- <sup>1</sup>
100G ports	-	-	-	8	32	64	64	128	- <sup>1</sup>
200G ports	-	-	-	-	-	-	32	64	- <sup>1</sup>
400G ports	-	-	-	-	-	-	16	32	- <sup>1</sup>
<b>Transceiver types (native speeds)</b>									
1Gb SFP	✓	✓	✓	✓	-	-	-	-	- <sup>1</sup>
10Gb SFP+	✓	✓	✓	✓	-	-	✓	-	- <sup>1</sup>
25Gb SFP28	-	-	-	✓	-	-	✓	-	- <sup>1</sup>
40Gb QSFP+	-	-	✓	✓	✓	✓	✓	✓	- <sup>1</sup>
50Gb QSFP28	-	-	-	-	-	-	✓	-	- <sup>1</sup>
100Gb QSFP28	-	-	-	✓	✓	✓	✓	✓	- <sup>1</sup>
400Gb QSFP-DD	-	-	-	-	-	-	✓	✓	- <sup>1</sup>
Cisco BIDI	-	-	✓	Coming soon	✓	✓	✓	✓	- <sup>1</sup>
<b>Compliance and security certifications</b>									
FIPS 140-2	✓	✓	✓	-	✓	✓	-	-	-
NEBS-3	-	-	-	-	-	-	✓	-	-
TAA	-	✓	✓	✓	✓	✓	✓	✓	-
DoDIN APL	-	✓	✓	-	✓	✓	-	-	-

1. Switch dependent. Vision Edge OS only supports Edgecore 5812 and Edgecore 7712 switches.

	Vision E1S	Vision E10S	Vision E40	Vision E50	Vision E100	Vision 7816	Vision E400S	Vision E400P	Vision Edge OS
<b>Inline security</b>									
Inline support	-	✓	✓	Coming soon	✓	✓	✓	Coming soon	-
Simultaneous Inline & Out-of-band (OOB)	-	✓	✓	Coming soon	✓	✓	✓	Coming soon	-
Service chaining	-	✓	✓	Coming soon	✓	✓	✓	Coming soon	-
Customizable heartbeat (HB)	-	✓	✓	Coming soon	✓	✓	✓	Coming soon	-
Load balance	-	✓	✓	Coming soon	✓	✓	✓	Coming soon	-
High availability (HA)	-	✓	✓	Coming soon	✓	✓	✓	Coming soon	-
<b>NetStack</b>									
3-Stage filtering	-	✓	✓	✓	✓	✓	✓	✓	✓
L2-4 filtering	✓	✓	✓	✓	✓	✓	✓	✓	✓
Max. number of filter rules	-	16K	16K	6K	4K	4K	8K	8K	- <sup>1</sup>
Dynamic filter compiler (rule overlap resolution)	-	✓	✓	✓	✓	✓	✓	✓	✓
Priority-based filtering (ACL-like logic)	-	✓	✓	Coming soon	✓	✓	✓	✓	✓
Aggregation & replication	✓	✓	✓	✓	✓	✓	✓	✓	✓
Load balancing	✓	✓	✓	✓	✓	✓	✓	✓	✓
Source port labeling (VLAN tagging)	-	✓	✓	✓	✓	✓	✓	✓	✓
Tunneling (L2GRE, VxLAN)	✓	-	✓	✓	✓	✓	✓	✓	✓
Port-level packet capture	-	✓	✓	✓	✓	✓	✓	✓	-
<b>PacketStack</b>									
Deduplication	✓	✓	-	-	-	-	-	-	-
Header stripping	✓	✓	-	-	-	-	-	-	-
Generic header stripping	-	✓	-	-	-	-	-	-	-
Packet trimming	-	✓	-	-	-	-	-	-	-
Timestamping	-	✓	-	-	-	-	-	-	-
Data masking	-	✓	-	-	-	-	-	-	-
Burst protection	-	✓	-	-	-	-	-	-	-
Tunneling (L2GRE)	-	✓	-	-	-	-	-	-	-
Tunneling termination (all)	-	✓	-	-	-	-	-	-	-
NetFlow V10 generation	-	✓	-	-	-	-	-	-	-
<b>PacketStack+ (Silicon-based features)</b>									
Deduplication	-	-	-	-	-	-	✓	✓	-
Header stripping (20+ protocols)	-	-	-	-	-	-	✓	✓	-
Packet trimming/slicing	-	-	-	-	-	-	✓	✓	-
Timestamping	-	-	-	-	-	-	✓	✓	-
Data masking	-	-	-	-	-	-	✓	✓	-
Tunneling (L2GRE, VxLAN)	-	-	-	-	-	-	✓	✓	-
<b>AppStack</b>									
Application identification	✓	-	-	-	-	-	-	-	-
Geolocation & tagging	✓	-	-	-	-	-	-	-	-
Optional RegEx	-	-	-	-	-	-	-	-	-
NetFlow/IPFIX generation	✓	-	-	-	-	-	-	-	-
Enriched flow data (IxFLOW) generation	✓	-	-	-	-	-	-	-	-
Data masking plus	✓	-	-	-	-	-	-	-	-
Packet capture	✓	-	-	-	-	-	-	-	-
Application signature subscription	-	-	-	-	-	-	-	-	-

1. Switch dependent. Vision Edge OS only supports Edgecore 5812 and Edgecore 7712 switches.

# Full-feature and Core NPBs

	Vision One	Vision 400	Vision X
Best for	Full-feature edge, core	Full-feature edge, core	Full-feature core
<b>System specifications</b>			
System height	1RU	1RU	3RU
System design	Fixed	Fixed	Modular
AC or DC redundant power (hot swap)	✓	✓	✓
Backplane capacity	640Gbps	9.2Tbps	6.4Tbps
Front panel interfaces	48 x 1/10G 6 x 40G	24 x 10G/25G/50G 16 x 40G/100G/400G	12 x 100G in switch card Four (4) module bays with varying port options
Feature processing elements	Silicon, FPGA, CPU	P4 Silicon, FPGA, CPU	Silicon, FPGA, CPU
<b>Visibility Intelligence</b>			
NetStack	✓	✓	✓
PacketStack	✓	✓	✓
PacketStack+	-	✓	-
FlowStack	-	-	✓
SecureStack	✓	✓	✓
AppStack	✓	✓	✓
MobileStack	✓	-	✓
<b>Maximum port densities (fan in/out)</b>			
1G ports	48	-	-
10G ports	64	152	108
25G ports	-	152	108
40G ports	16	32	76
50G ports	-	152	108
100G ports	-	64	60
200G ports	-	32	-
400G ports	-	16	-
<b>Transceiver types (native speeds)</b>			
1Gb SFP	✓	-	-
10Gb SFP+	✓	✓	-
25Gb SFP28	-	✓	-
40Gb QSFP+	✓	✓	✓
50Gb QSPF28	-	✓	-
100Gb QSFP28	-	✓	✓
400Gb QSFP-DD	-	✓	-
Cisco BIDI	✓	✓	✓
<b>Compliance and security certifications</b>			
FIPS 140-2	✓	-	✓
NEBS-3	✓	✓	✓
TAA	✓	✓	✓
DoDIN APL	✓	-	✓

	Vision One	Vision 400	Vision X
<b>Inline security</b>			
Inline support	✓	✓	✓
Simultaneous Inline & Out-of-band (OOB)	✓	✓	✓
Service chaining	✓	✓	✓
Customizable heartbeat (HB)	✓	✓	✓
Load balance	✓	✓	✓
High availability (HA)	✓	✓	✓
<b>NetStack</b>			
3-Stage filtering	✓	✓	✓
L2-4 filtering	✓	✓	✓
Max. number of filter rules	4K	8K	4K
Dynamic filter compiler (rule overlap resolution)	✓	✓	✓
Priority-based filtering (ACL-like logic)	✓	✓	✓
Aggregation & replication	✓	✓	✓
Load balancing	✓	✓	✓
Source port labeling (VLAN tagging)	✓	✓	✓
Tunneling (L2GRE, VxLAN)	-	-	✓
Port-level packet capture	✓	✓	✓
<b>PacketStack</b>			
Deduplication	✓	✓	✓
Header stripping	✓	-	✓
Generic header stripping	✓	-	✓
Packet trimming	✓	✓	✓
Timestamping	✓	✓	✓
Data masking	✓	-	✓
Burst protection	✓	✓	✓
Tunneling origination (L2GRE)	✓	-	-
Tunneling termination (all)	✓	-	✓
NetFlow V10 generation	-	-	-
<b>PacketStack+ (Silicon-based features)</b>			
Deduplication	-	✓	-
Header stripping (20+ protocols)	-	✓	-
Packet trimming/slicing	-	✓	-
Timestamping	-	✓	-
Data masking	-	✓	-
Tunneling (L2GRE, VxLAN)	-	✓	-
<b>AppStack</b>			
Application identification	✓	✓	✓
Geolocation & tagging	✓	✓	✓
Optional RegEx	✓	✓	✓
NetFlow/IPFIX generation	✓	✓	✓
Enriched flow data (IxFlow) generation	✓	✓	✓
Data masking plus	✓	✓	✓
Packet capture	✓	✓	✓
Application signature subscription	✓	✓	✓

	Vision One	Vision 400	Vision X
<b>FlowStack</b>			
Accelerated NetFlow IPFIX record generation	-	-	✓
Accelerated IxFlow enrichment - enriched NetFlow v10 generation	-	-	✓
<b>SecureStack</b>			
Out-of-band (OOB) decryption	✓	-	✓
Inline decryption	✓	✓	✓
<b>MobileStack</b>			
SIP/RTP correlation	✓	-	-
SIP/RTP load balancing	✓	-	-
SIP/RTP sampling	✓	-	-
SIP/RTP whitelisting	✓	-	-
GTP correlation (2G, 3G, 4G, 5G support)	-	-	✓
Max. number of GTP subscriber sessions	-	-	512M
GTP load balancing	-	-	✓
GTP subscriber filtering	-	-	✓
GTP subscriber sampling	-	-	✓
GTP subscriber whitelisting	-	-	✓
5G universal translator (5G SBI)	-	-	✓

Keysight enables innovators to push the boundaries of engineering by quickly solving design, emulation, and test challenges to create the best product experiences. Start your innovation journey at [www.keysight.com](http://www.keysight.com).



This information is subject to change without notice. © Keysight Technologies, 2019 – 2025, Published in USA, February 4, 2025, 7019-0202.EN