

Information here is by **rumor, innuendo and extrapolation**. Manufacturers rarely put info on packet buffers in their data sheets. There are some [summary thoughts](#)

The *buffer size* question discussed in 2012 on the [nanog list](#) and is reproduced. [Buffer requirements](#) for long RTT networks is less well understood than you might hope. IETF tests for burst management are not as well developed as bandwidth tests. There is a [draft](#) that hints at progress. [Packet pacing](#) can improve buffer effectiveness by making TCP less bursty. Cisco wrote a [review of the buffer question](#) in 2017.

Packet buffers and switch performance have shown steady improvement. This [table](#) attempts to show this for ASICs with integrated packet buffers and why using crufty old stuff is at your peril.

[Incast](#) is a buffer exhaustion phenomena that is one consequence of running out of packet memory.

Shared memory means that the hardware permits buffers to be used by any port that needs them. An [intel white paper](#) compares shared memory with other architectures. In a shared memory design it is not possible to let ALL the memory go to queued packets. There would be no room for new arrivals which would lead to head of line blocking. The other major option for a switch fabric is a [crossbar matrix](#).

Buffer queue depth monitoring cannot be done directly with SNMP MIB-II polling of the current occupancy of the buffer. Even if a buffer depth SNMP poll object existed it would not possible to interrogate it on a time scale short enough to catch microbursts. A burst that would fill a 4 MByte buffer would completely drain in 3.2 mS at 10 Gb/s. You could hope for indirect evidence of buffer exhaustion by monitoring packet drops. Bursts too short to cause drops can nonetheless be long enough to affect performance. [Direct queue monitoring](#) can thus add valuable information.

The switch entries below are organized by switch ASIC families. A Packet Pushers [video blog by Pete Lumbis](#) from October 2018 gives a refreshing overview of the evolution of switch ASICs.

Some switches have multiple switch ICs that each manage their own memory pool. Examples are the Brocade FCX648S and the Cisco 3750-48. Memory from one IC can be shared among the ports in that IC's group but cannot be loaned out to ports controlled by other switch chips. Here we are interested in queue resources that can be claimed by a single flow for burst absorption -- not the total RAM in the system.

Tolly (tolly.com) occasionally reports on the ability of switches to sustain [microbursts](#) in his reports on data center switches. These measurements relate directly to output port buffering. See esp the IBM G8264 below.

Max buffer queue depth requires that all packet memory can be put into a single queue. QoS schemes divide buffer resources among defined queues. As such, I am not interested in the QoS descriptions and these are even less reliable than the rest of this doc.

Model	Port Type	RX Queue	TX Queue	Total Buffer	RX Buffer	TX Buffer
Trident+ Shared Memory						
Accton 5652	48 SFP+ and 4 QSFP+	8Q		9 MB		5? MB
Juniper QFX3500	48 SFP+ and 4 QSFP+	8Q		9 MB		5 MB
Arista 7050S-64	48 SFP+ and 4 QSFP	8Q		9 MB/switch		5 MB
	24 SFP+ and 2 x QSFP+	8Q		9 MB		

Dell 8132F & 4032F						
Dell 8164F & 4064F	48 SFP+ and 4 x QSFP+	8Q		9 MB		
Pica8 P-3920	48 SFP+ and 4 x QSFP+			9 MB		
Penguin 4804x	48 SFP+ and 4 x QSFP+			9 MB		
Cisco Nexus 3064X	48 SFP+ and 4 QSFP+	12Q		9 MB		5 MB
Supermicro SSE-X3348T	48 10GTw-Pr and 4 QSFP+	8Q		9 MB		
Supermicro SSE-X3348S	48 SFP+ and 4 QSFP+	8Q		9 MB		
IBM G8264	48 SFP+ and 4 QSFP+	8Q		9 MB/switch		not on data sheet
Force10 S4810	48 SFP+ and 4 QSFP+	4Q		9 MB		
Allied Telesis DC2552	48 SFP+ and 4 QSFP+	8Q		9 MB		5 MB
NEC PF5820	48 SFP+ and 4 QSFP+					
HP 5900AF-48XG-4QSFP+	48 SFP+ and 4 QSFP+			9 MB		
Edge-core-AS5600-52X	48 SFP+ and 4 QSFP+			9 MB		
Cisco Nexus 3048	48 1000-base-T and 4 SFP+	8Q		9 MB but see notes		5? MB to 1 port
Brocade TOR custom						
Brocade VDX 6740	48 SFP+ and 4 QSFP+			24 MB	Dynamic up to 8 MB	Dynamic up to 8 MB
Brocade VDX 6940	96 SFP+ and 12 QSFP+			24 MB	Dynamic up to 8 MB	Dynamic up to 8 MB
Trident II and II+						
Champion Trident2	varies by model			12.2 MB		
Lenovo G8272	48 SFP+ and 6 QSFP+			12.2 MB		

Arista 7050X	32 QSFP+	8Q		12 MB		Dynamic up to 8 MB
Arista 7250X	64 QSFP+	8Q		12 MB/ASIC, 48 MB total		Dynamic up to 8 MB
Arista 7300X 4/8/16 slot chassis	16 slot: 512 QSFP	8Q		12 MB/ASIC		Dynamic up to 8 MB
Brocade 7750-26Q	26 QSFP+ and slot	8Q		12.2 MB		Dynamic up to 8 MB
Brocade 7750-48F	48 SFP+ and 6 QSFP+ and expansion	8Q		12.2 MB		Dynamic up to 8 MB
Brocade 7750-48C	48 10GbaseT and 6 QSFP+ and expansion	8Q		12.2 MB		Dynamic up to 8 MB
Quanta BMS T3048-LY8	48 SFP+ and 6 QSFP+	8Q		12 MB		8 MB
Pluribus E68	44 SFP+ and 6 QSFP+	8Q				
Extreme Summit 770	32 QSFP+	8Q		No info		No info
Cisco Nexus 3132Q	32 QSFP+ or 31 QSFP+ and 4 SFP+	8Q		12.2 MB		Dynamic up to 8 MB
Cisco Nexus 3172PQ	48 SFP+ and 6 QSFP+	8Q		12.2 MB		Dynamic up to 8 MB
Dell-S4048-ON	48 SFP+ and 6 QSFP+	8Q		12 MB		Dynamic up to 8 MB
Dell S6000	32 QSFP+	8Q		12 MB		Dynamic up to 8 MB
Juniper QFX5100-24Q	24 QSFP+ + expansion slots	8Q		12 MB		Dynamic up to 8 MB
Juniper EX4600	24 SFP+ + 4 QSFP + expansion slots	8Q		12 MB		Dynamic up to 8

						MB
HP 5930	32 QSFP+	8Q		12.2 MB		Dynamic up to 8 MB
HP 5930 w 2 modules	48 SFP+ and 4 QSFP+	8Q		12.2 MB		Dynamic up to 8 MB
HP Altoline 5712	48 SFP+ and 6 QSFP+	8Q		12.2 MB		Dynamic up to 8 MB
HP Altoline 6712	32 QSFP+	8Q		12.2 MB		Dynamic up to 8 MB
Accton Edge-corE AS5712-54X	48 SFP+ and 6 QSFP+	8Q		12.2 MB		Dynamic up to 8 MB
Accton Edge-corE AS6712-32X	32 QSFP+	8Q		12.2 MB		Dynamic up to 8 MB
Supermicro SSE-X3648S	48 SFP+ and 6 QSFP+	8Q		12.2 MB		Dynamic up to 8 MB
Inventec D6232Q	48 SFP+ and 6 QSFP+	8Q		12.2 MB		Dynamic up to 8 MB
Wedge - Facebook OCP	16 QSFP+	8Q		12.2 MB		Dynamic up to 8 MB
Trident II+						
Alpha Networks SNX-60x0-486x	48 SFP+ and 4 QSFP28 100G and 2 QSFP+	8Q		16 MB		Dynamic up to 12 MB
Artica 4806xp	48 SFP+ and 6 QSFP 40G	8Q		16 MB		Dynamic up to 12 MB
Champion Trident2+	<i>Three switch configurations</i>	8Q		16 MB		
Arista 7050X2 family	see table	8Q		16 MB		Dynamic up to 12 MB

Dell S4048T-ON	48 10G-BASE-T and 6 x QSFP+	8Q		16 MB		Dynamic up to 12 MB
Dell S6010-ON	32 40-Gbps QSFP	8Q		16 MB		Dynamic up to 12 MB
Cisco Nexus 3132Q-V	32 QSFP+ or 26 QSFP+ and 6 QSFP28	8Q		16 MB		Dynamic up to 12 MB
Cisco Nexus 31108PC-V	48 SFP+ and 6 QSFP28	8Q		16 MB		Dynamic up to 12 MB
Cisco NCS5001	40 1/10-Gbps SFP+ and 4 QSFP28 100G	8Q		16 MB		Dynamic up to 12 MB
Cisco NCS5002	80 1/10-Gbps SFP+ and 4 QSFP28 100G	8Q		16 MB		Dynamic up to 12 MB
EdgeCore AS6812-32X	32 40-Gbps QSFP+	8Q		16 MB		Dynamic up to 12 MB
Accton EdgecorE AS5812-54X	48 SFP+ and 6 QSFP+	8Q		16 MB		Dynamic up to 12 MB
HPE Altoline 6921-54X	48 SFP+ and 6 QSFP+	8Q		16 MB??		Dynamic up to 12 MB
Juniper QFX5110-48S	48 SFP+ and 4 QSFP28 100G	8Q		16 MB		Dynamic up to 12 MB
Extreme Networks VSP 8404C 4-slot modular	2-port 100Gb/s module, 8-port QSFP module, . . .	8Q				
Trident 3						
Arista 7050CX3-32S	32 port 100G QSFP28 and 2 port 10 Gb/s	8Q		32 MB		27 MB shared pool
Arista 7050SX3-48YC12	48 port 25G SFP28 and 12 port 100 Gb/s	8Q		32 MB		27 MB shared pool

Edgecore AS7326-56X	48 port 25G SFP28 and 8 port 100 Gb/s	8Q		32 MB		
QuantaMesh BMS T4048-IX8	48 port 25G SFP28 and 8 port 100 Gb/s	8Q		32 MB		
QuantaMesh BMS T7032-IX7	32 port 100G QSFP28	8Q		32 MB		
Alpha SNC-60x0-488F	48 port 25G SFP28 and 8 port 100 Gb/s	8Q				
Dell S5248	48 port 25 Gb/s SFP28 and ??? 100G QSFP28	8Q		32 MB		
Delta 9032v2	32 port 100 Gb/s QSFP28	8Q		32 MB		
Cisco C3132C-Z	32 port 100 Gb/s QSFP28	8Q		32 MB		
Ruckus ICX 7850-32Q	32 x QSFP28 100 Gb/s ports			32 MB		
Ruckus ICX7850-48FS	48 x SFP+ 1/10 Gb/s and 8 x QSFP28 100 G ports			32 MB		
Ruckus ICX 7850-48F	48 x SFP28 1/10/25 Gb/s and 8 x QSFP28 100 G			32 MB		
Arista 720XP family	48 and 24 port models with uplinks and PoE (varies)			6 MB		
Trident 4						
Nephos 8360 Taurus family						
Liteon-LS3048-SN1	48 port 10G QSFP and 6 port 100 Gb/s	8Q		options: 20-50 Mbyte		
Nephos-AS7116-54X	48 port 25G QSFP28 and 6 port 100 Gb/s	8Q		options: 20-50 Mbyte		
Ingrasys S9130-32X	32 port 100G QSFP28	8Q		options: 20-50 Mbyte		
Ingrasys S9230-32X	64 port 100G QSFP28	8Q		options: 20-50 Mbyte		
Broadcom Maverick						
		8Q		?? MB		

Alpha Networks SNX-61A0-486T	48 10G-base-T and 4 QSFP28 and 2 QSFP					
Alpha Networks SNX-61A0-486F	48 SFP+ and 4 QSFP28 and 2 QSFP	8Q		?? MB		
Dell S4148F-ON	48 port SFP+ and 2 QSFP+ and 2 QSFP28	8Q		12 MByte		8 MB
QCT QuantaMesh T3048 LY7	48 port SFP+ and 4 QSFP28	8Q		12 MByte		8 MB
Broadcom Tomahawk						
Penguin 3200C	32 port QSFP28 100 Gb/s	8Q		16 MByte		Est 3 MByte per core
Dell Z9100	32 port QSFP28 100 Gb/s	8Q		16 MByte		Est 3 MByte per core
Dell S6100-ON	Depends on modules selected.	8Q		16 MByte		Est 3 MByte per core
Dell S5148	48 port SFP28+ 25 Gb/s + 6 x 100G	8Q		16 MByte		Est 3 MByte per core
Cisco Nexus 3232C	32 port QSFP28 100 Gb/s	8Q		16 MByte		Est 3 MByte per core
Cisco NCS5011	32 QSFP28 100G	8Q		16 MByte		Est 3 Mbyte per core
Arista 7060CX-32	32 port QSFP28 100 Gb/s and 2 SFP+	8Q		16 MByte		Est 3 MByte per core
Arista 7260CX-64	64 port QSFP28 100 Gb/s and 2 SFP+	8Q		64 MByte		Est 3 MByte per core
Arista 7320X	256 port QSFP28 100 Gb/s	8Q		64 MByte		Est 3 MByte per core
Juniper QFX5200-32C	32 port QSFP28 100 Gb/s	8Q		16 MByte		Est 3 MByte per core

Juniper QFX5200-64Q	32 port QSFP28 OR 64 QSFP	8Q		16 MByte		Est 3 MByte per core
Aurora 620 with ONIE	48 SFP28 25 Gb/s and 6 QSFP28 100 G	8Q		16 MByte		Est 3 MByte per core
Aurora 720 with ONIE	32 QSFP28 100 Gb/s	8Q		16 MByte		Est 3 MByte per core
Inventec D7032Q28B	32 QSFP28 100 Gb/s	8Q		16 MByte		Est 3 MByte per core
Edge-core-7710 and 7712	32 QSFP28 100 Gb/s	8Q		16 MB		Est 3 Mbyte per core
Champion Tomahawk	32 QSFP28 100 Gb/s					
HP 6960	32 QSFP28 100 Gb/s	8Q		16 MB		Est 3 Mbyte per core
Quanta T7032-IX1	32 x QSFP28 100Gb/s	8Q		16 MB		Est 3 Mbyte per core
Quanta T4048-IX2	48 x SFP28 + 8 x QSFP28/s	8Q		16 MB		Est 3 Mbyte per core
Agema AG5648	6 QSFP28 100 Gb/s and 48 SFP28 25 Gb/s	8Q		16 MB		Est 3 Mbyte per core
Supermicro SSE-C3632S	32 QSFP28 100 Gb/s	8Q		16 MB		Est 3 Mbyte per core
Agema AG9032	32 QSFP28 100 Gb/s	8Q		16 MB		Est 3 Mbyte per core
Facebook OCP Backpack	128 QSFP28 100 Gb/s	8Q		256 MB		Est 3 Mbyte per core
Edge-core 7812-24S	16 QSFP28 AND 8 200 Gb/s coherent	8Q				Est 3 Mbyte per core
Broadcom Tomahawk-+						

fs.com N8500-48B6C	48 SFP28 25 Gb/s and 6 QSFP28 100 Gb/s	8Q		16 MB		
Agema AG5648V1	48 SFP28 25 Gb/s and 6 QSFP28 100 Gb/s	8Q		16 MB		
Edge-core AS7312-54X	48 SFP28 and 6 QSFP28	8Q		22 MB		Est 4.5 Mbyte per core
Alpha Networks SNC-60x0-486F	48 SFP28 25 Gb/s and 6 QSFP28 100 Gb/s	8Q		22 MB		
Arista 7060CX2-32S	32 QSFP28 100 Gb/s AND 2 SFP+	8Q		22 MB		Est 4.5 Mbyte per core
Lenovo NE2572 & NE2572O	48 SFP28 25 Gb/s AND 6 QSFP28	8Q		22 MB		Est 4.5 Mbyte per core
Broadcom Tomahawk-II						
Arista 7260QX-64	64 QSFP 40 Gb/s AND 2 SFP+	8Q		16 MB		Est 3 Mbyte per core
Arista 7260CX3-64	64 QSFP28 100Gb/s AND 2 SFP+	8Q		42 MB		10.5 Mbyte per slice
Agema AG9064	64 QSFP28 100 Gb/s AND 2 SFP+	8Q		16 MB		Est 3 Mbyte per core
Edge-core AS7816-64X	64 QSFP28 100 Gb/s AND 2 SFP+	8Q		42 MB		Est 10.5 Mbyte per slice
Cisco Nexus C3264C-E	64 QSFP28 100 Gb/s AND 2 SFP+	8Q		42 MB		Est 10.5 Mbyte per slice
Dell Z9264f-ON	64 QSFP28 100 Gb/s AND 2 SFP+	8Q		42 MB		Est 10.5 Mbyte per slice
Broadcom Tomahawk 3						
Edgecore AS7900-32X	32 x QSFP-DD 400 Gb/s ports					
Arista 7060PX4-32	32 x OSFP 400 Gb/s ports			64 MB		

Arista 7060DX4-32	32 x QSFP-DD 400 Gb/s ports			64 MB		
Innovium Teralynx Hot new chip to take over the world [2017 OCP]						
Cisco C3432D-S	32 x QSFP-DD 400 Gb/s ports + 2 x SFP			70 MB		
Cisco Nexus 3408-S	8-slot chassis w 4-port 400G and 16-port 100G cards			70 MB		
Broadcom Jericho a member of the StrataDNX DUNE family -- includes Qumran						
Cisco NCS 5508	288 QSFP28 100 Gb/s ports			4 GByte per ASIC		VoQ 10 mS per queue
Cisco NCS 5501	six QSFP28 100 Gb/s ports and 48 x 10 Gb/s			4 GByte per ASIC		VoQ 10 mS per queue
Cisco Nexus N9K-X9636C-R	36 x 100 Gb/s QSFP28 linecard			4 GByte per ASIC		VoQ
Cisco Nexus N9K-X9636Q-R	36 x 40 Gb/s QSFP linecard			4 GByte per ASIC		VoQ
Arista 7500R Linecard 36CQ	36 x QSFP28 100G	8Q		24 GB		VoQ
Arista 7500R Linecard 36Q	30 x 40G QSFP and 6 x 100G	8Q		8 GB		VoQ
Arista 7500R Linecard 48S2CQ	48 port sfp+ and 2 x 100G	8Q		4 GB		VoQ
Arista 7280SR-48C6	48 x 10 G SFP+ and 6 x QSFP28	8Q		4 GB	4 GB VoQ	VoQ
Arista 7280TR-48C6	48 x 10GBASE-T and 6 x QSFP28	8Q		4 GB	4 GB VoQ	VoQ
Arista 7280QR-C36	24 QSFP+ and 12 QSFP28	8Q		8 GB	8 GB in 2 groups	VoQ
Arista 7280QR-C48	48 QSFP+ and 24 QSFP28	8Q		32 GB	32 GB in 8 groups	VoQ
Brocade SLX-9850	36 QSFP28 per linecard	8Q				4 or 6 GB per 6-port group VoQ

Brocade SLX-9540	6 QSFP28 100/40 Gb/s and 48 10/1 Gb/s	8Q		6 GB		6 GB VoQ
Edge-Core AS5900-54X	48 SFP+ and 6 QSFP28	8Q		4 GB		VoQ
Champion Qumran	48 SFP+ and 6 QSFP28	8Q		4 GB		VoQ
Alpha STX-60x0-486F Qumran	48 SFP+ and 6 QSFP28	8Q		4 GB		VoQ
Dell S4248-ON	48 SFP+ and 6 QSFP28	8Q		4 GB		VoQ
Extreme VSP8600 - 8 slot chassis	modules: 6 x 100G, 16 x 40G, 24 x 10G					
Agema AGC7648A	48 SFP+ and 6 QSFP28	8Q		6 GB		VoQ
AT&T open XGS-PON	16 XFP and 6 QSFP28			32 MB		VoQ
Broadcom Jericho+ a member of the StrataDNX DUNE family						
Agema AGC5648 Jericho+	48 SFP28+ and 6 QSFP28	8Q		8 GB per ASIC		VoQ
Cisco 3636C-R	36 ea QSFP28 100 Gb/s	8Q		4 GB per ASIC		VoQ
Arista 7280SR2A-48YC6	48 x 25 G SFP28 and 6 x QSFP28	8Q		8 GB	8 GB VoQ	VoQ
Arista 7500R2-36CQ	36 x QSFP28 100 Gb/s	8Q		4 GByte per ASIC		VoQ
Broadcom Jericho2 a member of the StrataDNX DUNE family						
Broadcom ARAD (July 2014) a member of the StrataDNX DUNE family						
Arista 7280E-64	48 port SFP+ and 4 x QSFP	8Q		9 GB		VoQ 125 MB per 10 gig port
Arista 7280E-68	48 port SFP+ and 2 x QSFP28 100 Gb/s	8Q		9 GB		VoQ 125 MB per

						10 gig port
Arista 7280E-72	48 port SFP+ and 2 x MXP	8Q		9 GB		VoQ 125 MB per 10 gig port
Arista 7504E/7508E	48 port sfp+ line card	8Q		3 GB per each of 3 processors	50 MB/port-queue	VoQ
Arista 7504E Linecard 12CQ	12 QSFP28 100G	8Q		3 GB per each of 6 processors	500 MB/port-queue	VoQ
EZChip NP-5						
PARPRO N5R-100	24 SFP+ and 4 QSFP+	??		12 GByte		VoQ very large
Cavium						
Edge-corE AS7500-32X	32 QSFP28 100 Gb/s	??				24 MB
Edge-corE AS7512-54X	6 QSFP28 100 Gb/s and 48 SFP28	??				24 MB
Wedge_100C	32 QSFP28 100 Gb/s	??				24 MB
Arista 7160 family	32 QSFP28 100 Gb/s	??				24 MB
Brocade SLX-9240	32 QSFP28 100 Gb/s	??				24 MB
Brocade SLX-9140	6 QSFP28 100 Gb/s and 48 QSFP28	??				24 MB
Pegatron w/out model num	6 QSFP28 100 Gb/s and 48 QSFP28	??				24 MB
Barefoot Tofino						
Wedge 100BF-32X	32 x QSFP28 100G			16 MByte		16 Mbyte
Wedge 100BF-65X	65 x QSFP28 100G			16 MByte		16 Mbyte
OSW 1800	48 x SFP28 25G and 6 x QSFP28 100G			16 MByte		16 Mbyte

Aurora 710	32 x QSFP28 and 2x SFP+		20 MByte			20 Mbyte
Arista 7170-64C	64 x QSFP28		22 MByte			20 Mbyte
Stordis BF2556XT -1T	48 x SFP28 and 8 x QSFP28		22 MByte			20 Mbyte
Cisco Nexus C34180	48 x SFP28 and 6 x QSFP28		20 MByte			20 Mbyte
Arista 7170-32C	32 x QSFP28		22 MByte			20 Mbyte
A mystery_(for now)						
Telco Systems T-Metro-8100	2 x QSFP28 100G and 48 x SFP+ 10G					
Huawei S6720-54C-EI-48S	48 SFP+ and 2 QSFP and 4 QSFP expansion	??				8 MB to 1 port
Huawei S6720-30C-EI-24S	24 SFP+ and 2 QSFP and 4 QSFP expansion	??				8 MB to 1 port
Mellanox						
Mellanox SX1024	48 SFP+ and 12 QSFP+	??		4.6 MB		64 KB to 1 port
Mellanox SX1036	36 QSFP+	??		4.6 MB		128 KB to 1 port
Mellanox Spectrum	32 QSFP28 100Gb/s	??		16 MB		12 MB to 1 port?
Mellanox Spectrum-2						
Broadcom Helix						
Arista 7010T	48 1000-base-T + 4 SFP+	8Q		4 MB/switch		4 MB
Brocade ICX 7150-24	(24+2) 1000-base-T and 4 SFP+	8Q		2 MB		2 MB to 1 port
Brocade ICX 7250-24	(24+2) 1000-base-T and 4 SFP+	8Q		2 MB		2 MB to 1 port
Brocade ICX 7650-48P	48 x 1000bsseT and (2 x 40G or 4 x 10G front module)	8Q		5 MB		

Brocade ICX 7650-48ZP	24 x 1000BaseT and 24 multiGig ports and (1 x 100G or 2 x 40G front module)	8Q		12 MB		
HPE Altoline 6900	48 1000-base-T and 4 SFP+ and 2 QSFP stacking ports	8Q		4 MB		? MB to 1 port
Champion helix4	48 1000-base-T and 4 SFP+ and 2 QSFP stacking ports	8Q		4 MB		
Dell S3048-ON	48 1000-base-T and 4 SFP+	8Q		4 MB		? MB to 1 port
Agema AG6248C	48 1000-base-T w 2 SFP+	8Q		4 MB		? MB to 1 port
Centec						
Centec V580-20Q4Z and E580-20Q4Z	20 x QSFP 40G and 4 x SFP+ and 4 x QSFP28 100G			9 MB		
Centec V580-48X2Q4Z and E580-48X2Q4Z	48 x SFP+ 10G and 2 x QSFP+ 40G and 4 x QSFP28 100G			9 MB		
Centec V350-48T4X and E350-48T4X	48 x 1000baeT and 4 x QSFP+ 40G and 4 x QSFP28 100G			3 MB		
Centec E330-52SX	48 x SFP 1G and 4 x SFP+ 10G			6 MB		
Cisco UADP Catalyst						
Catalyst 3850, 3650	ASIC support 24 GE ports AND 2 x 10GE	8Q	several	6 MB per ASIC		4 MB per ASIC
Catalyst C3850-12XS	12 SFP+ (6 ports per ASIC)	8Q	2P6Q3T	6 MB per ASIC		4 MB per ASIC
Catalyst C9200-family	24- and 48-port 1-Gb/s access switches + uplinks	8Q		6 MB		4 MB
Catalyst C9300-24T	ASIC support 24 GE ports AND uplink module	8Q	2P6Q3T			not clear
Catalyst C9300-48T	48 GE ports AND uplink module	8Q	2P6Q3T			not clear
Catalyst C9300-24UX	24 100/1G/2.5G/5G/10G Tw-Pr ports AND uplink module	8Q	2P6Q3T			not clear
	24 QSFP 40 Gb/s	8Q	2P6Q3T			not clear

Catalyst C9500-24Q						
Catalyst C9500-40X	24 SFP+ ports AND uplink module	8Q	2P6Q3T			not clear
Catalyst C9500-24Y4C [UADP 3.0]	24 SFP28 ports AND 4 QSFP28 100G	8Q	2P6Q3T	36 MB per ASIC		est 23 MB
Catalyst C9500-32QC [UADP 3.0]	16 x QSFP28 100G OR 32 QSFP 40G	8Q	2P6Q3T	36 MB per ASIC		est 23 MB
Catalyst C9500-32C [UADP 3.0]	32 SFP28 100G ports	8Q	2P6Q3T	36 MB per ASIC		est 23 MB
Catalyst C9500-48Y4C [UADP 3.0]	48 SFP+ ports AND 4 QSFP28 100G	8Q	2P6Q3T	36 MB per ASIC		est 23 MB
Catalyst C9800	Wi-Fi controller					
Cisco Nexus switches w ACI silicon						
Cisco Nexus 92160YC-X	48 SFP28 and 6 QSFP28			Single ASE3 20 MByte		10.2 MB
Cisco Nexus 9272Q	2RU 72 x 40Gb/s QSFP+			Single ASE2 30 Mbyte		5.1 MB
Cisco Nexus 92304QC	2RU 56 x 40Gb/s QSFP+ and 8 QSFP28			Single ASE2 30 Mbyte		5.1 MB
Cisco Nexus 9372TX	48 10-Gbps Base-T and 6 QSFP+			12 MB NFE + 25 MB ALE		21 MB max burst
Cisco Nexus 9396PX	48 SFP+ and {12 QSFP+ or 4 CPAK 100G}			12 MB NFE + 40 MB ALE		21 MB max burst
Cisco Nexus 93180YC-EX	48 SFP28 25 Gb/s and 6 QSFP28			40 MByte		17.6 MB
Cisco Nexus 93108TC-EX	48 tw-pr 10 Gb/s and 6 QSFP28			40 MByte		17.6 MB
Cisco Nexus 9364C	64 ports QSFP28 100 Gb/s			40 MByte		17.6 MB
Cisco Nexus N9K-C9316D-	16 QSFP-DD 400/100 Gb/s			80 MByte		

GX						
Cisco Nexus N9K-C93600CD-GX	28 SFP28 and 8 QSFP28-DD			80 MByte		
Other Shared Memory						
Catalyst 3550-24	24 10/100-base-T + 2 x 1G GBIC	8Q		2 MB		2 MByte
Ciena 3930	2 x SFP+ and 4 SFP and 4 SFP-or-TwPr (10/100/1000)	8Q				
Extreme X450-G2-48T-10G	48 1000-base-T + 4 x 10G SFP+	8Q		4 MB		?
Extreme 620X-16	16 10-Gbps SFP+	8Q		2 MB		2 MB
Extreme 620X-10	10 10-Gbps SFP+	8Q		2 MB		2 MB
Brocade FCX624S	24Gig-E and 4 SFP+	8Q		2 MB		1.04 MB to 1 port
Juniper Ex4500 / Ex4550	40 SFP+ plus 8 SFP+	8Q		4 MB per ASIC		230 KBytes
Brocade ICX6610-24	24Gig-E w 8 SFP+	8Q		4 MB		1 MB to 1 port
HP 3800	24Gig-E and 4 10Gb/s	8Q or 4Q or 2Q				0.23 MB
HP 2920-24	24 tw-pr Gig-E and 4 optional 10Gb/s	8Q		11.25 MB	4.5 MB shared	6.75 MB shared
HP 2824	20 tw-pr Gig-E and 4 SFP	4Q		0.512 MB shared		0.512 MB shared
HP A5800-24G	24Gig-E and 4 10Gb/s	8Q		4 MB		4 MB
HP E6600-24G-4XG	24Gig-E w 2 10Gb/s	8Q		18 MB for GE		18 MB
Arista 7124SX	24 x SFP+	8Q		2 MB/sw-chip	shared	1.238 + 0.02 MB
Arista 7148SX	48 SFP+	8Q		2 MB/sw-chip, 8 MB total		1.238 + 0.02 MB
	24 SFP+	8Q		7.5 MB		

Arista DCS-7150S-24						
Arista DSC-7150S-52	52 SFP+	8Q		7.5 MB		
Arista DCS-7150S-64	48 SFP+ and 4 QSFP+	8Q		7.5 MB		
Dell 8024	24 SFP+	2Q		2 MB		
Dell 6248	48 Gig-E, 4 x SFP+	8Q		0.75 MByte		98 KB per port
Dell 7024	24 Gig-E, 4 x SFP+	8Q		4 MB		4 MB
IBM BNT G8052	48 GE + 4 SFP+	8Q		4 MB/switch		4 MB
Nortel 5520-48T ver 1-3	48 GE + 4 SFP shared		8Q fixed	786 KB per 12-port		131 KB w 8 Queues
Nortel 5520-48T ver 4-5	48 GE + 4 SFP shared		1 to 8Q	786 KB per 12-port		786 KB w 1 Queue
Catalyst 3750G-48TS, 2960G	12 ASICs w/ 4 GE ports ea	8Q	1P3Q3T	576KB per ASIC	192KB per ASIC	384 KB per ASIC
Catalyst 2960S	Single ASIC: 48 +2 10Gb/s	8Q	1P3Q3T	2 MByte		2 MByte
Catalyst 3750E, 3560E, 3750X & 3560X	ASIC support 24 GE ports or 2 x 10G	2Q	1P3Q3T	2750KB per ASIC	750KB per ASIC	2 MB per ASIC
Catalyst 2960-X	ASIC support 48 GE ports AND uplink and stack	4Q				4 MB per ASIC
Catalyst 4948E	48 GigE + 4 SFP+	4		17.5 MB		Max 16 MB to 1 port
Cisco Catalyst 4510R+E	Chassis w 8 interface slots -- 12 port SFP+ line card	8	1P7Q1T	32 MB on Supervisor		Max 14 MB to 1 port
Cisco Catalyst WS-C4500X-32SFP+	1 RU w 32 SFP+ ports and module for 8 more	8	1P7Q1T	32 MB		see note above
Cisco Nexus 3548 and 3548X	48 SFP+	4		18 MB		5.8 MB
Large queue 1RU switches						

Force10 S60	48 Gig-E + 4 SFP+	4Q		1250 MB		enough
Arista 7048	48 Gig-E + 4 SFP+	8Q		768 MB	16 MB/port?	GOBBS
Corsa DP2100	32 1/10 G SFP+	8Q		6 GB		see note
Corsa DP2200	32 1/10 G SFP+ and 2 QSFP28 100G	8Q		6 GB		see note
Corsa DP2400	32 1/10 G SFP+ and 2 QSFP28 100G + stack	8Q		6 GB		see note
Corsa DP6430	24 SFP+ and 2 CFP/2 100G	8Q		20 GB		see note
Corsa DP6440	48 SFP+ and 4 CFP/2 100G	8Q		20 GB		see note
Virtual Output Port queuing						
Brocade MLX	2-port 100 Gb/s line card	8Q		3 GB	256 MB/port-queue	VoQ
Brocade MLX	8-port 10 Gb/s line card	8Q		3 GB	256 MB/port-queue	VoQ
Brocade MLX	24-port 1 Gb/s line card	8Q		1 GB	64 MB/port-queue	VoQ
Extreme BlackDiamond X8	96-port SFP+ line card 48-port QSFP+ line card 4-port CFP2 100 Gb/s line card	8Q		9 MB per 24 10-Gb/s ports 9 MB per 6 40-Gb/s ports 36 MB per fabric module		Who knows??
Cisco Nexus 5010	26 SFP+	8	1 (I think)	480 KB per port	480 KB	VoQ
Cisco Nexus 5548P	32 fixed SFP+ and 16-port expansion module	8 Unicast 8 Multi	1 (I think)	640 KB per port	640 KB	VoQ
Cisco Nexus 5672UP	48 fixed SFP+ and 6 QSFP+	8 Unicast 8 Multi	1 (I think)	25 MB per 12-port 10G ASIC	14 MB shared per ASIC	3 MB Unicast + 6 MB Multicast
	48 fixed SFP+ and 4 QSFP+					

Cisco Nexus 6001		8 Unicast 8 Multi	1 (I think)	25 MB per 12-port 10G ASIC	14 MB shared per ASIC	3 MB Unicast + 6 MB Multicast
Cisco ASR-9000	Chassis solution. 1-6 ports per ASIC			ASICs have 0.5 to 3.3 GB/port		VoQ
Juniper QFX10002-36	QSFP: 12 x 100 Gb/s OR 36 x 40 Gb/s	8Q		4 GByte per ASIC		VoQ 100 mS per port
Nexus 7000/7700						
Cisco Nexus 7000 (M1 series)	48-port Tw-Pr GE	2q4t	1p3q4t		7.56 MB per port	6.15 MB per port
Cisco Nexus 7000 (F3 Series)	6-port 100GE CPAK	4q	4q	72 MB shared		VoQ
Cisco Nexus 7000 (F2 series)	48 SFP+ across 12 ASICs	4q1t	1p3q1t	72 MB shared		VoQ
Cisco Nexus 7000 (F3 series)	12 QSFP+ across 6 ASICs	4q1t	1p3q1t	72 MB shared		VoQ
Cisco Nexus 7000 (M1 series)	32-port 10GE shared 4-port groups SFP+	8q2t	1p7q4t		65 MB per group	80 MB per group
Cisco Nexus 7000 (M1 series)	8-port 10GE X2	8q2t	1p7q4t		92 MB	80 MB
Cisco Nexus 7000 (M2 series)	2-port 100GE CFP2	8q2t	1p7q4t		62.46 MB	31.23 MB
Cisco Nexus 7000 (M2 series)	24-port 10GE SFP+	8q2t	1p7q4t		5.21 MB	5.21 MB
Cisco Nexus 7700 (F3 Series)	12-port 100GE CPAK across 12 ASICs	4q	4q	144 MB shared		VoQ
Cisco Nexus 7700 (F3 Series)	24-port 40GE QSFP+ across 12 ASICs	4q	4q	144 MB shared		VoQ
Cisco Nexus 7700 (F3 Series)	48-port 10GE SFP+ across 6 ASICs	4q	4q	144 MB shared		VoQ
Cisco Catalyst 6500 gets its own table						

Comments, suggestions, corrections to warner@ucsc.edu

Opinions herein are solely those of jim warner. The University has no opinions, and if they did, these would not be them.