Vendor	Cisco	Brocade	Juniper
Model	**Nexus 7010**	**NetIron MLX 16**	**EX8216**
Airflow	FtB	FtB	S2S
Size in RU	21	14	21
Dimensions - See note 3	17.3"W x 36.5"H x 38"D	17.45"W x 24.47"H x 25.5"D	17.3"W x 36.5"H x 28.2"D
Weight - Chassis only	200	>100lbs<130lbs - See note #4	160lbs
Weight - Fully configured	507	236lbs	486lbs
Sup modules	2	2	2
Linecard slots	8	16(half-height)	16
Power supplies and size	3(6000W or 7500W)	8(1200W or 2400W)	6(1200W, 2000W, or 3000W)
Fabric modules	5	4	8
Fan modules/trays	4(2 system, 2 fabric)	3	2
Max10G ports	256(64 NB)	128 NB	640
Oversubscription per module	4to1	0	5to1
Power per port	10W	<10W	Unknown - See note 5
Sup Proc	Dual-core Intel Xeon	Unknown	1.2Ghz PowerPC
DRAM	4GB	1GB	2GB
Flash-on board	2GB	Unknown	4GB
TOR Fabric extension?	Yes - Nexus 2248TP	Yes - 48T module & MRJ-21	No
Backplane capacity	Up to 15Tbps - See note 7	3.84Tbps	6.2Tbps
Slot bandwidth	80Gbps	120Gbps	160Gbps
ISSU capable?	Yes	Yes	Yes
OIR capable?	Yes	Yes	Yes
TACACS+ Supported?	Yes	Yes	Yes
Jumbo frame support?	Yes	Yes	Yes
MAC size limit	128k per linecard	Up to 2mil - See note 9	160k
ARP entry limit	Unknown	Unknown	100k
PVST+?	Yes	Yes	Yes
Multi-chassis link agg?	vPC	MCT	Unknown - See note 11
L2 Discovery	CDP/LLDP	CDP/FDP/LLDP	LLDP
FHRP? - See note 13	HSRP/VRRP	VRRP/VRRP-E(proprietary)	VRRP
SNMP v3 support?	Yes	Yes	Yes
Flow monitoring	Netflow	sFlow(RFC 3176)	sFlow
Support level?	Up to 4hr replacement - See note 16	Up to 4hr replacement	Up to 4hr replacement - See note 17

Vendor	Force10	Arista	HP
Model	E1200	7500	A12508
Airflow	S2S - See note 1	FtB	FtB - See note 1
Size in RU	24	11	25 - See note 2
Dimensions - See note 3	17.4"W x 36.75"H x 21"D	17.5"W x 19"H x 30"D	17.4"W x 38.4"H x 26.1"D
Weight - Chassis only	139lbs	95lbs	143.3lbs
Weight - Fully configured	394lbs	300lbs	385.8lbs
Sup modules	2	2	2
Linecard slots	14	8	8
Power supplies and size	4x2800W	4x2900W	6x2000W
Fabric modules	8	6	9(6min to run)
Fan modules/trays	Yes, but # unknown	6	2
Max10G ports	224(56 NB)	384 NB	256(64 NB)
Oversubscription per module	4to1	0	4to1
Power per port	Unknown - See note 5	<10W	Unknown - See note 5
Sup Proc	3x?? - See note 6	2.4Ghz Dual-core x86 64bit	MPC8548+MPC8544 (FFDR CPU)
DRAM	Unknown	4GB	1GB(up to 2GB)
Flash-on board	Unknown	2GB	256MB(up to 1GB)
TOR Fabric extension?	Yes - LC-EF-GE-90M & MRJ-21	No	No
Backplane capacity	5Tbps	10Tbps	3.06Tbps
Slot bandwidth	56.25Gbps	648Gbps	80Gbps(Estimated)
ISSU capable?	Yes - Assumption	Yes	Yes
OIR capable?	Yes	Yes	Yes
TACACS+ Supported?	Yes	Yes	Yes
Jumbo frame support?	Yes	Yes	Unknown - See note 8
MAC size limit	896k	16384 per linecard	512k
ARP entry limit	256k - See note 10	8k per linecard	64k
PVST+?	Yes	Yes - Future release	No
Multi-chassis link agg?	Unknown	MLAG	No
L2 Discovery	LLDP	LLDP	Unknown - See note 12
FHRP? - See note 13	VRRP	VRRP - Future release	VRRP/VRRP-E(proprietary)
SNMP v3 support?	Yes	Yes	Unknown - See note 14
Flow monitoring	sFlow	Unknown - See note 15	sFlow
Support level?	See note 18	Up to 4hr replacement - See note 19	Up to 4hr replacement

Notes

1. Airflow direction could not be located in the documentation available through the website. Estimates of airflow direction were made based on photos showing locations of fans and/or vent placement on the chassis itself.

2. Exact size of the HP/H3C A12508 in RU was not found in the documentation on the website. This value is an estimate based on the dimensions of the product and may be incorrect. It should be within about 3RU of the actual value. This was the tallest chassis in the group of 6 that were examined.

3. Dimensions are given with the assumption that all cable management hardware is going to be used. This increased the depth on the Cisco Nexus 7010 and Juniper EX8216 by several inches.

4. Actual numbers from Brocade on empty chassis weights were not available. It was annotated in one document on their site that the empty weight was 236lbs, but this appears to be erroneous as other documents showed 236lbs as the fully configured weight. As the chassis itself is 66% the heighth of the Cisco Nexus 7010, it wouldn't make sense for the empty weight to exceed that of the Nexus 7010's empty weight. Therefore, since the actual empty weight is unknown, it is most likely between 100lbs and 130lbs. When compared to the empty weights of the other vendor chassis, this is not an unreasonable assumption.

5. Not every vendor released their power per port numbers. Some were downright confusing when trying to figure out their power utilization statistics. While this value isn't REALLY important to me, it might be of benefit to some. I want to know total utilization of the chassis in terms of power. While I could have included those numbers, I chose not to as power utilization will change based on amount of slots in use. As long as I know the size of the power supplies and the number needed, I can plan for maximum power draw of the chassis and allocate power to that end.

6. I know that Force10 has 3 processors in their supervisor module, but I couldn't find any information other than that.

7. This is full duplex capacity, but I don't know the actual capacity itself. "Up to" is not the same as giving me a hard number like the other vendors did.

8. I couldn't find a mention from HP on whether the A12508 supported jumbo frames. My guess is that they do since everyone else seems to support them.

9. This number is for the MLX-32. Brocade didn't break down numbers for each individual model. I would assume that the MLX-16 is either half or one quarter of the 2 million MAC addresses. That's still a LOT of MAC addresses even in a virtual environment with things like VMWare vMotion

10. According to Force10 documentation, the 256k value is per 4 port 10Gig card. This was one of the harder values to come by as I couldn't get a definitive one for either Cisco or Brocade.

11. Every vendor except for Force10 seems to have a multi-chassis linking technology. Force10 may have one, but I couldn't find any mention of it. By multi-chassis, I am referring to technologies that overcome the limitations of spanning-tree. If 2 switches are able to have their own separate link to a server/switch and have those separate links appear as 1 to the other server/switch, that's multi-chassis linking. Cisco's VSS technology for their 6500 switching platform is a good example. Juniper does have this, but I don't think it works with the EX8200 series. All the documentation I could find on it showed it working with the EX4500 switch and below, but did not indicate that the EX8200 platform was capable of this.

12. I could not find any mention of layer 2 discovery protocols with regards to the HP A12508. I am assuming they support LLDP. In the interest of fairness, I didn't want to mark them as a "no".

13. If you are wondering why you will not see GLBP included, it is because I do not have a requirement to use it today or anytime in the near future. However, quite a few of these switches do support GLBP if that is a requirement you have.

14. Although I found several references to SNMP v1 and v2, I didn't find any mention of SNMP v3 support. However, my assumption is that it is probably supported, so I didn't want to make this a definitive "no". If it is not supported, it probably will be very shortly.

15. I could not find anything that mentioned flow monitoring on the Arista site. However, it must be pointed out that Arista has by far the most open switch out of all the 6 I looked at. You can pretty much run anything you want on it so I suspect pulling flow information off of it would be a rather trivial task for most organizations.

16. Cisco does have a 2 hour hardware replacement option in certain areas. Most of my requirements are based on either 4 hour or next business day if I have redundant hardware. To my knowledge, Cisco is the only vendor out of the 6 that I examined that has a 2 hour response time offering.

17. Juniper does offer 4 hour hardware replacement, but you have to be within 50 miles of a Juniper parts depot. My guess would be that most major metropolitan areas in North America have depots, but you would have to check with Juniper to be sure. In all my dealings with Juniper, I have yet to have to replace a part within a 4 hour window, so my knowledge in that area is very limited.

18. I couldn't find any particular details on Force10's hardware replacement except that they do have equipment depots all over the world. Based on that, I would assume at a minimum they have next business day support and more than likely, same day in certain areas. Actual product support is available 24x7 though.

19. Arista has up to 4 hour replacement, but it is only available in 5 areas in North America. They are: San Francisco, Chicago, New York City, Toronto, and Washington DC. Everywhere else is next business day. Other parts of the world like London, Sydney, Frankfurt, and a few other major cities have 4 hour response capabilities as well. Some countries have their hardware replacement handled by a third party. Check the Arista site for the latest hardware replacement capabilities.