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Riverbed® Steelhead® Product Family

Model Specifications: Riverbed Steelhead xx50 Series Appliances

Steelhead Appliances are available in a range of different models to suit the needs of any office.

	Small Office Steelhead					Mid-Size Office Steelhead					
Model	**250 Series**			**550 Series**			**1050 Series**			**2050 Series**		
Configurations	L	M	H	M	H	U	L	M	H	L	M	H
Profile	Desktop			Desktop		1U				1U		
Upgradeable to	250-M/H	250-H	-	550-H	-	-	1050-M/H	1050-H	-	2050-M/H	2050-H	-
Optimized WAN Capacity[a]	1 Mbps	1 Mbps	2 Mbps	2 Mbps	4 Mbps	4 Mbps	8 Mbps[o]	10 Mbps[o]	20 Mbps[o]	45 Mbps[b]		
Optimized TCP Connections[d]	30	125	200	300	600	600	800	1,300	2,300	2,500	4,000	6,000
Raw Capacity	120 GB			160 GB		250 GB	250 GB		500 GB	1 TB		
Data Store Capacity	40 GB			80 GB		100 GB	100 GB		200 GB	400 GB		
RSP Partition[k]	55 GB			55 GB		100 GB	100 GB (Default) 200 GB (RAID)		200 GB	75 GB		
RSP 64 Bit Packages	No						Yes			Yes		
Storage Fault Tolerance	-					-	Optional RAID			RAID		
Front Swappable Drives	-					1	1 (default) 4[g] (RAID)		2 (default) 4[g] (RAID)	4[g]		
RAM[m]	1 GB			2 GB		2 GB	2 GB	2 GB	4 GB	6 GB		
Expansion Slots (PCI-e)[h]	-						1			1		
Onboard Bypass ports (Copper)	2						4			4		
Max # of Bypass Ports	2						8			8		

	Large Office or Data Center Steelhead						Management		
Model	**5050**			**6050**	**7050**		**INT 9350**	**CMC 8150**	**SMC 8650**
Configurations	L	M	H		L	M			
Profile	3U			3U	3U		3U	1U	1U
Upgradeable to	5050-M/H	5050-H	-	-	7050-M	-	-	-	-
Optimized WAN Capacity[a]	90 Mbps[b, o]	90 Mbps[b, o]	155 Mbps[b]	310 Mbps	1 Gbps[b, c, n]		12 Gbps[p]	NA	NA
Optimized TCP Connections[d]	7,500	10,000	18,000	50,000	75,000	100,000	1,000,000	-	-
Raw Capacity	2 TB	2 TB	3 TB	8 TB	2.8 TB	5 TB	-	1 TB	1 TB
Data Store Capacity	600 GB	600 GB	800 GB	3.5 TB	2.2 TB	4.4 TB	-	NA	N/A
RSP Partition[k]	100 GB[e]	100 GB[e]	150 GB[e]	150 GB[e]	100 GB[e]	100 GB[e]	-	-	-
RSP 64 Bit Packages	Yes			Yes	Yes		-	-	-
Storage Fault Tolerance	RAID			RAID	RAID[f]		RAID	-	-
Front Swappable Disks	8[g]	8[g]	12[g]	16[g]	16[g]	30[g]	3[g]	2	2
RAM[m]	8 GB			24 GB	32 GB	48 GB	8 GB	6 GB	6 GB
Expansion Slots (PCI-e)[h]	4	4	4	4	4		4		
Onboard Bypass ports (Copper)	4	4	4	4	4		4		
Max # of Bypass Ports	20	20	20	20	20		20	-	-

(a) Inbound (WAN to LAN) Steelhead capacity is unrestricted; outbound WAN capacity can be expected up to the amount listed. On the 2050, 5050, and 6050, total WAN capacity equals inbound traffic + outbound traffic

(b) No enforced optimized WAN bandwidth limit

(c) For Data Center to Data Center workloads, WAN capacity is up to 1 Gbps. For DC to remote office workloads, recommended WAN capacity is up to 622 Mbps

(d) TCP Connections can be expected up to the amount listed

(e) No PFS support

(f) Data store uses fault tolerant striped configuration

((g) Hot swappable disks

(h) Optional Network Bypass cards: Dual and Quad LX and SX GigE Fiber GigE, Quad Copper GigE, Dual 10GbE SR (INT9350 & SHA7050 only)

(k) Raw disk capacity allocated to the RSP partition. About 7GB is used by RSP package and filesystem. Partner packages need additional storage (based on the size of the package)

(m) RSP requires additional 2GB of memory, 6050 requires 4GB, 7050 requires 8GB

(n) Over 4Gbps of LAN performance with 2.5X data reduction when configured to use jumbo Ethernet frames.

(o) The 5050L and the 1050 B/W increases require RiOS 5.5.7 or 6.0.2 onwards

(p) Multiple inpath interfaces were used to achieve this throughput

Power & Physical Specifications

	Small Office Steelhead			Mid-Size Office Steelhead								
Model	**250 Series**			**550 Series**		**1050 Series**				**2050 Series**		
Configurations	L	M	H	M	H	U	L	M	H	L	M	H
Profile	Desktop			Desktop		1U				1U		
Dual Power Supplies	-			-		(Optional)				✓		
Power [Watts] (Typical)	62.5			66.5		138			151	197		
BTU	213			227		471			515	672		
Temperature	0 - 45 deg C / 32 - 113 deg F (Operating) -40 - 65 deg C / -40 - 149 deg F (Storage)					10 - 40 deg C / 50 - 95 deg F (Operating) -40 - 65 deg C / -40 - 149 deg F (Storage)						
Relative Humidity[i]	20% - 80% non-condensing (Operating)5% - 95% non-condensing (Storage)											
Operating Acoustic Noise	45 dBA Sound Pressure (Typical)					61 dBA Sound Pressure (Typical)						
System Dimensions (LxWxH)[ii]	12 x 7.1 x 1.65 in 304.8 x 180.3 x 42 mm					25.4 x 17.2 x 1.71 in 645.4 x 436 x 43.5 mm						
Packaging Dimensions	24.5 x 12 x 4 in 622 x 305 x 102 mm					33.6 x 22.9 x 8.6 in 854 x 582 x 219 mm						
Max Weight (without packaging)	4.7 Lbs / 2.15 Kg					29 Lbs / 13.1 Kg			30 Lbs / 13.6 Kg	35 Lbs / 15.9 Kg		
Rail Information	Mounting ears included. Orderable spare part RMK-001					Mounting rail kit included. Orderable spare part RMK-002						

	Large Office or Data Center Steelhead						Management		
Model	**5050**			**6050**	**7050**	**7050**	**INT 9350**	**CMC 8150**	**SMC8650**
Configurations	L	M	H		L	M			
Profile	3U			3U	3U		3U	-	-
Dual Power Supplies	✓			✓	✓		✓	-	-
Power [Watts] (Typical)	203	225		352	425	430	320	153	206
BTU	693	768		1670	1455	1470	1091	515	646
Temperature	10 - 40 deg C / 50 - 95 deg F (Operating) -40 - 65 deg C / -40 - 149 deg F (Storage)							10 - 35 dec C / 50-95 deg F (Operating) -40-70 deg C / -40-158 deg F (Storage)	
Relative Humidity[i]	20% - 80% non-condensing (Operating)5% - 95% non-condensing (Storage)								
Operating Acoustic Noise	61 dBA Sound Pressure (Typical)						Same as 1050		Same as models 520 - 2020
System Dimensions (LxWxH)[ii]	25.72 x 17.0 x 5.2 in 653.4 x 431.6 x 131.9 mm							Same as 1050	1.69 x 17.6 x 21.5 in (4.27 x 44.7 x 54.62)
Packaging Dimensions	34.1 x 23.7 x 15.9 in 866 x 602 x 403 mm							Same as 1050	13 x 25 x 35 in (33 x 64 x 89)
Max Weight (without packaging)	59 Lbs / 26.7 Kg	64 Lbs / 29 Kg		71 Lbs / 32.2 Kg	55 Lbs / 25 Kg	59 Lbs / 25.8 Kg	51 Lbs / 23.2 Kg	30 lbs / 13.6 kg	26 lbs / 12 kg
Rail Information	Mounting rail kit included. Orderable spare part RMK-003							Same as 1050	Universal (2 and 4 post)

(i) Operating altitude up to 10,000 feet

(ii) Length is without bezel

The availability, export or re-export of these products or specific features are subject to the export laws and regulations of the U.S. and the laws and regulations of any applicable foreign agency or authority.

Please refer to the xx20 appliances spec sheet for specifications on the other models.

System Requirements: Steelhead Mobile

Steelhead Mobile software optimizes application performance over the WAN for the mobile workforce.

Operating System	Windows 2000 SP4, XP SP2 (32 bit versions only); Vista and Windows 7 (32 bit and 64 bit versions). Mac OSX 10.5 and 10.6 (Intel only)
CPU	Celeron 650 MHz
Memory	256 MBz
Disk Store	256 MB free disk space (min. required)
Steelhead Appliance[1]	Required
Steelhead Mobile Controller (SMC)	Required: Either Steelhead Mobile Controller Appliance or Steelhead Mobile Conroller Virtual Edition

Software Specifications: Steelhead Mobile

Concurrent Clients Supported per SMC	4000 (SMC-Appliance) / 100 (SMC-Virtual Edition)
Concurrent Clients Supported with SMC Cluster[2]	$n \times 4000^{10}$
VPN Compatibility[3]	Cisco, Juniper, Nortel, OpenVPN, Microsoft, Aventail, Citrix, AT&T Netclient, Array, Check Point, F5, Sonicwall, Fortiinet, WatchGuard
Wireless PC Card Compatibility[4]	Verizon, AT&T, Sprint

(1) At least one Steelhead appliance is required running RiOS version 4.x or higher.

(2) SMCs can operate in clustered mode to support additional Steelhead Mobile clients.

(3) Partial listing. VPN compatibility may be impacted by vendor software version, client configuration, and other factors. Refer to detailed VPN specifications at http://www.riverbed.com/products/steelhead_mobile/vpn_specs/ for more information.

(4) Partial listing. Wireless PC Card compatibility may be impacted dependent upon hardware and driver versions, bundled software and other factors. Refer to detailed wireless specifications at http://www.riverbed.com/products/steelhead_mobile/wireless for more information.

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About Riverbed

Riverbed Technology is the IT performance company. The Riverbed family of wide area network (WAN) optimization solutions liberates businesses from common IT constraints by increasing application performance, enabling consolidation, and providing enterprise-wide network and application visibility – all while eliminating the need to increase bandwidth, storage or servers. Thousands of companies with distributed operations use Riverbed to make their IT infrastructure faster, less expensive and more responsive. Additional information about Riverbed (NASDAQ: RVBD) is available at **www.riverbed.com**.

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