SteelHead

Riverbed® SteelHead™

Model Specifications

SteelHead CX

Model	CX580 Series			CX780 Series					CX3080 Series		
Software Configuration (RiOS)	Essentials	Standard	Enterprise	Essentials	Standard	Enterprise	Turbo Standard	Turbo Enterprise	Essentials	Standard	Enterprise
Profile	Desktop								1U		
Software Upgrade Path (RiOS)	Standard / Enterprise	Enterprise	–	Standard / Enterprise	Enterprise	–	Turbo Enterprise	–	Standard / Enterprise	Enterprise	–
Optimized TCP Connections and UDP Flows	2,500			5,500					14,000		
Optimized SSL/TLS Connections	2,500			5,500					14,000		
Optimized WAN Capacity[1]	50 Mbps			100 Mbps			200 Mbps		200 Mbps		
Network Services - WAN Capacity[2]	1,000 Mbps										
Data Store Capacity	200 GB SSD								400 GB SSD		
Web Proxy Cache Capacity	150 GB			250 GB					350 GB		
Storage Fault Tolerance	–								RAID[4]		
Hot Swappable Drives	–								2		
RAM	16 GB								24 GB		
Expansion Slots (PCI-e)[3]	–								1		
Included Bypass Ports (Copper)	4										
Max. # of Bypass Ports	4								8		

1.   Optimized WAN capacity limit is enforced on outbound optimized traffic. Inbound optimized WAN traffic is not capped.
2.   Using 1 Gbps on-board interface.
3.   Restrictions apply in combination of card types. Please see technical documentation for details.

NOTE: All WAN capacities, connections, flows and rules/classes specifications listed are maximums and may not be achieved simultaneously and/or in all environments.

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Power and Physical Specifications

SteelHead CX

Model	CX580 Series	CX780 Series	CX3080 Series
Dual Power Supplies	–		✓
Power [Watts] (Typical)	37W	60W	70W
Power Supply Efficiency Rating	80 Plus Gold		80 Plus Platinum
BTU	128	205	242
Temperature[1]	0-45°C / 32-113°F (Operating) -40-65°C / -40-149°F (Storage)		
Relative Humidity[2]	20%-80% non-condensing (Operating) 10%-95%, non-condensing (Storage)[3]		20%-80%, non-condensing (Operating)[3] 10%-95%, non-condensing (Storage)[4]
Operating Acoustic Noise (Typical)	45 dBA		
System Dimensions (LxWxH)	12.25 x 13.75 x 1.73 in 311.15 x 349.25 x 44 mm		15.25 x 17.24 x1.73 in 387.35 x 483 x 44 mm
Packaging Dimensions	17.7 x 12.2 x 7 in 450 x 310 x 180 mm		36 x 24 x 13 in 914.4 x 609.6 x 330.2 mm
Weight (Without Packaging)	6 lbs 2.7 kg		27 lbs 12.25 kg
Rail Information	Mounting Rail Kit Included Orderable Spare Part Number: RMK-4-DT		Mounting Rail Included Orderable Spare Part Numbers: RMK-4-3080

1. In China – for use in non-tropical locations.
2. Operating altitude up to 10,000 feet except in China 6,562 feet (2,000 m).
3. Max dew point of 21°C / 69.8°F.
4. Maximum wet bulb of 28°C / 82.4°F (at temperatures from 25-35°C / 77 – 95°F).

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

Feature Tiers: SteelHead CX-580/CX-780/CX-3080 and SteelHead Virtual

	Essentials	Standard	Enterprise
Description	Basic WAN Optimization	Full WAN Optimization with App Acceleration	Full Featured App Acceleration + Next Gen Features
Sample Features	• Full Deduplication • TCP Optimization / MXTCP • Hybrid Networking: QOS / Secure Transport / Path Selection	*Essentials +* • HTTPS Optimization • Most Protocol Blades (MAPI, SMB 2/3, CIFS) • WebProxy • SteelHead Mobile • Secure Protocols Optimization (TLS/SSL, encrypted/signed SMB)	*Standard +* • Data Center Protocol Blades (Replication, NFS) • SCPS / FIPS

Riverbed® SteelHead™

Model Specifications

SteelHead CX

Model	CX5080 Series		CX7080 Series		
Hardware Configuration / License	CXA-05080-B010 / L25	CXA-05080-B010 / L26	CXA-07080-B010 / L30	CXA-07080-B020 / L31	CXA-07080-B030 / L32
Profile	2U				
Upgradeable to	L26	–	-B020 / L31 or -B030 / L32[2]	-B030 / L32[2]	–
Optimized TCP Connections and UDP Flows	20,000	60,000	100,000	150,000	220,000
Optimized SSL/TLS Connections	20,000	60,000	100,000	150,000	220,000
Optimized WAN Capacity[1]	300 Mbps	622 Mbps	1,000 Mbps	2,000 Mbps	3,000 Mbps
Network Services – WAN Capacity	Unrestricted				
Network Services – Flows[3]	160,000		320,000	480,000	800,000
Network Services – Rules/Classes	6,000				
Data Store Capacity	1.4 TB		2.8 TB	3.8 TB	7.6 TB
Web Proxy Cache Capacity	300 GB		500 GB		
Storage Fault Tolerance	RAID[4]				
Hot Swappable Drives	6 SSDs + 2 HDDs		8 SSDs + 2 HDDs		
RAM	32 GB		64 GB	96 GB	192 GB
Total # of Expansion Slots (PCI-e)	Up to 4 FHFL + 2 FHHL[5]		Up to 4 FHFL + 1 FHHL + 1 HHHL[5]		
Included # of Bypass Ports (10/100/1000 Copper)	4				
Max. # of Bypass Ports 40 GbE / 10 GbE / 1 GbE	4x40 GbE / 16x10 GbE / 24x1 GbE[5]				

1. Optimized WAN capacity limit is enforced on outbound optimized traffic. Inbound optimized WAN traffic is not capped.
2. Requires exchange of appliance device (UPC-CXA-07080).
3. Inclusive of all optimized and/or managed flows.
4. RAID1 configuration for HDD. Datastore uses fault tolerant striped (FTS) configuration for SSD.
5. Restrictions apply in combination of card types. Please see technical documentation for details.

NOTE: All WAN capacities, connections, flows and rules/classes specifications listed are maximums and may not be achieved simultaneously and/or in all environments.

Riverbed® SteelHead™

Power and Physical Specifications

SteelHead CX

Model	CX5080 Series		CX7080 Series		
Hardware Configuration / License	CXA-05080-B010 / L25	CXA-05080-B010 / L26	CXA-07080-B010 / L30	CXA-07080-B020 / L31	CXA-07080-B030 / L32
Dual Power Supplies			✓		
Power [Watts] (Typical)	With 120VAC: 298W / With 230VAC: 290W		With 120VAC: 374W / With 230VAC: 364W		With 120VAC: 478W / With 230VAC: 459W
Power Supply Efficiency Rating	80 Plus Platinum				
BTU	With 120VAC: 1015 / With 230VAC: 991		With 120VAC: 1275 / With 230VAC: 1240		With 120VAC: 1632 / With 230VAC: 1566
Temperature[1]	0-40°C / 32-104°F (Operating)[4] / -40-60°C / -40-140°F (Storage)[5]				
Relative Humidity[2]	40-90%, non-condensing at 40°C				
Operating Acoustic Noise (Typical)	<60 dB				
System Dimensions (LxWxH)	27.56 x 17.32 x 3.43 in / 700 x 440 x 87 mm				
Packaging Dimensions[3]	36 x 24 x 12 in / 914.4 x 609.6 x 304.8 mm				
Max Weight (Without Packaging, without PCIE cards)	51 lbs / 23 kg				
Rail Information	Mounting Rail Kit Included. Orderable Spare Part Number: RMK-4-2U				

1. In China – for use in non-tropical locations.
2. Operating altitude up to 10,000 feet except in China 6,562 feet (2,000 m).
3. Length is without bezel.
4. Max dew point of 21°C / 69.8°F.

5. Maximum wet bulb of 28°C / 82.4°F (at temperatures from 25-35°C / 77 – 95°F).

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Perpetual or Monthly Subscription Models

SteelHead Virtual

Model	VCX-30	VCX-40	VCX-50	VCX-60	VCX-70	VCX-80	VCX-90	VCX-100	VCX-110
Optimized WAN Capacity	10 Mbps	25 Mbps	50 Mbps	100 Mbps	200 Mbps	500 Mbps	1,000 Mbps	2.5 Gbps	5 Gbps
Optimized TCP and UDP Flows	500	1,000	2,000	5,000	12,000	50,000	100,000	150,000	180,000
Network Services	50 Mbps	100 Mbps	250 Mbps	500 Mbps	Unrestricted				
Disk Capacity Advised[4]	120	176	438		870	1,686	2,358	3,760	5,100
Max Data Store Capacity	100	150	400		800	1,600	2,240	3,600	4,800
Management Disk	38	44	56		88	104	136	178	318
Maximum Web Proxy	400 GB		800 GB						
Virtual CPUs Required (min)	2	4			6	12	24	32	44
Reserved Memory Required	4 GB		8 GB		24 GB	38 GB	64 GB	80 GB	128 GB

Feature-tier licensing is available with RiOS version 9.9.3 and RiOS versions 9.10.1 and later. Virtual SteelHead must run RiOS version 9.9.3 or RiOS version 9.10.1 or later on a supported guest hypervisor. See Riverbed virtual products documentation for compatible hypervisors.

For information on the SteelCentral Controller for SteelHead, see the documentation for that product under the Documentation tab here: SteelHead Central Controller.

For NIC card support, see the documentation for Riverbed hardware platforms under the Documentation tab here: https://support.riverbed.com/content/support/software/steelhead/cx-appliance.html.

NOTE: All WAN capacity / bandwidth, TCP connections and UDP flows, and QoS specifications listed are maximums and may not be achieved in all environments. The WAN capacity limit is enforced on outbound optimized traffic. Inbound optimized WAN traffic is not capped.

Riverbed® SteelHead™

Model Specifications

SteelHead Cloud for Amazon Web Services Cloud

Model	CCX PERF-TIER1	CCX PERF-TIER2	CCX PERF-TIER3	CCX PERF-TIER4	CCX PERF-TIER4-H	CCX PERF-TIER5	CCX PERF-TIER5-H
Optimized WAN Capacity[1]	10 Mbps	50 Mbps	200 Mbps	500 Mbps		1 Gbps	
Optimized TCP Connections[2]	1,250	4,500	9,000	1,000	30,000	1,000	50,000
Total Elastic Block Store (EBS) Volume Size	430 GB			960 GB		2.4 TB	
Amazon Machine Instance (AMI) Size[3]	M4.large M5.large[4]		M4.2xlarge M5.2xlarge[4]	M4.4xlarge		M4.10xlarge	

1. Optimized WAN capacity-inbound and outbound.
2. Optimized WAN capacity and TCP connections are limited up to the listed amounts.

3. CPU and memory capacity are fixed for any Amazon Machine Instance (AMI) size.
4. An M5 new installation requires RIOS Version 9.15.1 or later.

Riverbed® SteelHead™

Model Specifications

SteelHead Cloud for Microsoft Azure Cloud

Model	CCX PERF-TIER1	CCX PERF-TIER2	CCX PERF-TIER3	CCX PERF-TIER4	CCX PERF-TIER4-H	CCX PERF-TIER5	CCX PERF-TIER5-H
Optimized WAN Capacity[1]	10 Mbps	50 Mbps	200 Mbps	500 Mbps		1 Gbps	
Optimized TCP Connections[2]	1,250	4,500	9,000	1,000	30,000	1,000	50,000
Total Azure Blob Storage Volume Size	430 GB			1.2 TB		2.4 TB	
Azure Target (v4 & v5 series)[3]	D2s_v4 D2s_v5	D4s_v4 D4s_v5	D8s_v4 D8s_v5	E16s_v4 E16s_v5		E20s_v4* E20s_v5*	

1. Optimized WAN capacity-inbound and outbound.
2. Optimized WAN capacity and TCP connections are limited up to the listed amounts.

3. For upgrade scenarios, if there is an existing v2 series, resize won't give options for "Ds_v4" / "Ds_v5" or "Es_v4" / "Es_v5" series.
   In this situation, there are two options:
   - For the upgrade option, you will need to resize the instance to "Dds_v4" / "Dds_v5" or "Eds_v4" / "Eds_v5" series which come with temp storage.
   - For the migration option, redeploy and migrate to new "Ds_v4" / "Ds_v5" or "Es_v4" / "Es_v5" series instance to use the new image.

Riverbed® SteelHead™

Model Specifications

SteelHead Interceptor

	Data Center
Model	INT9800
Profile	2U
Effective LAN Throughput	50 Gbps[1]
Storage Fault Tolerance	RAID
Front Swappable Drives	2[2]
RAM	48 GB
Expansion Slots (PCI-e)	6[3]
Included Bypass Ports (copper)	–
Max. # of Bypass Ports	16
Max. SteelHead Cluster Size	25

1. All LAN capacity, bandwidth, and TCP connections listed are maximums and may not be achieved in all environments.
2. Hot swappable disks.
3. Optional Network Bypass cards: Quad 10GbE SR/LR, Dual 40GbE SR/LR, Dual 100GbE SR/LR.

Riverbed® SteelHead™

Power and Physical Specifications

SteelHead Interceptor

	Data Center
Model	INT9800
Dual Power Supplies	–
Power [Watts] (Typical)	With 120VAC: 478W With 230VAC: 459W
Power Supply Efficiency Rating	80 Plus Platinum
BTU	With 120VAC: 1632 With 230VAC: 1566
Temperature[1]	0-40°C / 32-104°F (Operating) -40-60°C / -40-140°F (Storage)
Relative Humidity[2]	40-90%, non-condensing at 40°C
Operating Acoustic Noise	<60 dB
System Dimensions (LxWxH)[3]	27.56 x 17.32 x 3.43 in 700 x 440 x 87 mm
Packaging Dimensions	36 x 24 x 12 in 914.4 x 609.6 x 304.8 mm
Max Weight (Without Packaging)	51 lbs 23 kg
Rail Information	Mounting Rail Kit Included Orderable Spare Part Numbers: RMK-4-2U

1. In China – for use in non-tropical locations.
2. Operating altitude up to 10,000 feet except in China 6,562 feet (2,000m).
3. Length is without bezel.

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System Requirements

SteelHead Mobile

Model	Version 6.4.1/higher
Operating System	Windows 10, Windows 11, Windows 11 – 22H2 , Windows 11 – 23H2 Mac OS 12, 13, 14
CPU	1 GHz or higher
Memory	4 GB
Data Store	256 MB free disk space (min. required)
SteelHead Appliance[1]	Minimum 1 Physical (CX), Virtual (VCX) or SteelHead Cloud (CCX) needed on Server Side
SteelHead Mobile Controller	Required Controller: Virtual or Azure Edition

Riverbed® SteelHead™

Software Specifications

SteelHead Mobile

Model	SteelHead Mobile
Concurrent Clients Supported per SteelHead Mobile Controller	20,000 (SteelHead Mobile Controller 9000) / 20,000 (SteelHead Mobile Controller)[3]
Concurrent Clients Supported with SteelHead Mobile Controller[4]	(Number of SteelHead Mobile Controller x 20,000) or (Number of SteelHead Mobile Controller for Azure x 35,000)
VPN Compatibility[5]	Cisco AnyConnect, Cisco Secure Client, SonicWall Connect Tunnel, Palo Alto Global Protect, Wireguard, AppGate SDP, Microsoft Always On VPN

1. At least one SteelHead appliance is required. Recommend running RiOS version 8.6 or higher on it.
2. Supported with SteelHead Mobile 6.3.x or higher.
3. Up to 20,000 clients for VMware ESX, Microsoft Hyper-V, and KVM platforms. Up to 35,000 clients for Microsoft Azure platforms.
   Please refer to the SteelHead Mobile Installation Guide for details on VM resource requirements.
4. SteelHead Mobile Controller can operate in clustered mode to support additional SteelHead Mobile clients. A cluster of up to 10 Controllers can support up to 200,000 concurrent clients.
5. VPN compatibility may be impacted by vendor software version, client configuration, and other factors.

Riverbed® SteelHead™

License Specifications

Flex

Model	CXA-00580	CXA-00780	CXA-03080	CXA-05080	CXA-07080 B010	CXA-07080 B020	CXA-07080 B030
Flex-100	**100 Mbps**	**100 Mbps[1]**	**100 Mbps[1]**	**100 Mbps[1]**	**100 Mbps[1]**	**100 Mbps[1]**	**100 Mbps[1]**
Flex-200	100 Mbps[2]	**200 Mbps**	**200 Mbps[1]**	**200 Mbps[1]**	**200 Mbps[1]**	**200 Mbps[1]**	**200 Mbps[1]**
Flex-400	100 Mbps[2]	200 Mbps[2]	**400 Mbps**	**400 Mbps[1]**	**400 Mbps[1]**	**400 Mbps[1]**	**400 Mbps[1]**
Flex-500	100 Mbps[2]	200 Mbps[2]	400 Mbps[2]	**500 Mbps[1]**	**500 Mbps[1]**	**500 Mbps[1]**	**500 Mbps[1]**
Flex-750	100 Mbps[2]	200 Mbps[2]	400 Mbps[2]	**750 Mbps**	**750 Mbps[1]**	**750 Mbps[1]**	**750 Mbps[1]**
Flex-1000	100 Mbps[2]	200 Mbps[2]	400 Mbps[2]	750 Mbps[2]	**1000 Mbps**	**1000 Mbps[1]**	**1000 Mbps[1]**
Flex-2000	100 Mbps[2]	200 Mbps[2]	400 Mbps[2]	750 Mbps[2]	1000 Mbps[2]	**2000 Mbps**	**2000 Mbps[1]**
Flex-3000	100 Mbps[2]	200 Mbps[2]	400 Mbps[2]	750 Mbps[2]	1000 Mbps[2]	2000 Mbps[2]	**3000 Mbps**

1. Max throughput defined by license. Higher capacity can be unlocked with higher throughput license.

2. Max throughput limited by hardware capacity. Higher capacities require larger appliance model and higher throughput license.