

SteelHead CX

Riverbed® SteelHead™

Model Specifications

SteelHead CX

| Model | CX580 Series | | | CX780 Series | | | CX3080 Series | | |
|--|---|------------|------------|-----------------------|------------|------------|-----------------------|------------|------------|
| Software Configuration (RiOS) | Essentials | Standard | Enterprise | Essentials | Standard | Enterprise | Essentials | Standard | Enterprise |
| Profile | Desktop | | | | | | 1U | | |
| Software Upgrade Path (RiOS) | Standard / Enterprise | Enterprise | - | Standard / Enterprise | Enterprise | - | Standard / Enterprise | Enterprise | - |
| Software Conversion Path Versa Operating System (VOS) ¹ | VOS ¹ / Essentials / Standard / Advanced | | | | | | | | |
| 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 ² | 50 Mbps | | | 100 Mbps | | | 200 Mbps | | |
| Network Services - WAN Capacity ³ | 1,000 Mbps | | | | | | | | |
| Data Store Capacity | 200 GB SSD | | | 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 | | | 16 GB | | | 24 GB | | |
| Expansion Slots (PCI-e) ⁴ | - | | | - | | | 1 | | |
| Included Bypass Ports (Copper) | 4 | | | 4 | | | 4 | | |
| Max. # of Bypass Ports | 4 | | | 4 | | | 8 | | |

1. See Riverbed® SteelConnect™ EX spec sheet for more information about VOS-based platform capabilities
2. Optimized WAN capacity limit is enforced on outbound optimized traffic. Inbound optimized WAN traffic is not capped
3. Using 1 Gbps on-board interface
4. Restrictions apply in combination of card types. Please see technical documentation for details
5. 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) | 37 | 60 | 70 |
| BTU | 128 | 205 | 242 |
| Temperature ¹ | 0-45°C / 32-113°F (Operating) -40-65°C / -40-149°F (Storage) | | 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 x 1.73 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 CX for Virtual Series

| |  Essentials |  Standard |  Enterprise |
|------------------------|--|--|---|
| Description | Basic WAN Optimization | Full WAN Optimization with App Acceleration | Full Featured App Acceleration + Next Gen Features |
| Sample Features | <ul style="list-style-type: none"> • Full Deduplication • TCP Optimization / MXTCP • Hybrid Networking: QOS / Secure Transport / Path Selection | Essentials + <ul style="list-style-type: none"> • HTTPS Optimization • Most Protocol Blades (MAPI, SMB, CIFS) • WebProxy • SaaS Accelerator | Standard + <ul style="list-style-type: none"> • Data Center Protocol Blades (Replication, NFS) • Exotic Protocols – Lotus Notes • SCPS / FIPS |

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Model Specifications

SteelHead CX

| Model | CX5080 Series | | CX7080 Series | | |
|---|--|--|--|--|--|
| | CXA-05080-B010 / L25 | CXA-05080-B010 / L26 | CXA-07080-B010 / L30 | CXA-07080-B020 / L31 | CXA-07080-B030 / L32 |
| Profile | 2U | 2U | 2U | 2U | 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 | Unrestricted | Unrestricted | Unrestricted | Unrestricted |
| Network Services – Flows ³ | 160,000 | 160,000 | 320,000 | 480,000 | 800,000 |
| Network Services – Rules/Classes | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 |
| Data Store Capacity | 1.4 TB | 1.4 TB | 2.8 TB | 3.8 TB | 7.6 TB |
| Web Proxy Cache Capacity | 300 GB | 300 GB | 500 GB | 500 GB | 500 GB |
| Storage Fault Tolerance | RAID ⁴ | RAID ⁴ | RAID ⁴ | RAID ⁴ | RAID ⁴ |
| Hot Swappable Drives | 6 SSDs + 2 HDDs | 6 SSDs + 2 HDDs | 6 SSDs + 2 HDDs | 8 SSDs + 2 HDDs | 8 SSDs + 2 HDDs |
| RAM | 32 GB | 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 + 2 FHHL ⁵ | Up to 4 FHFL + 1 FHHL + 1 HHHHL ⁵ | Up to 4 FHFL + 1 FHHL + 1 HHHHL ⁵ | Up to 4 FHFL + 1 FHHL + 1 HHHHL ⁵ |
| Included # of Bypass Ports (10/100/1000 Copper) | 4 | 4 | 4 | 4 | 4 |
| Max. # of Bypass Ports 40 GbE / 10 GbE / 1 GbE | 4x40 GbE / 16x10 GbE / 24x1 GbE ⁵ | 4x40 GbE / 16x10 GbE / 24x1 GbE ⁵ | 4x40 GbE / 16x10 GbE / 24x1 GbE ⁵ | 4x40 GbE / 16x10 GbE / 24x1 GbE ⁵ | 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: 298W With 230VAC: 290W | With 120VAC: 374W With 230VAC: 364W | With 120VAC: 374W With 230VAC: 364W | With 120VAC: 478W With 230VAC: 459W |
| BTU | With 120VAC: 1015 With 230VAC: 991 | With 120VAC: 1015 With 230VAC: 991 | With 120VAC: 1275 With 230VAC: 1240 | 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 | 0-40°C / 32-104°F (Operating) ⁴ -40-60°C / -40-140°F (Storage) ⁵ | 0-40°C / 32-104°F (Operating) ⁴ -40-60°C / -40-140°F (Storage) ⁵ | 0-40°C / 32-104°F (Operating) ⁴ -40-60°C / -40-140°F (Storage) ⁵ | 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 | 40-90%, non-condensing at 40°C | 40-90%, non-condensing at 40°C | 40-90%, non-condensing at 40°C | 40-90%, non-condensing at 40°C |
| Operating Acoustic Noise (Typical) | <60 dB | <60 dB | <60 dB | <60 dB | <60 dB |
| System Dimensions (LxWxH) | 27.56 x 17.32 x 3.43 in 700 x 440 x 87 mm | 27.56 x 17.32 x 3.43 in 700 x 440 x 87 mm | 27.56 x 17.32 x 3.43 in 700 x 440 x 87 mm | 27.56 x 17.32 x 3.43 in 700 x 440 x 87 mm | 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 | 36 x 24 x 12 in 914.4 x 609.6 x 304.8 mm | 36 x 24 x 12 in 914.4 x 609.6 x 304.8 mm | 36 x 24 x 12 in 914.4 x 609.6 x 304.8 mm | 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 | 51 lbs 23 kg | 51 lbs 23 kg | 51 lbs 23 kg | 51 lbs 23 kg |
| Rail Information | Mounting Rail Kit Included. Orderable Spare Part Number: RMK-4-2U | Mounting Rail Kit Included. Orderable Spare Part Number: RMK-4-2U | Mounting Rail Kit Included. Orderable Spare Part Number: RMK-4-2U | Mounting Rail Kit Included. Orderable Spare Part Number: RMK-4-2U | 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 CX for 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 | 438 | 870 | 1,686 | 2,358 | 3,760 | 5,100 |
| Max Data Store Capacity | 100 | 150 | 400 | 400 | 800 | 1,600 | 2,240 | 3,600 | 4,800 |
| Management Disk | 38 | 44 | 56 | 56 | 88 | 104 | 136 | 178 | 318 |
| Maximum Web Proxy | 400 GB | 400 GB | 800 GB | 800 GB | 800 GB | 800 GB | 800 GB | 800 GB | 800 GB |
| Virtual CPUs Required (min) | 2 | 4 | 4 | 4 | 6 | 12 | 24 | 32 | 44 |
| Reserved Memory Required | 4 GB | 4 GB | 8 GB | 8 GB | 24 GB | 32 GB | 48 GB | 64 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: [SteelCentral Controller for SteelHead](#)

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 CX 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 | | M4.2xlarge | 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

Riverbed® SteelHead™

Model Specifications

SteelHead CX 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) | D2s_v4 D2s_v5 | D4s_v4 D4s_v5 | D8s_v4 D8s_v5 | D16s_v4 D16s_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 CX for Oracle Cloud Infrastructure (OCI)

| Model | CCX PERF-TIER1 | CCX PERF-TIER2 | CCX PERF-TIER3 |
|--|----------------|----------------|----------------|
| Optimized Wan Capacity ¹ | 10 Mbps | 50 Mbps | 200 Mbps |
| Optimized TCP Connections ² | 1,250 | 4,500 | 9,000 |
| Total Storage | 430 GB | 430 GB | 430 GB (SSD) |
| VM Shape | VM.Standard2.1 | VM.Standard2.1 | VM.Standard2.2 |
| Number CPUs | 1 OCPU | 1 OCPU | 2 OCPU |
| Memory | 15 GB RAM | 15 GB RAM | 30 GB RAM |
| DataStore disk | 430 GB | 430 GB | 430 GB (SSD) |

1. Optimized WAN capacity-inbound and outbound

2. Optimized WAN capacity and TCP connections are limited up to the listed amounts

Riverbed® SteelHead™

Model Specifications

SteelHead Interceptor

| | Data Center | |
|---------------------------------|----------------------|----------------------|
| Model | INT9600 | INT9800 |
| Profile | 2U | 2U |
| Effective LAN Throughput | 40 Gbps ¹ | 50 Gbps ¹ |
| Storage Fault Tolerance | RAID | RAID |
| Front Swappable Drives | 2 ² | 2 ² |
| RAM | 32 GB | 48 GB |
| Expansion Slots (PCI-e) | 6 ³ | 6 ⁴ |
| Included Bypass Ports (copper) | 4 | - |
| Max. # of Bypass Ports | 24 | 16 |
| Max. # of Manageable Appliances | - | - |

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: Dual and Quad LX and SX GigE, Quad CopperQuad 10 Gbe SR/LR, Dual 40 Gbe SR/LR
4. 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 | INT9600 | INT9800 |
| Dual Power Supplies | ✓ | ✓ |
| Power [Watts] (Typical) | 227 | With 120VAC: 478W With 230VAC: 459W |
| BTU | 774 | With 120VAC: 1632 With 230VAC: 1566 |
| Temperature ² | 10-35°C / 50-95°F (Operating) -40-70°C / -40-158°F (Storage) | 0-40°C / 32-104°F (Operating) -40-60°C / -40-140°F (Storage) |
| Relative Humidity ¹ | 50%-90%, non-condensing with a maximum wet bulb of 28°C (at temperatures from 25 to 35°C) ⁴ | 40-90%, non-condensing at 40°C |
| Operating Acoustic Noise | 7.0 BA (Operating Condition in Typical Office Ambient Temperature: 23 +/- 2°C) | <60 dB |
| System Dimensions (LxWxH) ³ | 27.87 x 17.24 x 3.45 in 707.8 x 438 x 87.6 mm | 27.56 x 17.32 x 3.43 in 700 x 440 x 87 mm |
| Packaging Dimensions | 36 x 24 x 14 in 914.4 x 609.6 x 355.6 mm | 36 x 24 x 12 in 914.4 x 609.6 x 304.8 mm |
| Max Weight (Without Packaging) | 40 lbs 18.14 kg | 51 lbs 23 kg |
| Rail Information | Mounting Rail Kit Included Orderable Spare Part Numbers: RMK-1-VRAIL, RMK-1-PRAIL | Mounting Rail Kit Included Orderable Spare Part Numbers: RMK-4-2U |

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

4. Shipping Humidity Spec for CXA-xxx70/INT9600 models

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. and the laws and regulations of any applicable foreign agency or authority

Riverbed® SteelHead™

System Requirements

Client Accelerator

| Model | Version 6.0/higher |
|---|---|
| Operating System | Windows 8.1, Windows 10, Windows 11 Mac OS 10.15, 11.x, 12.x ³ |
| CPU | 1 GHz or higher |
| Memory | 2 GB or higher |
| Data Store | 256 MB free disk space (min. required) |
| VSP CPU & Memory Requirements | Minimum 1 CPU (1 GHz or higher) and 3 GB or higher |
| SteelHead Appliance ¹ | Minimum 1 Physical (CX), Virtual (VCX) or Cloud SteelHead (CCX) needed on Server Side |
| Client Accelerator Controller (formerly SCCM) | Required Controller: Virtual or Azure Edition |

Riverbed® SteelHead™

Software Specifications

Client Accelerator

| Model | Client Accelerator |
|---|--|
| Concurrent Clients Supported per Client Accelerator Controller | 20,000 (Client Accelerator Controller 9000) / 20,000 (Client Accelerator Controller-v) ⁶ |
| Concurrent Clients Supported with Client Accelerator Cluster ⁴ | (Number of Client Accelerator Controllers x 20,000) or (Number of Client Accelerator Controllers for Azure x 35,000) |
| VPN Compatibility ⁵ | Cisco, Juniper, OpenVPN, Microsoft, Citrix, Array, Checkpoint, F5, Dell Sonicwall Aventail, Fortinet, NetMotion Mobile VPN, Apple VN, Palo Alto Global Protect (Version 4.7 Onwards) |

1. At least one SteelHead appliance is required. Recommend running RiOS version 8.6 or higher on it
2. Supported up to Client Accelerator 6.2.2
3. Supported with Client Accelerator 6.3.x or higher
4. Client Accelerator Controller can operate in clustered mode to support additional Client Accelerator clients. A cluster of up to 10 SMC9000 models can support up to 200,000 concurrent clients
5. VPN compatibility may be impacted by vendor software version, client configuration, and other factors
6. Up to 20,000 clients for VMWare ESX and Microsoft Hyper-V platforms. Up to 35,000 clients for Microsoft Azure platforms. Please refer to the Client Accelerator Installation Guide for details on VM resource requirements.



Riverbed – Empower the Experience

Riverbed is the only company with the collective richness of telemetry from network to app to end user that illuminates and then accelerates every interaction so that users get the flawless digital experience they expect across the entire digital ecosystem. Riverbed offers two industry-leading solution areas – Alluvio by Riverbed, an innovative and differentiated Unified Observability portfolio that unifies data, insights, and actions across IT, so customers can deliver seamless digital experiences; and Riverbed Acceleration, providing fast, agile, secure acceleration of any app over any network to users, whether mobile, remote, or on-prem. Together with our thousands of partners, and market-leading customers across the world, we empower every click, every digital experience. Learn more at riverbed.com.