# SteelHead Product Family

**Riverbed® SteelHead™**

**Model Specifications**

## SteelHead CX

<table>
<thead>
<tr>
<th>Model</th>
<th>Branch Office SteelHead</th>
<th>Mid-Size Office SteelHead</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Configurations</strong></td>
<td>U</td>
<td>L</td>
</tr>
<tr>
<td><strong>Profile</strong></td>
<td>Desktop</td>
<td></td>
</tr>
<tr>
<td><strong>Upgradeable to</strong></td>
<td>255L/M/H</td>
<td>255M/H</td>
</tr>
<tr>
<td><strong>Optimized TCP Connections and UDP Flows</strong></td>
<td>50</td>
<td>75</td>
</tr>
<tr>
<td><strong>Optimized SSL/TLS Connections</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Optimized WAN Capacity&lt;sup&gt;2&lt;/sup&gt;</strong></td>
<td>2 Mbps</td>
<td>6 Mbps</td>
</tr>
<tr>
<td><strong>Network Services – WAN Capacity&lt;sup&gt;3&lt;/sup&gt;</strong></td>
<td>10 Mbps&lt;sup&gt;3&lt;/sup&gt;</td>
<td>30 Mbps&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Network Services – Flows&lt;sup&gt;4&lt;/sup&gt;</strong></td>
<td>8,000</td>
<td>8,000</td>
</tr>
<tr>
<td><strong>Network Services – Rules/Classes&lt;sup&gt;4&lt;/sup&gt;</strong></td>
<td>300</td>
<td>500</td>
</tr>
<tr>
<td><strong>Data Store Capacity</strong></td>
<td>50 GB</td>
<td>70 GB SSD</td>
</tr>
<tr>
<td><strong>Web Proxy Cache Capacity</strong></td>
<td>50 GB</td>
<td>50 GB</td>
</tr>
<tr>
<td><strong>Storage Fault Tolerance</strong></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Hot Swappable Drives</strong></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>RAM&lt;sup&gt;10&lt;/sup&gt;</strong></td>
<td>2 GB</td>
<td>2 GB</td>
</tr>
<tr>
<td><strong>Expansion Slots (PCI-e)&lt;sup&gt;7&lt;/sup&gt;</strong></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Included Bypass Ports (Copper)</strong></td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td><strong>Max. # of Bypass Ports</strong></td>
<td>2</td>
<td>4</td>
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</table>
Riverbed® SteelHead™

Model Specifications

**SteelHead CX**

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Large Office or Data Center SteelHead</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>CX3070 Series</td>
</tr>
<tr>
<td>Profile</td>
<td>L</td>
</tr>
<tr>
<td>Upgradeable to</td>
<td>3070M/H</td>
</tr>
<tr>
<td>Optimized TCP Connections and UDP Flows</td>
<td>3,000</td>
</tr>
<tr>
<td>Optimized SSL/TLS Connections</td>
<td>Optimized WAN Capacity&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Network Services – WAN Capacity&lt;sup&gt;2&lt;/sup&gt;</td>
<td>250 Mbps</td>
</tr>
<tr>
<td>Network Services – Flows&lt;sup&gt;4&lt;/sup&gt;</td>
<td>48,000</td>
</tr>
<tr>
<td>Network Services – Rules/Classes&lt;sup&gt;5&lt;/sup&gt;</td>
<td>2,000</td>
</tr>
<tr>
<td>Data Store Capacity</td>
<td>320 GB SSD</td>
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<tr>
<td>Web Proxy Cache Capacity</td>
<td>200 GB</td>
</tr>
<tr>
<td>Storage Fault Tolerance</td>
<td>RAID&lt;sup&gt;6&lt;/sup&gt;</td>
</tr>
<tr>
<td>Hot Swappable Drives</td>
<td>4</td>
</tr>
<tr>
<td>RAM&lt;sup&gt;7&lt;/sup&gt;</td>
<td>12 GB</td>
</tr>
<tr>
<td>Expansion Slots (PCI-e)&lt;sup&gt;8&lt;/sup&gt;</td>
<td>2</td>
</tr>
<tr>
<td>Included Bypass Ports (Copper)</td>
<td>4</td>
</tr>
<tr>
<td>Max. # of Bypass Ports</td>
<td>12</td>
</tr>
<tr>
<td>SteelHead SD Capable</td>
<td>Yes</td>
</tr>
</tbody>
</table>

1. Optimized WAN capacity limit is enforced on outbound optimized traffic. Inbound optimized WAN traffic is not capped.
2. Maximum outbound WAN throughput. For SteelHead SD models the WAN capacity is equivalent to VPN throughput performance. Full VPN throughput spec for SteelHead SD 3070M/H models may not be achievable in all environments.
3. RiOS 8.6.2b or later
4. Inclusive of all optimized and/or managed flows
5. Maximum number of classes plus rules. Not applicable to SteelHead SD models
6. RAID1 configuration for HDD, Data store uses fault tolerant striped (FTS) configuration for SSD
7. Optional Network Bypass cards: Dual and Quad LX and SX GigE Fiber GigE, Quad Copper GigE, 10 GbE SR/LR. CX3070/7070 only: 2 Quad port 10 GbE SR/LR
8. No enforced optimized WAN bandwidth limit
9. 7070 H WAN capacity is specified at up to 2 Gbps for branch-to-data center workloads and up to 3 Gbps for data center-to-data center workloads.
10. SteelHead SD models have a larger RAM size: CX 370 = 8 GB, CX 770 = 12 GB, CX 3070 = 16 GB
11. SteelHead SD model 770H Web Proxy Cache Capacity is 50 GB

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**

<table>
<thead>
<tr>
<th>Model</th>
<th>Branch Office SteelHead</th>
<th>Mid-Size Office SteelHead</th>
<th>Large Office or Data Center SteelHead</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual Power Supplies</td>
<td>-</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>Power (Watts) (Typical)</td>
<td>30</td>
<td>45</td>
<td>50</td>
</tr>
<tr>
<td>BTU</td>
<td>102</td>
<td>145</td>
<td>165</td>
</tr>
<tr>
<td>Temperature&lt;sup&gt;1&lt;/sup&gt;</td>
<td>0-45°C / 32-113°F (Operating); -40-65°C / -40-149°F (Storage)</td>
<td>0-35°C / 30-95°F (Operating); -40-70°C / -40-158°F (Storage)</td>
<td></td>
</tr>
<tr>
<td>Relative Humidity&lt;sup&gt;1&lt;/sup&gt;</td>
<td>20%-80%, non-condensing (Operating); 5%-95%, non-condensing (Storage)</td>
<td>20%-80%, non-condensing (Operating); 50%-80%, non-condensing (Storage)&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
</tbody>
</table>
## SteelHead CX

<table>
<thead>
<tr>
<th>Model</th>
<th>Branch Office SteelHead</th>
<th>Mid-Size Office SteelHead</th>
<th>Large Office or Data Center SteelHead</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CX255 Series</td>
<td>CX570 Series</td>
<td>CX770 Series</td>
</tr>
<tr>
<td><strong>Operating Acoustic Noise (Typical)</strong></td>
<td>45 dBA</td>
<td></td>
<td>7.0 BA (Operating Condition in Typical Office Ambient Temperature: 23 +/- 2°C)</td>
</tr>
<tr>
<td><strong>System Dimensions (LxWxH)</strong></td>
<td>13.0 x 8.0 x 1.7 in</td>
<td>25.21 x 17.24 x 1.7 in</td>
<td>27.87 x 17.24 x 3.45 in</td>
</tr>
<tr>
<td><strong>Packaging Dimensions</strong></td>
<td>17.7 x 12.3 x 7 in</td>
<td>36 x 24 x 13 in</td>
<td>36 x 24 x 14 in</td>
</tr>
<tr>
<td><strong>Weight (Without Packaging)</strong></td>
<td>5.6 lbs</td>
<td>2.4 kg</td>
<td>27 lbs</td>
</tr>
<tr>
<td><strong>Rail Information</strong></td>
<td>Included spare part RMK-010, Orderable RMK-016</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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. Maximum 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)

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

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### Riverbed® SteelHead™

#### Model Specifications

#### SteelHead SD Series

<table>
<thead>
<tr>
<th>Model</th>
<th>L</th>
<th>M</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Profile</strong></td>
<td>Desktop</td>
<td>Desktop</td>
<td>1U</td>
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<tr>
<td><strong>SDWAN-Only Mode</strong></td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>WAN Op License Upgradeable to</strong></td>
<td>570M/H</td>
<td>570H</td>
<td>-</td>
</tr>
<tr>
<td><strong>Optimized TCP Connections and UDP Flows</strong></td>
<td>770M/H</td>
<td>770H</td>
<td>-</td>
</tr>
<tr>
<td><strong>Optimized SSL/TLS Connections</strong></td>
<td>275</td>
<td>450</td>
<td>700</td>
</tr>
<tr>
<td><strong>Optimized WAN Capacity</strong></td>
<td>1,000</td>
<td>1,500</td>
<td>2,500</td>
</tr>
<tr>
<td><strong>Max SD-WAN (Auto-VPN) Throughput</strong></td>
<td>3,000</td>
<td>6,000</td>
<td>9,000</td>
</tr>
<tr>
<td><strong>Max SD-WAN (Auto-VPN) Throughput</strong></td>
<td>10 Mbps</td>
<td>20 Mbps</td>
<td>30 Mbps</td>
</tr>
<tr>
<td><strong>Data Store Capacity</strong></td>
<td>50 GB SSD</td>
<td>50 GB SSD</td>
<td></td>
</tr>
<tr>
<td><strong>Web Proxy Cache Capacity</strong></td>
<td>70 GB SSD</td>
<td>150 GB SSD</td>
<td></td>
</tr>
<tr>
<td><strong>Storage Fault Tolerance</strong></td>
<td>RAID4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hot Swappable Drives</strong></td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RAM</strong></td>
<td>8 GB</td>
<td>12 GB</td>
<td></td>
</tr>
<tr>
<td><strong>Expansion Slots (PCI-e)</strong></td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Optimized WAN capacity limit is enforced on outbound optimized traffic. Inbound optimized WAN traffic is not capped.
2. Maximum SD-WAN (Auto-VPN) throughput is calculated as aggregate throughput in both directions and applies to SDWAN-only mode.
3. With WAN Op enabled on 3070 platforms max throughput/capacity specs may not be achievable in all environments
4. RAID4 configuration for HDD. Data store uses fault tolerant striped (FTS) configuration for SSDRAID1 configuration for HDD. Data store uses fault tolerant striped (FTS) configuration for SSD

NOTE: All WAN (SD-WAN and WAN Op) capacities and connections are maximums and may not be achieved simultaneously and/or in all environments
## Riverbed® SteelHead™
### Model Specifications

#### SteelHead GX

<table>
<thead>
<tr>
<th>Model</th>
<th>Large Office / Data Center SteelHead</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile</td>
<td>2U</td>
</tr>
<tr>
<td>Optimized TCP Connections and UDP Flows</td>
<td></td>
</tr>
<tr>
<td>Optimized SSL/TLS Connections</td>
<td>270,000</td>
</tr>
<tr>
<td>Optimized WAN Capacity</td>
<td>10 Gbps</td>
</tr>
<tr>
<td>Network Services – WAN Capacity</td>
<td>10 Gbps</td>
</tr>
<tr>
<td>Network Services – Flows</td>
<td>768,000</td>
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<tr>
<td>Network Services – Rules/Classes</td>
<td>4,000</td>
</tr>
<tr>
<td>Data Store Capacity</td>
<td>9.6 TB SSD</td>
</tr>
<tr>
<td>Web Proxy Cache Capacity</td>
<td>400 GB</td>
</tr>
<tr>
<td>Storage Fault Tolerance</td>
<td>RAID5</td>
</tr>
<tr>
<td>Hot Swappable Drives</td>
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<tr>
<td>RAM</td>
<td>256 GB</td>
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<tr>
<td>Expansion Slots (PCI-e)</td>
<td>4</td>
</tr>
<tr>
<td>Max. # Bypass Ports</td>
<td>10 GbE: 8 (4 Dual or 2 Quad port)</td>
</tr>
<tr>
<td></td>
<td>40 GbE: 4 (2 Quad port)</td>
</tr>
<tr>
<td>SteelHead SD Capable</td>
<td>No</td>
</tr>
</tbody>
</table>

1. Optimized WAN capacity limit is enforced on outbound optimized traffic. Inbound optimized WAN traffic is not capped. Total system measured system capacity is 25 Gbps (this is the total of LAN and WAN bandwidth added together)
2. Maximum outbound WAN throughput is capped at 10 Gbps
3. Inclusive of all optimized and/or managed flows
4. Maximum number of classes plus rules
5. RAID configuration for HDD. Data store uses fault tolerant striped (FTS) configuration for SSD
6. Total of 4 Dual port 10 GbE Bypass NICs or 2 Quad port 10 GbE Bypass NICs or 2 Dual port 40 GbE Bypass NICs and combinations thereof

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 GX

<table>
<thead>
<tr>
<th>Model</th>
<th>Large Office / Data Center SteelHead</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual Power Supplies</td>
<td>Yes</td>
</tr>
<tr>
<td>Power (Watts) (Typical)</td>
<td>437</td>
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<td>BTU</td>
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<tr>
<td>Temperature</td>
<td>10-35°C / 50-95°F (Operating)</td>
</tr>
<tr>
<td></td>
<td>-40-70°C / -40-158°F (Storage)</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>20%-80%, non-condensing (Operating)</td>
</tr>
<tr>
<td></td>
<td>50%-90%, non-condensing (Storage)</td>
</tr>
<tr>
<td>Operating Acoustic Noise (Typical)</td>
<td>45 dBA</td>
</tr>
<tr>
<td>System Dimensions (LxWxH)</td>
<td>31.25 x 17.25 x 3.5 in</td>
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<tr>
<td></td>
<td>793.8 x 439 x 89 mm</td>
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<tr>
<td>Packaging Dimensions</td>
<td>37 x 24 x 11 in</td>
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<td></td>
<td>939.8 x 609.6 x 279.4 mm</td>
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<tr>
<td>Max Weight (Without Packaging)</td>
<td>46 lbs</td>
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<tr>
<td></td>
<td>20.87 kg</td>
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<tr>
<td>Rail Information</td>
<td>Mounting Rail Kit Included</td>
</tr>
</tbody>
</table>

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. 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)
5. Length is without bezel

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## Riverbed® SteelHead™

### Perpetual or Monthly Subscription Models

#### SteelHead CX for Virtual

<table>
<thead>
<tr>
<th>Model</th>
<th>VCX-10</th>
<th>VCX-20</th>
<th>VCX-30</th>
<th>VCX-40</th>
<th>VCX-50</th>
<th>VCX-60</th>
<th>VCX-70</th>
<th>VCX-80</th>
<th>VCX-90</th>
<th>VCX-100</th>
<th>VCX-110</th>
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<tbody>
<tr>
<td><strong>Optimized WAN Capacity</strong></td>
<td>2 Mbps</td>
<td>5 Mbps</td>
<td>10 Mbps</td>
<td>20 Mbps</td>
<td>50 Mbps</td>
<td>100 Mbps</td>
<td>200 Mbps</td>
<td>500 Mbps</td>
<td>1,000 Mbps</td>
<td>2.5 Gbps</td>
<td>5 Gbps</td>
</tr>
<tr>
<td><strong>Optimized TCP and UDP Flows</strong></td>
<td>50</td>
<td>200</td>
<td>500</td>
<td>1,000</td>
<td>2,000</td>
<td>5,000</td>
<td>12,000</td>
<td>50,000</td>
<td>100,000</td>
<td>150,000</td>
<td>180,000</td>
</tr>
<tr>
<td><strong>Network Services</strong></td>
<td>10 Mbps</td>
<td>25 Mbps</td>
<td>50 Mbps</td>
<td>100 Mbps</td>
<td>250 Mbps</td>
<td>500 Mbps</td>
<td>Unrestricted</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Disk Capacity Advised</strong></td>
<td>70</td>
<td>100</td>
<td>120</td>
<td>176</td>
<td>438</td>
<td>438</td>
<td>870</td>
<td>1,686</td>
<td>2,358</td>
<td>3,760</td>
<td>5,100</td>
</tr>
<tr>
<td><strong>Max Data Store Capacity</strong></td>
<td>50</td>
<td>80</td>
<td>100</td>
<td>150</td>
<td>400</td>
<td>400</td>
<td>800</td>
<td>1,600</td>
<td>2,240</td>
<td>3,600</td>
<td>4,800</td>
</tr>
<tr>
<td><strong>Management Disk</strong></td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>26</td>
<td>38</td>
<td>38</td>
<td>70</td>
<td>86</td>
<td>118</td>
<td>160</td>
<td>300</td>
</tr>
<tr>
<td><strong>Maximum Web Proxy</strong></td>
<td>200 GB</td>
<td>200 GB</td>
<td>400 GB</td>
<td>400 GB</td>
<td>800 GB</td>
<td>800 GB</td>
<td>800 GB</td>
<td>800 GB</td>
<td>800 GB</td>
<td>800 GB</td>
<td>800 GB</td>
</tr>
<tr>
<td><strong>Virtual CPUs Required (min)</strong></td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>12</td>
<td>24</td>
<td>32</td>
<td>44</td>
</tr>
<tr>
<td><strong>Reserved Memory Required</strong></td>
<td>2 GB</td>
<td>2 GB</td>
<td>2 GB</td>
<td>4 GB</td>
<td>8 GB</td>
<td>8 GB</td>
<td>24 GB</td>
<td>32 GB</td>
<td>48 GB</td>
<td>64 GB</td>
<td>128 GB</td>
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#### Riverbed® SteelHead™

### Model Specifications

#### SteelHead CX for Virtual

<table>
<thead>
<tr>
<th>Model</th>
<th>VCX255</th>
<th>VCX555</th>
<th>VCX755</th>
<th>VCX1555</th>
</tr>
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<tbody>
<tr>
<td><strong>Configurations</strong></td>
<td>U</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
<tr>
<td><strong>Optimized WAN Capacity</strong></td>
<td>2 Mbps</td>
<td>6 Mbps</td>
<td>6 Mbps</td>
<td>10 Mbps</td>
</tr>
<tr>
<td><strong>Optimized TCP and UDP Flows</strong></td>
<td>50</td>
<td>75</td>
<td>150</td>
<td>230</td>
</tr>
<tr>
<td><strong>QoS Bandwidth</strong></td>
<td>4 Mbps</td>
<td>12 Mbps</td>
<td>12 Mbps</td>
<td>20 Mbps</td>
</tr>
<tr>
<td><strong>QoS Rules/Classes</strong></td>
<td>No Published Limit (Global QoS Limit of 2,000 Rules and 2,000 Classes)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Disk Capacity Advised</strong></td>
<td>88 GB</td>
<td>118 GB</td>
<td>140 GB</td>
<td>188 GB</td>
</tr>
<tr>
<td><strong>Max Data Store Capacity</strong></td>
<td>50 GB</td>
<td>80 GB</td>
<td>102 GB</td>
<td>150 GB</td>
</tr>
<tr>
<td><strong>Virtual CPUs Required (min)</strong></td>
<td>1 x 1.0 Ghz</td>
<td>1 x 1.2 Ghz</td>
<td>2 x 1.2 Ghz</td>
<td>4 x 1.2 Ghz</td>
</tr>
<tr>
<td><strong>Reserved Memory Required</strong></td>
<td>2 GB</td>
<td>2 GB</td>
<td>2 GB</td>
<td>4 GB</td>
</tr>
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### Riverbed® SteelHead™ Model Specifications

#### SteelHead CX for Virtual

<table>
<thead>
<tr>
<th>Model</th>
<th>VCX5055</th>
<th>VCX7055</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configurations</td>
<td>M</td>
<td>H</td>
</tr>
<tr>
<td>Optimization WAN Capacity</td>
<td>200 Mbps(^1)</td>
<td>400 Mbps(^1)</td>
</tr>
<tr>
<td>Optimized TCP and UDP Flows</td>
<td>14,000</td>
<td>25,000</td>
</tr>
<tr>
<td>QoS Bandwidth(^1)</td>
<td>Unlimited</td>
<td>No Published Limit (Global QoS Limit of 2,000 Rules and 2,000 Classes)</td>
</tr>
<tr>
<td>QoS Rules/Classes(^2)</td>
<td>No Published Limit (Global QoS Limit of 2,000 Rules and 2,000 Classes)</td>
<td></td>
</tr>
<tr>
<td>Disk Capacity Advised</td>
<td>722 GB</td>
<td>1,778 GB</td>
</tr>
<tr>
<td>Max Data Store Capacity</td>
<td>8 x 80 GB</td>
<td>10 x 160 GB</td>
</tr>
<tr>
<td>Virtual CPUs Required</td>
<td>12 x 1.2 Ghz</td>
<td>16 x 1.2 Ghz</td>
</tr>
<tr>
<td>Reserved Memory Required</td>
<td>16 GB</td>
<td>32 GB</td>
</tr>
</tbody>
</table>

1. Recommended maximum outbound QoS shaping capacity
2. Total of classes plus rules
3. SSD or other high IOPS storage medium required for VCX1555/5055/7055 models and VCX-30 to VCX-90 models
4. Without web-proxy activated

For ESXi, Available I/W NIC options are NIC-001-2TX (2 port copper), NIC-002-4TX (4 port copper), NIC-008-2SR (2 port multimode fiber) For VCX-10 to VCX110: Available I/W NIC options are NIC-1-001G-4TX-BP and NIC-1-001G-4SX-BP on all hypervisors (KVM, Hyper-V and ESXi)

Hyper-V is supported only for Models up to VCX 1555 (300 Mbps) on Windows Server 2012 and Hyper-V Server 2012 running Rios 8.0.3 and later

NOTE: Virtual SteelHead guests must run at least Rios 6.1 or later and support vSphere 4.0 or later release, using ESX/ESXi 4.0 or later; Rios 6.5.x and later support ESX 4.1, Rios 6.5.x and later support ESXi 5.0, Rios 8.6.0 and later support ESXi 5.1, Rios 9.6.0a and later support ESXi 6.0. Please refer to the VMware system compatibility guide for servers supported with these vSphere/ESX/ESXi releases.

Riverbed network bypass cards NIC-001-2TX, NIC-002-4TX, and NIC-003-4TX are supported by Virtual SteelHead guests running Rios 7.0.1 or later

Riverbed network bypass cards NIC-1-001G-4TX-BP and NIC-1-001G-4SX-BP are supported by Virtual SteelHead guests running Rios 9.7.0 or later

Riverbed network bypass cards are supported only on ESXi 4.1 and up for all current Rios releases

Riverbed network bypass cards NIC-008-2SR is supported by Virtual SteelHead guests on ESXi running Rios 8.6.0 or later

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

<table>
<thead>
<tr>
<th>Model</th>
<th>CCX PERF-TIER1</th>
<th>CCX PERF-TIER2</th>
<th>CCX PERF-TIER3</th>
<th>CCX PERF-TIER4</th>
<th>CCX PERF-TIER4-H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimized WAN Capacity(^1)</td>
<td>10 Mbps</td>
<td>50 Mbps</td>
<td>200 Mbps</td>
<td>500 Mbps</td>
<td>1 Gbps</td>
</tr>
<tr>
<td>Optimized TCP Connections(^2)</td>
<td>1,250</td>
<td>4,500</td>
<td>9,000</td>
<td>1,000</td>
<td>30,000</td>
</tr>
<tr>
<td>Total Elastic Block Store (EBS) Volume Size</td>
<td>430 GB</td>
<td>960 GB</td>
<td>2.4 TB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amazon Machine Instance (AMI) Size(^1)</td>
<td>M4 large</td>
<td>M4.2xlarge</td>
<td>M4.4xlarge</td>
<td>M4.10xlarge</td>
<td></td>
</tr>
</tbody>
</table>

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

#### SteelHead CX for VMware ESX Cloud

<table>
<thead>
<tr>
<th>Model</th>
<th>CCX PERF-TIER1</th>
<th>CCX PERF-TIER2</th>
<th>CCX PERF-TIER3</th>
<th>CCX PERF-TIER4</th>
<th>CCX PERF-TIER4-H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimized WAN Capacity(^1)</td>
<td>10 Mbps</td>
<td>50 Mbps</td>
<td>200 Mbps</td>
<td>N / A</td>
<td></td>
</tr>
<tr>
<td>Optimized TCP Connections(^2)</td>
<td>1,250</td>
<td>4,500</td>
<td>9,000</td>
<td>N / A</td>
<td></td>
</tr>
<tr>
<td>Disk Capacity Required</td>
<td>430 GB</td>
<td></td>
<td></td>
<td>N / A</td>
<td></td>
</tr>
<tr>
<td>Virtual CPUs Required</td>
<td>2 x 1.2 Ghz</td>
<td>4 x 1.2 Ghz</td>
<td>4 x 2.2 Ghz</td>
<td>N / A</td>
<td></td>
</tr>
<tr>
<td>Reserved Memory Required</td>
<td>3 GB</td>
<td>8 GB</td>
<td>14 GB</td>
<td>N / A</td>
<td></td>
</tr>
</tbody>
</table>

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 CX for Microsoft Azure Cloud

<table>
<thead>
<tr>
<th>Model</th>
<th>CCX PERF-TIER1</th>
<th>CCX PERF-TIER2</th>
<th>CCX PERF-TIER3</th>
<th>CCX PERF-TIER4</th>
<th>CCX PERF-TIER4-H</th>
<th>CCX PERF-TIER5</th>
<th>CCX PERF-TIER5-H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimized WAN Capacity¹</td>
<td>10 Mbps</td>
<td>50 Mbps</td>
<td>200 Mbps</td>
<td>500 Mbps</td>
<td>1 Gbps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optimized TCP Connections²</td>
<td>1,250</td>
<td>4,500</td>
<td>9,000</td>
<td>1,000</td>
<td>30,000</td>
<td>1,000</td>
<td>50,000</td>
</tr>
<tr>
<td>Total Azure Blob Storage Volume Size</td>
<td>430 GB</td>
<td></td>
<td>1.2 TB</td>
<td></td>
<td>2.4 TB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Azure Target</td>
<td>A2</td>
<td>A3</td>
<td>D3 v2</td>
<td>D14 v2</td>
<td>D15 v2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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, SteelCentral Controller for SteelHead or SCC (formerly Central Management Console or CMC), SteelCentral Controller for SteelHead Mobile or SCCM (formerly SteelHead Mobile Controller or SMC)

#### Data Center Management

<table>
<thead>
<tr>
<th>Model</th>
<th>INT9600</th>
<th>SCC1000</th>
<th>SMC9000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile</td>
<td>2U</td>
<td></td>
<td>1U</td>
</tr>
<tr>
<td>Effective LAN Throughput</td>
<td>40 Gbps¹ ²</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage Fault Tolerance</td>
<td>RAID</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Front Swappable Drives</td>
<td>2³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAM</td>
<td>32 GB</td>
<td></td>
<td>16 GB</td>
</tr>
<tr>
<td>Expansion Slots (PCI-e)</td>
<td>6⁴</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Included Bypass Ports (copper)</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. # of Bypass Ports</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. # of Manageable Appliances</td>
<td></td>
<td>2,000</td>
<td></td>
</tr>
</tbody>
</table>

1. All LAN capacity, bandwidth, and TCP connections listed are maximums and may not be achieved in all environments
2. Requires 5 or greater 10 G in-path interfaces and xbridge enabled
3. Hot swappable disks

Riverbed® SteelHead™

Power and Physical Specifications

### SteelHead Interceptor, SteelCentral Controller for SteelHead or SCC (formerly Central Management Console or CMC), SteelCentral Controller for SteelHead Mobile or SCCM (formerly SteelHead Mobile Controller or SMC)

<table>
<thead>
<tr>
<th>Model</th>
<th>INT9600</th>
<th>SCC1000</th>
<th>SMC9000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual Power Supplies</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power [Watts] (Typical)</td>
<td>227</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>BTU</td>
<td>774</td>
<td></td>
<td>165</td>
</tr>
<tr>
<td>Temperature¹</td>
<td>10-35°C / 50-95°F (Operating) -40-70°C / -40-158°F (Storage)</td>
<td>0-45°C / 32-113°F (Operating) -40-65°C / -40-149°F (Storage)</td>
<td></td>
</tr>
<tr>
<td>Relative Humidity¹</td>
<td>50%-90%, non-condensing with a maximum wet bulb of 28°C (at temperatures from 25 to 35°C)</td>
<td>20%-80%, non-condensing (Operating) 5%-90%, non-condensing (Storage)</td>
<td></td>
</tr>
<tr>
<td>Operating Acoustic Noise</td>
<td>7.0 BA (Operating Condition in Typical Office Ambient Temperature: 23 +/- 2°C)</td>
<td></td>
<td>45 dBA</td>
</tr>
</tbody>
</table>
SteelHead Interceptor, SteelCentral Controller for SteelHead or SCC (formerly Central Management Console or CMC), SteelCentral Controller for SteelHead Mobile or SCCM (formerly SteelHead Mobile Controller or SMC) continued

<table>
<thead>
<tr>
<th>Model</th>
<th>INT9600</th>
<th>SCC1000</th>
<th>SMC9000</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Dimensions (LxWxH)</td>
<td>27.87 x 17.24 x 3.45 in, 707.8 x 438 x 87.6 mm</td>
<td>13.0 x 8.0 x 7.3 in, 330 x 204 x 184 mm</td>
<td>17.7 x 12.2 x 7.1 in, 450 x 310 x 180 mm</td>
</tr>
<tr>
<td>Packaging Dimensions</td>
<td>36 x 24 x 14 in, 914.4 x 609.6 x 355.6 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max Weight (Without Packaging)</td>
<td>40 lbs, 18.14 kg</td>
<td>6 lbs, 2.7 kg</td>
<td></td>
</tr>
<tr>
<td>Rail Information</td>
<td>Mounting Rail Kit Included, Orderable Spare Part Numbers: RMK-1-VRAIL, RMK-1-PRAIL</td>
<td>Included Spare Part RMK-010, Orderable RMK-016</td>
<td></td>
</tr>
</tbody>
</table>

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

SteelHead Mobile

<table>
<thead>
<tr>
<th>Model</th>
<th>Version 6.0/higher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>Windows 7 (32 and 64 bit), Windows 8 (32 and 64-bit), Windows 10 (32 and 64-bit), MacOS 10.11, 10.12, and 10.13</td>
</tr>
<tr>
<td>CPU</td>
<td>1 GHz or higher</td>
</tr>
<tr>
<td>Memory</td>
<td>2 GB or higher</td>
</tr>
<tr>
<td>Data Store</td>
<td>256 MB free disk space (min. required)</td>
</tr>
<tr>
<td>VSP CPU &amp; Memory Requirements</td>
<td>Minimum 1 CPU (1 GHz or higher) and 3 GB or higher</td>
</tr>
<tr>
<td>SteelHead Appliance</td>
<td>Minimum 1 Physical (CX), Virtual (VCX) or Cloud SteelHead (CCX) needed on Server Side</td>
</tr>
<tr>
<td>SteelCentral Controller for Mobile SteelHead – SCCM (formerly SMC)</td>
<td>Required: Either SteelHead Mobile Controller Appliance or SteelHead Mobile Controller Virtual Edition</td>
</tr>
</tbody>
</table>

Riverbed® SteelHead™

Software Specifications

SteelHead Mobile

<table>
<thead>
<tr>
<th>Model</th>
<th>SteelHead Mobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concurrent Clients Supported per SCCM</td>
<td>20,000 (SMC9000) / 4,000 (SMC-Virtual Edition)²</td>
</tr>
<tr>
<td>Concurrent Clients Supported with SCCM Cluster³</td>
<td>(Number of SMC9000s x 20,000) or (Number of SMC8650s/SMC-Virtual) x 4,000) or (Number of SMC-Virtuals for Azure x 35,000)</td>
</tr>
<tr>
<td>VPN Compatibility⁴</td>
<td>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)</td>
</tr>
</tbody>
</table>

1. At least one SteelHead appliance is required. Recommend running RiOS version 8.6 or higher on it.
2. SCCMs (SMCs) can operate in clustered mode to support additional SteelHead Mobile clients. A cluster can have a mix of SMC8650 and SMC9000 models but is not recommended. Up to 100,000 concurrent clients can be supported by a minimum of 5 SMC9000s and up to 20,000 concurrent clients can be supported by a cluster of 5 SMC 8650s.
3. VPN compatibility may be impacted by vendor software version, client configuration, and other factors.
4. Up to 4000 clients for VMware ESX and Microsoft Hyper-V platforms. Up to 35,000 clients for Microsoft Azure platforms. Please refer to the SteelHead Mobile Installation Guide for details on VM resource requirements.

About Riverbed

Riverbed®, The Digital Performance Company™, enables organizations to maximize digital performance across every aspect of their business, allowing customers to rethink possible. At more than $1 billion in annual revenue, Riverbed’s 30,000+ customers include 98% of the Fortune 100 and 100% of the Forbes Global 100. Learn more at riverbed.com.