

# RUCKUS<sup>®</sup> ICX 8200

Enterprise-class stackable access switch with future-proof expandability

The RUCKUS ICX 8200 Switch series is purposely designed to handle next generation wireless first and IoT campus networks. These intelligent, scalable edge switches deliver enterprise-class functionality at an affordable price without compromising performance and reliability.

The RUCKUS ICX 8200 raises the bar with up to 8× 25 GbE ports for uplinks or stacking, PoE++ (802.3bt), VXLAN, advanced L2/L3 features and market-leading stacking density with up to 12 switches per stack. In addition, the RUCKUS ICX 8200 combines enterprise-class features, manageability, performance, and reliability with the flexibility, costeffectiveness, and "pay as you grow" scalability of stackable solution.



## Benefits

## Maximum flexibility: Gigabit, Multigigabit edge ports and Fiber to the Room

- Optimized for latest generation Wi-Fi 6/6E/7 AP deployments with multigigabit ports.
- 8, 24 and 48 Gigabit Ethernet ports
- Up to 24x 1/2.5G Multigigabit RJ45 ports
- Up to 4× 1/2.5/5/10 Gbps Multigigabit RJ-45 ports
- Up to 48x 1G SFP fiber ports
- Up to 24x 10G SFP+ fiber ports

#### Power next generation APs and PoE devices

- PoE+ 802.3at, 30W per port on all ports
- PoE++ 802.3bt, 60/90W on multigigabit ports
- Up to 1480W PoE budget with two power supplies

## 25 GbE uplinks/stacking for maximum performance and future-proofing

- Stacking comes standard with all ICX 8200
- Up to 8x 1/10/25GbE SFP28 fiber ports for uplink and/or stacking

#### Enhanced Security and data privacy

• VXLAN\* support for advanced network segmentation and data confidentiality

#### Advanced L3 routing delivers network design flexibility

- IPv4 and IPv6 L3 routing
- Static routes, RIP, OSPF, VRRP, VRF, GRE, PIM, PBR

## Broad range of unified management options for maximum flexibility

- On Premises: SmartZone
- Cloud Based: RUCKUS Cloud\*
- Controllerless: RUCKUS Unleashed\*
- RUCKUS Analytics

#### Enhanced availability

Redundant, load-sharing power supplies and fans on specific models

#### Services and Support Included

- 3 Years remote TAC support included with every ICX 8200 model
- Limited lifetime warranty

| RUCKUS ICX 8200 with RJ45 Copper ports and  |   |
|---|---|
| These stackable RUCKUS ICX 8200 models offer a single in<br>one USB Type-C port for console management, one RJ-45 p | tegrated power supply, one RJ-45 Ethernet port for out-of-band network management,<br>port for serial console management, and one USB port for external file storage.                   |
|   | ICX 8200-24<br>• 24× 10/100/1000 Mbps RJ-45 ports<br>• 4× 1/10/25 GbE uplink/stacking SFP28 ports   |
|   | ICX 8200-24P PoE<br>• 24× 10/100/1000 Mbps RJ-45 PoE+ ports<br>• 4× 1/10/25 GbE uplink/stacking SFP28 ports<br>• 370 W PoE budget. PoE+ 802.3at   |
|   | <ul> <li>ICX 8200-24ZP Multigigabit PoE</li> <li>24× 100/1000/2500 Mbps RJ-45 PoE++ 90W ports</li> <li>4× 1/10/25 GbE uplink/stacking SFP28 ports</li> <li>740 W PoE budget.</li> </ul> |
|   | <b>ICX 8200-48</b><br>• 48× 10/100/1000 Mbps RJ-45 ports<br>• 4× 1/10/25 GbE uplink/stacking SFP28 ports  |
|   | ICX 8200-48P PoE<br>• 48× 10/100/1000 Mbps RJ-45 PoE+ ports<br>• 4× 1/10/25 GbE uplink/stacking SFP28 ports<br>• 370 W PoE budget. PoE+ 802.3at   |
|   | ICX 8200-48PF PoE<br>• 48× 10/100/1000 Mbps RJ-45 PoE+ ports<br>• 4× 1/10/25 GbE uplink/stacking SFP28 ports<br>• 740 W PoE budget. PoE+ 802.3at  |

#### RUCKUS ICX 8200 with hot-swap power supplies and fans

These stackable RUCKUS ICX 8200 models offers 2 slots for redundant hot swappable load sharing power supplies, 2 slots for hot swappable fans, one RJ-45 Ethernet port for out-of-band network management, one USB Type-C port for console management, one RJ-45 port for serial console management, and one USB port for external file storage.

| ICX 8200-48PF2 PoE<br>• 48× 10/100/1000 Mbps RJ-45 PoE+ ports<br>• 4× 1/10/25 GbE uplink/stacking SFP28 ports<br>• 1440 W PoE budget with two PSUs (740W with one PSU)<br>• Dual hot swappable power supplies and fans  |
|---|
| <ul> <li>ICX 8200-48ZP2 Multigigabit PoE</li> <li>32× 10/100/1000 Mbps RJ-45 PoE+ ports</li> <li>16× 100/1000/2500 Mbps RJ-45 PoE++ 90W ports</li> <li>4× 1/10/25 GbE uplink/stacking SFP28 ports</li> <li>1480 W PoE budget with two PSUs (740W with one PSU)</li> <li>Dual hot swappable power supplies and fans</li> </ul> |

| RUCKUS ICX 8200 Compact   |  |
|---|--|
| These RUCKUS ICX 8200 compact switches offer a single in<br>Ethernet port for out-of-band network management, one f | ntegrated power supply, one USB Type-C port for console management, one RJ-45<br>RJ-45 port for serial console management, and one USB port for external file storage.                               |
|   | ICX 8200-C08P PoE<br>• 8× 10/100/1000 Mbps RJ-45 PoE+ ports<br>• 2× 1/10GbE uplink/stacking SFP+ ports<br>• 124 W PoE budget PoE+ 802.3at  |
|   | ICX 8200-C08ZP Multigigabit PoE<br>• 4× 100/1000/2500 Mbps RJ-45 PoE++ 90W ports<br>• 4× 1/2.5/5/10 Gbps RJ-45 PoE++ 90W ports<br>• 2× 1/10/25 GbE uplink/stacking SFP28 ports<br>• 240 W PoE budget |

| RUCKUS ICX 8200 Fiber             |   |
|-----------------------------------|---|
|                                   | egrated power supply, one RJ-45 Ethernet port for out-of-band network management,<br>port for serial console management, and one USB port for external file storage |
| ( (H <b>) ++++++</b> (++++++ (H)) | ICX 8200-24F Fiber<br>• 24× 1GbE SFP ports<br>• 4× 1/10/25 GbE uplink/stacking SFP28 ports  |
|                                   | ICX 8200-48F Fiber<br>• 48× 1GbE SFP ports<br>• 4× 1/10/25 GbE uplink/stacking SFP28 ports  |
|                                   | ICX 8200-24FX 10G Fiber<br>• 16× 1/10GbE SFP+ ports<br>• 8× 1/10/25 GbE uplink/stacking SFP28 ports   |

|   | Gigabit<br>Compact        |                       | abit<br>-PoE          | Gigabit<br>PoE         |                        |                         |                          |
|---|---------------------------|-----------------------|-----------------------|------------------------|------------------------|-------------------------|--------------------------|
|   | RUCKUS ICX<br>8200-C08PF  | RUCKUS ICX<br>8200-24 | RUCKUS ICX<br>8200-48 | RUCKUS ICX<br>8200-24P | RUCKUS ICX<br>8200-48P | RUCKUS ICX<br>8200-48PF | RUCKUS ICX<br>8200-48PF2 |
| Feature   |                           |                       |                       |                        |                        |                         |                          |
| <b>Switching capacity</b><br>(data rate, full duplex)         | 56 Gbps                   | 248 Gbps              | 296 Gbps              | 248 Gbps               | 296 Gbps               | 296 Gbps                | 296 Gbps                 |
| Forwarding capacity<br>(data rate, full duplex)               | 42 Mpps                   | 184 Mpps              | 220 Mpps              | 184 Mpps               | 220 Mpps               | 220 Mpps                | 220 Mpps                 |
| 10/100/1000 Mbps RJ45   | 8                         | 24                    | 48                    | 24                     | 48                     | 48                      | 48                       |
| 1 Gbps SFP uplinks  |                           |                       |                       |                        |                        |                         |                          |
| 1/10 Gbps SFP/SFP+ uplinks                                    | 2                         |                       |                       |                        |                        |                         |                          |
| 1/10/25 Gbps SFP/SFP+/SFP28 uplinks                           |                           | 4                     | 4                     | 4                      | 4                      | 4                       | 4                        |
| PoE/PoE+ 802.3at ports  | 8                         |                       |                       | 24                     | 48                     | 48                      | 48                       |
| Dual hot-swap power supplies and fan modules                  |                           |                       |                       |                        |                        |                         | Yes                      |
| Max PoE Class 3 ports<br>(15.4 W per port)                    | 8                         |                       |                       | 24                     | 48                     | 48                      | 48                       |
| Max PoE+ Class 4 ports<br>(30 W per port)                     | 4                         |                       |                       | 12                     | 12                     | 24                      | 48 (2 PSU)               |
| Energy Efficient Ethernet (802.3az)                           |                           |                       | ,                     | Yes                    |                        |                         |                          |
| Base IPv4/v6 Layer 3 routing<br>(static routing, RIP)         |                           |                       |                       | Yes                    |                        |                         |                          |
| Advanced IPv4/v6 Layer 3<br>(OSPF, VRRP, VRF, GRE, PIM, PBR)  | With License              |                       |                       |                        |                        |                         |                          |
| Aggregated stacking bandwidth<br>(data rate, full duplex)     | 240 Gbps                  |                       |                       | 1.2                    | Tbps                   |                         |                          |
| <b>Stacking density</b><br>(maximum switches in a stack)      | 12                        |                       |                       |                        |                        |                         |                          |
| <b>Stacking ports</b> (maximum ports usable for stacking)     | Up to<br>2×10 GbE<br>SFP+ |                       |                       |                        | to<br>DE SFP28         |                         |                          |
| Maximum stacking distance (distance between stacked switches) |                           |                       |                       | 10 km                  |                        |                         |                          |

|   | Gigabit<br>Compact       |                          | abit<br>-PoE              | Gigabit<br>PoE            |                                      |                           |                               |
|---|--------------------------|--------------------------|---------------------------|---------------------------|--------------------------------------|---------------------------|-------------------------------|
|   | RUCKUS ICX<br>8200-C08PF | RUCKUS ICX<br>8200-24    | RUCKUS ICX<br>8200-48     | RUCKUS ICX<br>8200-24P    | RUCKUS ICX<br>8200-48P               | RUCKUS ICX<br>8200-48PF   | RUCKUS ICX<br>8200-48PF2      |
| Features  |                          |                          |                           | POWER                     |                                      |                           |                               |
| Power inlet (AC)  |                          |                          |                           | C14                       |                                      |                           |                               |
| Input voltage/frequency   |                          |                          | AC: 100                   | to 240 VAC @ 50           | to 60 Hz                             |                           |                               |
| Power Supply Hold Time  | 10ms                     | 10ms                     | 10ms                      | 20ms                      | 20ms                                 | 10ms                      | 10ms                          |
| Power supply rated max (AC)   | 240 W                    | 65 W                     | 100 W                     | 525 W                     | 525 W                                | 880 W                     | 920W x 2                      |
| PoE power budget (AC)   | 124 W                    |                          |                           | 370 W                     | 370 W                                | 740 W                     | 740W (1 PSU)<br>1440W (2 PSU) |
| Switch power usage (25°C)<br>10% traffic* (no PoE load)<br>100% traffic** (full PoE load)       | 18 W<br>150 W            | 31 W<br>38 W             | 47 W<br>54 W              | 36 W<br>445 W             | 49 W<br>451 W                        | 51W<br>854 W              | 86 W<br>1667 W                |
| Airflow   | Fanless                  |                          | s Mode.<br>ide & back     | F                         | Fanless Mode.<br>Front to side & bac | :k                        | Front to Back                 |
| Switch power dissipation (25°C)<br>10% traffic* (no PoE load)<br>100% traffic** (full PoE load) | 61 BTU/hr<br>514 BTU/hr  | 106 BTU/hr<br>132 BTU/hr | 160 BTU/hr.<br>184 BTU/hr | 124 BTU/hr<br>1518 BTU/hr | 167 BTU/hr<br>1539 BTU/hr            | 174 BTU/hr<br>2914 BTU/hr | 294 BTU/hr<br>5692 BTU/hr     |
| Features  |                          |                          |                           |                           |                                      | ,<br>                     |                               |
| Net Weight  | 2.27 kg<br>5.00 lb       | 3.74 kg<br>8.24 lb       | 4.96 kg<br>10.93 lb       | 4.34 kg<br>9.57 lb        | 5.57 kg<br>12.28 lb                  | 5.51kg<br>12.15 lb        | 6.39 kg<br>14.08 lb           |
| <b>Dimensions</b><br>Height   | 4.40 cm<br>1.73 Inches   | 4.40 cm<br>1.73 Inches   | 4.40 cm<br>1.73 inches    | 4.40 cm<br>1.73 inches    | 4.40 cm<br>1.73 inches               | 4.40 cm<br>1.73 inches    | 4.40 cm<br>1.73 inches        |
| Width   | 27.00 cm<br>10.63 inches | 44.00 cm<br>17.32 inches | 44.00 cm<br>17.32 inches  | 44.00 cm<br>17.32 inches  | 44.00 cm<br>17.32 inches             | 44.00 cm<br>17.32 inches  | 44.00 cm<br>17.32 inches      |
| Depth   | 21.40 cm<br>8.42 inches  | 28.00 cm<br>11.02 inches | 37.00 cm<br>14.57 inches  | 28.00 cm<br>11.02 inches  | 37.00 cm<br>14.57 inches             | 37.00 cm<br>14.57 inches  | 37.00 cm<br>14.57 inches      |
| Acoustics (25°C, min fan speed)   | Fanless                  | 40.0 dBA                 | 40.0 dBA                  | 41.0 dBA                  | 41.0 dBA                             | 41.0 dBA                  | 51.0 dBA                      |
| MTBF (25°C)   | 2,007,096hr              | 1,543,328hr              | 1,136,723hr               | 1,550,360hr               | 1,297,288hr                          | 1,070,987hr               | 561,966hr                     |
| Features  |                          |                          | M                         | ANAGEMENT POF             | RTS                                  |                           |                               |
| <b>USB Type-C port</b><br>(For console management)  | Yes                      |                          |                           |                           |                                      |                           |                               |
| <b>RJ45 serial port</b><br>(For serial console management)                                      | Yes                      |                          |                           |                           |                                      |                           |                               |
| <b>USB Type-A port</b><br>(For external file storage)   |                          | Yes                      |                           |                           |                                      |                           |                               |
| <b>RJ45 Ethernet port</b><br>(For out of band network management)                               |                          | Yes                      |                           |                           |                                      |                           |                               |

\* All downlink ports, stacking ports, and uplink ports are linked up with 10% traffic rate. No PoE load on PoE models. Fans are at nominal speed.

\*\* All downlink ports, stacking ports, and uplink ports are linked up with 100% traffic rate. 100% PoE load on PoE models. Fans are at high speed.

|  | Multigigabit Ethernet<br>PoE++ |                         |                          | Fiber Ethernet          |                         |                        |
|--|--------------------------------|-------------------------|--------------------------|-------------------------|-------------------------|------------------------|
|  | RUCKUS ICX<br>8200-C08ZP       | RUCKUS ICX<br>8200-24ZP | RUCKUS ICX<br>8200-48ZP2 | RUCKUS ICX<br>8200-24F  | RUCKUS ICX<br>8200-24FX | RUCKUS ICX<br>8200-48F |
| Features   |                                |                         |                          |                         |                         |                        |
| Switching capacity<br>(data rate, full duplex)                       | 200 Gbps                       | 320 Gbps                | 344 Gbps                 | 248 Gbps                | 720 Gbps                | 296 Gbps               |
| <b>Forwarding capacity</b><br>(data rate, full duplex)               | 148 Mpps                       | 237 Mpps                | 254 Mpps                 | 184 Mpps                | 533 Mpps                | 219 Mpps               |
| 10/100/1000 Mbps RJ45  |                                |                         | 32                       |                         |                         |                        |
| 100/1000 Mbps/2.5 Gbps RJ45<br>downlinks (full duplex only)          | 4                              | 24                      | 16                       |                         |                         |                        |
| 100Mbps/1/2.5/5/10 Gbps RJ45<br>downlinks                            | 4                              |                         |                          |                         |                         |                        |
| 1 Gbps SFP   |                                |                         |                          | 24                      |                         | 48                     |
| 1/10 Gbps SFP+   |                                |                         |                          |                         | 16                      |                        |
| 1/10/25 Gbps SFP/SFP+/SFP28 uplinks                                  | 2                              | 4                       | 4                        | 4                       | 8                       | 4                      |
| PoE/PoE+ 802.3at ports   |                                |                         | 32                       |                         |                         |                        |
| PoH / PoE / PoE+ / PoE++ 802.3bt ports                               | 8                              | 24                      | 16                       |                         |                         |                        |
| Dual hot-swap power supplies and fan modules                         |                                |                         | Yes                      |                         |                         |                        |
| Maximum PoE Class 3 ports (15.4 W per port)                          | 8                              | 24                      | 48                       |                         |                         |                        |
| Maximum PoE+ Class 4 ports<br>(30 W per port)                        | 8                              | 24                      | 24 (1 PSU)<br>48 (2 PSU) |                         |                         |                        |
| Maximum PoE++ Class 6 ports<br>(60 W per port)                       | 4                              | 12                      | 12 (1PSU)<br>16 (2 PSU)  |                         |                         |                        |
| Energy Efficient Ethernet (802.3az)                                  |                                | Yes                     |                          |                         |                         |                        |
| Base IPv4/v6 Layer 3 routing<br>(static routing, RIP)                |                                |                         | Y                        | es                      |                         |                        |
| Advanced IPv4/v6 Layer 3 routing<br>(OSPF, VRRP, VRF, GRE, PIM, PBR) |                                |                         | With L                   | icense                  |                         |                        |
| Aggregated stacking bandwidth<br>(data rate, full duplex)            | 600 Gbps                       |                         |                          | 1.2 Tbps                |                         |                        |
| <b>Stacking density</b><br>(maximum switches in a stack)             | 12                             |                         |                          |                         |                         |                        |
| Stacking ports<br>(maximum ports usable for stacking)                | Up to<br>2×25 GbE SFP28        |                         |                          | Up to<br>4×25 GbE SFP28 |                         |                        |
| Maximum stacking distance<br>(distance between stacked switches)     |                                |                         | 10                       | km                      |                         |                        |

|   | Ν                           | Multigigabit Ethernet<br>PoE++ |                               |                            | Fiber Ethernet             |                            |  |
|---|-----------------------------|--------------------------------|-------------------------------|----------------------------|----------------------------|----------------------------|--|
|   | RUCKUS ICX<br>8200-C08ZP    | RUCKUS ICX<br>8200-24ZP        | RUCKUS ICX<br>8200-48ZP2      | RUCKUS ICX<br>8200-24F     | RUCKUS ICX<br>8200-24FX    | RUCKUS ICX<br>8200-48F     |  |
| Features  |                             |                                | PO                            | WER                        |                            |                            |  |
| Power inlet (AC)  |                             |                                | C                             | 14                         |                            |                            |  |
| Input voltage/frequency   |                             |                                | AC: 100 to 240 V              | AC @ 50 to 60 Hz           |                            |                            |  |
| Power supply hold time  | 20ms                        | 10ms                           | 10ms                          | 10ms                       | 10ms                       | 10ms                       |  |
| Power supply rated max (AC)   | 305W                        | 950W                           | 920W x 2                      | 100W                       | 150W                       | 180W                       |  |
| PoE power budget (AC)   | 240W                        | 740W                           | 800W (1 PSU)<br>1480W (2 PSU) |                            |                            |                            |  |
| Switch power usage (25°C)<br>10% traffic* (no PoE load)<br>100% traffic** (full PoE load)       | 41W<br>300W                 | 69W<br>920W                    | 90W<br>1839W                  | 65W<br>78W                 | 82W<br>93W                 | 106W<br>118W               |  |
| Airflow   | Fanless                     | Front to s                     | ide & back                    |                            | Front to side & back       |                            |  |
| Switch power dissipation (25°C)<br>10% traffic* (no PoE load)<br>100% traffic** (full PoE load) | 140 BTU/hr.<br>1023 BTU/hr. | 235 BTU/hr.<br>3139 BTU/hr.    | 305 BTU/hr.<br>6275 BTU/hr.   | 223 BTU/hr.<br>264 BTU/hr. | 279 BTU/hr.<br>316 BTU/hr. | 362 BTU/hr.<br>402 BTU/hr. |  |
| Features  |                             |                                |                               |                            |                            |                            |  |
| Net Weight  | 3.23 Kg                     | 5.22 Kg                        | 6.64 Kg<br>(2 PSUs)           | 3.77 Kg                    | 3.81 Kg                    | 4.30 Kg                    |  |
| Dimensions  |                             |                                |                               |                            |                            |                            |  |
| Height  | 4.40 cm<br>1.73 Inches      | 4.40 cm<br>1.73 inches         | 4.40 cm<br>1.73 inches        | 4.40 cm<br>1.73 inches     | 4.40 cm<br>1.73 inches     | 4.40 cm<br>1.73 inches     |  |
| Width   | 27.00 cm<br>10.63 inches    | 44.00 cm<br>17.32 inches       | 44.00 cm<br>17.32 inches      | 44.00 cm<br>17.32 inches   | 44.00 cm<br>17.32 inches   | 44.00 cm<br>17.32 inches   |  |
| Depth   | 26.00 cm<br>10.24 inches    | 28.00 cm<br>11.02 inches       | 37.00 cm<br>14.57 inches      | 28.00 cm<br>11.02 inches   | 28.00 cm<br>11.02 inches   | 28.00 cm<br>11.02 inches   |  |
| Acoustics (25°C, min fan speed)   | Fanless                     | 41.0 dBA                       | 51.0 dBA                      | 41.0 dBA                   | 41.0 dBA                   | 41.0 dBA                   |  |
| MTBF (25°C)   | 539,091hr                   | 936,765hr                      | 536,710hr                     | 1,190,512hr                | 890,716hr                  | 1,699,974hr                |  |
| Features  |                             |                                |                               |                            |                            |                            |  |
| <b>USB Type-C port</b><br>(For console management)  |                             | Yes                            |                               |                            |                            |                            |  |
| <b>RJ45 serial port</b><br>(For serial console management)                                      |                             | Yes                            |                               |                            |                            |                            |  |
| <b>USB Type-A port</b><br>(For external file storage)   |                             | Yes                            |                               |                            |                            |                            |  |
| <b>RJ45 Ethernet port</b><br>(For out of band network management)                               |                             |                                | Y                             | es                         |                            |                            |  |

\* All downlink ports, stacking ports, and uplink ports are linked up with 10% traffic rate. No PoE load on PoE models. Fans are at nominal speed.

\*\* All downlink ports, stacking ports, and uplink ports are linked up with 100% traffic rate. 100% PoE load on PoE models. Fans are at high speed.

## **RUCKUS ICX 8200 Specifications**

| Features                                   | SPECIFICATIONS   |  |
|--|--|--|
| Connector options                          | <ul> <li>10/100/1000 Mbps RJ-45</li> <li>1/2.5 Gbps RJ-45</li> <li>1/2.5/5/10 Gbps RJ-45</li> <li>1 Gbps SFP ports</li> <li>1/10 Gbps SFP+ ports</li> <li>1/10/25 Gbps SFP28 ports</li> </ul>  | <ul> <li>Out-of-band Ethernet management: 10/100/1000 Mbps RJ-45</li> <li>Console management: RJ45 serial port and USB Type-C port with serial communication device class support</li> <li>File transfer: USB port, standard-A plug</li> <li>For the latest information about supported optics, please visit www.commscope.com/ruckus.</li> </ul>  |
| DRAM<br>NVRAM (eMMC)<br>Packet buffer size | • 4 GB<br>• 8 GB<br>• 4 MB   |  |
| Maximum MAC addresses                      | • 32K  |  |
| Maximum VLANs<br>Maximum PVLANs            | • 4,095<br>• 32  |  |
| Maximum STP<br>(spanning trees instances)  | • 253  |  |
| Maximum VEs                                | • 512  |  |
| Maximum ARP entries                        | • 8192   |  |
| Maximum routes (in hardware)               | <ul><li>16k IPv4, 4k IPv6</li><li>Next hop address: 8k</li></ul>   |  |
| Trunking                                   | <ul><li>Maximum ports per LAG : 8</li><li>Maximum Link Aggregation Groups : 128</li></ul>  |  |
| Maximum jumbo frame size                   | • 9,216 bytes  |  |
| QoS priority queues                        | • 8 per port   |  |
| Multicast groups                           | <ul> <li>4096 (Layer2 IGMP) 512 (Layer2 MLD)</li> <li>4096 (IPv4 PIM) 512 (IPv6 PIM)</li> </ul>  |  |
| Quality of Service (QoS                    | <ul> <li>ACL Mapping and Marking of ToS/DSCP (CoS)</li> <li>ACL Mapping and Marking of 802.1p</li> <li>ACL Mapping to Priority Queue</li> <li>Classifying and Limiting Flows Based on TCP Flags</li> <li>DiffServ Support</li> </ul>   | <ul> <li>Honoring DSCP and 802.1p (CoS)</li> <li>MAC Address Mapping to Priority Queue</li> <li>Priority Queue Management using Weighted Round Robin</li> <li>(WRR), Strict Priority (SP), and a combination of WRR and SP</li> </ul>  |
| Traffic management                         | <ul> <li>ACL-based inbound rate limiting and traffic policies</li> <li>Broadcast, multicast, and unknown unicast rate limiting</li> <li>Inbound rate limiting per port</li> <li>Outbound rate limiting per port and per queue</li> </ul>   |  |
| Security                                   | <ul> <li>802.1X authentication</li> <li>MAC authentication</li> <li>Flexible authentication</li> <li>Web authentication</li> <li>DHCP snooping</li> <li>Dynamic ARP inspection</li> <li>Neighbor Discovery (ND) Inspection</li> <li>Bi-level Access Mode (Standard and EXEC Level)</li> <li>EAP pass-through support</li> <li>IEEE 802.1X username export in sFlow</li> <li>Protection against Denial of Service (DoS) attacks</li> <li>Authentication, Authorization, and Accounting (AAA)</li> </ul> | <ul> <li>MAC Address Locking MAC Port Security</li> <li>Advanced Encryption Standard (AES) with SSHv2</li> <li>RADIUS/TACACS/TACACS+</li> <li>Secure Copy (SCP)</li> <li>Secure Shell (SSHv2)</li> <li>Protected Ports</li> <li>Local Username/Password</li> <li>Change of Authorization (CoA) RFC 5176</li> <li>Trusted Platform Module</li> <li>RADSEC (RFC 6614)</li> <li>Encrypted Syslog (RFC 5425</li> </ul> |
| SDN features                               | <ul> <li>OpenFlow1 v1.0 and v1.3</li> <li>Operates with OpenDayLight Controller</li> <li>OpenFlow hybrid port mode (Supports both OpenFlow traffic forwarding and regular traffic forwarding on the same port)</li> </ul>  | :  |

## **RUCKUS ICX 8200 Specifications**

| Features   | SPECIFICATIONS  |  |  |  |  |
|--|---|--|--|--|--|
| High availability  | <ul> <li>Layer 3 VRRP/VRRP-E protocol redundancy</li> <li>Real-time state synchronization across the stack</li> <li>Hitless failover and switchover from master to standby stack<br/>controller</li> <li>Hot insertion and removal of stacked units</li> <li>Layer 2 VSRP switch redundancy</li> <li>In Service Software Update (ISSU</li> </ul>  | k  |  |  |  |
| Layer 2 feature set  | <ul> <li>802.1s Multiple Spanning Tree</li> <li>802.1x Authentication</li> <li>Auto MDI/MDIX</li> <li>BPDU Guard, Root Guard</li> <li>Dual-Mode VLANs</li> <li>MAC-based VLANs, Dynamic MAC-based VLAN activation</li> <li>Dynamic VLAN Assignment</li> <li>Dynamic Voice VLAN Assignment</li> <li>Fast Port Span</li> <li>GVRP : GARP VLAN Registration Protocol</li> <li>IGMP Snooping (v1/v2/v3)</li> <li>IGMP Proxy for Static Groups</li> <li>IGMP v2/v3 Fast Leave</li> <li>Inter-Packet Gap (IPG) adjustment</li> <li>Link Fault Signaling (LFS)</li> <li>MAC Address Filtering</li> <li>MAC Learning Disable</li> </ul> | <ul> <li>MLD Snooping (v1/v2)</li> <li>Multi-device Authentication</li> <li>Per-VLAN Spanning Tree (PVST/PVST+/PRST)</li> <li>Mirroring: Port-based, ACL-based, MAC Filter-based, and</li> <li>VLAN-based</li> <li>PIM-SM v2 Snooping</li> <li>Port Loop Detection</li> <li>Private VLAN</li> <li>Remote Fault Notification (RFN)</li> <li>Single-instance Spanning Tree</li> <li>Trunk Groups (static, LACP)</li> <li>Uni-Directional Link Detection (UDLD)</li> <li>Metro-Ring Protocol (MRP) (v1, v2)</li> <li>Virtual Switch Redundancy Protocol (VSRP)</li> <li>Q-in-Q and selective Q-in-Q</li> <li>VLAN Mapping</li> <li>Topology Groups</li> </ul> |  |  |  |
| Base Layer 3 IP routing feature set                                | <ul> <li>IPv4 and IPv6 static routes</li> <li>RIP v1/v2, RIPng</li> <li>ECMP</li> <li>Port-based Access Control Lists</li> <li>Layer 3/Layer 4 ACLs</li> </ul>  | <ul> <li>Host routes</li> <li>Virtual Interfaces</li> <li>Routed Interfaces</li> <li>Route-only Support</li> <li>Routing Between Directly Connected Subnets</li> </ul>   |  |  |  |
| Premium Layer 3 IP routing<br>feature set with software<br>license | <ul> <li>IPv4 and IPv6 dynamic routes</li> <li>OSPF v2, v3</li> <li>PIM-SM, PIM-SSM, PIM-DM, PIM passive (IPv4, IPv6)</li> <li>PBR</li> </ul>   | <ul> <li>Virtual Route Redundancy Protocol VRRP (IPv4)</li> <li>VRRP v3 (IPv6)</li> <li>VRRP-E(IPv4/IPv6)</li> <li>VRF (IPv4 and IPv6</li> <li>GRE</li> </ul>  |  |  |  |

| Features                  | STANDARD COMPLIANCE  |  |  |  |  |
|---------------------------|--|--|--|--|--|
| IEEE standards compliance | <ul> <li>802.1AB LLDP/ LLDP-MED</li> <li>802.1D MAC Bridging</li> <li>802.1p Mapping to Priority Queue</li> <li>802.1s Multiple Spanning Tree (MST)</li> <li>802.1w Rapid Reconfiguration of Spanning Tree (RSTP)</li> <li>802.1x Port-based Network Access Control (PNAC)</li> <li>802.3 Carrier Sense Multiple Access/Collision Detection</li> <li>(CSMA/CD)</li> <li>802.3ab 1000BASE-T</li> <li>802.3ad Link Aggregation (Dynamic and Static)</li> <li>802.1 AX-2008 Link Aggregation</li> </ul> | <ul> <li>802.3ae 10 Gigabit Ethernet</li> <li>802.3af Power over Ethernet</li> <li>802.3at Power over Ethernet Plus</li> <li>802.3bz Multigigabit Ethernet</li> <li>802.3u 100Base-TX</li> <li>802.3x Flow Control</li> <li>802.3z 1000Base-SX/LX</li> <li>802.3 MAU MIB (RFC 2239)</li> <li>802.1Q VLAN Tagging</li> <li>802.1BR Bridge Port Extension</li> <li>802.3az Energy Efficient Ethernet</li> <li>802.3bt PoE++</li> </ul> |  |  |  |
| RFC standards compliance  | For a complete list of RFCs supported by the ICX 8200 produc<br>please visit <u>www.commscope.com/ruckus</u> .   | t family,  |  |  |  |

## **RUCKUS ICX 8200 Specifications**

| Features   | FEATU  | FEATURE SETS  |  |  |  |
|------------|--|---|--|--|--|
| Management | <ul> <li>DHCP Auto-Configuration</li> <li>Configuration Logging</li> <li>Digital Optical Monitoring</li> <li>Display Log Messages on Multiple Terminals</li> <li>Embedded Web Management (HTTP/HTTPS)</li> <li>Embedded DHCP Server</li> <li>Industry-standard Command Line Interface (CLI)</li> <li>RUCKUS SmartZone, RUCKUS Cloud*, RUCKUS Unleashed*</li> <li>CLI activation of optional software features</li> <li>USB file management and storage</li> <li>Macro for batch execution</li> <li>Out-of-band Ethernet Management</li> <li>RSPAN</li> <li>TFTP</li> <li>TELNET Client and Server</li> <li>SSH / SSH V2</li> </ul> | <ul> <li>Bootp</li> <li>SNMPv1/v2c</li> <li>DHCP Server and DHCP Relay</li> <li>SNMPv3 Intro to Framework</li> <li>Architecture for Describing SNMP Framework</li> <li>SNMP Message Processing and Dispatching</li> <li>SNMPv3 Applications</li> <li>SNMPv3 User-based Security Model</li> <li>SNMP View-based Access Control Model SNMP</li> <li>sFlow</li> <li>Network Time Protocol (NTP)</li> <li>Multiple Syslog Servers</li> <li>SCP</li> <li>Virtual Cable Tester (VCT)</li> <li>From management MIB, please see the ICX technical documentation at <u>www.commscope.com/ruckus</u></li> </ul> |  |  |  |

| Features                              | ENVIRONMENT   |
|---------------------------------------|---|
| Ambient Temperature                   | <ul> <li>Operational: 0°C to 45°C (32°F to 113°F) at sea level</li> <li>Non-operational: 40°C to 70°C (-40°F to 158°F)</li> </ul> |
| Relative Humidity<br>(non-condensing) | <ul> <li>Operational: 10% to 90% at 50°C (122°F)</li> <li>Non-operational: 10% to 90% at 70°C (158°F)</li> </ul>                  |
| Altitude<br>(above sea level)         | <ul> <li>Operational 0 to 3,048 m (10,000 ft)</li> <li>Non-operational: 0 to 12,000 m (39,370 ft)</li> </ul>                      |

| Features                               | COMPLIANCE/CERTIFICATION  |
|--|---|
| Electromagnetic emissions              | <ul> <li>FCC Part 15, Subpart B (Class A)</li> <li>EN 55032 (CE mark) (Class A)</li> <li>EN 55035 (CE mark) (Immunity) for Information Technology Equipment</li> <li>EN 55024 (CE mark) (Immunity) for Information Technology Equipment</li> <li>ICES-003 (Canada) (Class A)</li> <li>AS/NZ 55032 (Australia/New Zealand) (Class A)</li> <li>VCCI (Japan) (Class A)</li> <li>VCCI (Japan) (Class A)</li> <li>EN 300 386</li> <li>CNS 15936-1 (BSMI) (Taiwan) (Class A)</li> <li>KN 32 (South Korea) (Class A)</li> <li>KN 35 (South Korea) (Class A)</li> <li>TCVN 7189 / TCVN 7317 (Vietnam) (Class A)</li> <li>EN 61000-3-2</li> <li>EN 61000-3-3</li> </ul>  |
| Safety                                 | <ul> <li>CAN/CSA-C22.2 No. 62368-1/UL 62368-1 - Safety of Information Technology Equipment</li> <li>EN 60825 Safety of Laser Products - Part 1: Equipment Classification, Requirements and User's Guide</li> <li>EN 60950-1/IEC 60950-1/EN 62368-1/EC 62368-1 Safety of Information Technology Equipment</li> <li>CNS 15598-1 (BSMI) (Taiwan)</li> </ul>  |
| Environmental regulatory<br>compliance | <ul> <li>2014/35/EU and 2014/30/EU</li> <li>2011/65/EU – Restriction of the use of certain hazardous substance in electrical and electronic equipment (EU RoHS)</li> <li>2012/19/EU – Waste electrical and electronic equipment (EU WEEE)</li> <li>94/62/EC – packaging and packaging waste (EU)</li> <li>2006/66/EC – batteries and accumulators and waste batteries and accumulators (EU battery directive)</li> <li>1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (EU REACH)</li> <li>Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 – U.S. Conflict Minerals</li> <li>30/2011/TT-BCT – Vietnam circular</li> <li>SJ/T 11363-2006 Requirements for Concentration Limits for Certain Hazardous Substances in EIPs (China)</li> <li>SJ/T 11364-2006 Marking for the Control of Pollution Caused by EIPs (China)</li> <li>CNS 15663 (BSMI) (Taiwan)</li> </ul> |
| Vibration                              | • IEC 68-2-36, IEC 68-2-6   |
| Shock and drop                         | • IEC 68-2-27, IEC 68-2-32  |
| TAA (Trade Agreement Act)              | All ICX 8200 SKUs are TAA compliant   |

## RUCKUS ICX 8200 Ordering Information

| Part Number      | RUCKUS ICX 8200 Switches with Three-Year Remote TAC support<br>TAA-Compliant   |
|------------------|--|
| ICX8200-C08PF    | RUCKUS ICX 8200 Compact Switch, 8×10/100/1000 Mbps PoE+ ports, 2×10 GbE SFP+ stacking/uplink-ports, 124 W PoE budget, three-year remote TAC support. Power cord not included.  |
| ICX8200-C08ZP    | RUCKUS ICX 8200 Compact Switch, 4×100/1000/2500 Mbps PoE++ ports, 4× 1/2.5/5/10Mbps PoE++ ports, 2×25 GbE SFP28 stacking/<br>uplink-ports, 240 W PoE budget, three-year remote TAC support. Power cord not included.   |
| ICX8200-24       | RUCKUS ICX 8200 Switch, 24×10/100/1000 Mbps ports, 4×25 GbE SFP28 stacking/uplink-ports, three-year remote TAC support. Power cord not included.   |
| ICX8200-24P      | RUCKUS ICX 8200 Switch, 24×10/100/1000 Mbps PoE+ ports, 4×25 GbE SFP28 stacking/uplink-ports, 370 W PoE budget, three-year remote TAC support. Power cord not included.  |
| ICX8200-24ZP     | RUCKUS ICX 8200 Switch, 24× 100/1000/2500 Mbps PoE++ ports, 4×25 GbE SFP28 stacking/uplink-ports, 740 W PoE budget, three-year remote TAC support. Power cord not included.  |
| ICX8200-48       | RUCKUS ICX 8200 Switch, 48×10/100/1000 Mbps ports, 4×25 GbE SFP28 stacking/uplink-ports, three-year remote TAC support. Power cord not included.   |
| ICX8200-48P      | RUCKUS ICX 8200 Switch, 48×10/100/1000 Mbps PoE+ ports, 4×25 GbE SFP28 stacking/uplink-ports, 370 W PoE budget, three-year remote TAC support. Power cord not included.  |
| ICX8200-48PF     | RUCKUS ICX 8200 Switch, 48×10/100/1000 Mbps PoE+ ports, 4×25 GbE SFP28 stacking/uplink-ports, 740 W PoE budget, three-year remote TAC support. Power cord not included.  |
| ICX8200-48PF2-E  | RUCKUS ICX 8200 Switch, 48×10/100/1000 Mbps PoE+ ports, 4×25 GbE SFP28 stacking/uplink-ports, 740 W PoE budget (with one PSU), hot swap power supplies and fans, one power supply and one fan included, three-year remote TAC support. Power cord not included.  |
| ICX8200-48PF2-E2 | RUCKUS ICX 8200 Switch, 48×10/100/1000 Mbps PoE+ ports, 4×25 GbE SFP28 stacking/uplink-ports, 1440 W PoE budget, hot swap power supplies and fans, two power supplies and two fans included, three-year remote TAC support. Power cords not included.  |
| ICX8200-48ZP2-E  | RUCKUS ICX 8200 Switch, 32×10/100/1000 Mbps PoE+ ports, 16× 100/1000/2500 Mbps RJ-45 PoE++ ports, 4×25 GbE SFP28 stacking/<br>uplink-ports, 740 W PoE budget (with one PSU), hot swap power supplies and fans, one power supply and one fan included, three-year<br>remote TAC support. Power cord not included. |
| ICX8200-48ZP2-E2 | RUCKUS ICX 8200 Switch, 32×10/100/1000 Mbps PoE+ ports, 16× 100/1000/2500 Mbps RJ-45 PoE++ ports, 4×25 GbE SFP28 stacking/<br>uplink-ports, 1480 W PoE budget, hot swap power supplies and fans, two power supplies and two fans included, three-year remote TAC<br>support. Power cords not included.           |
| ICX8200-24F      | RUCKUS ICX 8200 Switch, 24×10/100/1000 Mbps SFP ports, 4×25 GbE SFP28 stacking/uplink-ports, three-year remote TAC support. Power cord not included.   |
| ICX8200-48F      | RUCKUS ICX 8200 Switch, 48×10/100/1000 Mbps SFP ports, 4×25 GbE SFP28 stacking/uplink-ports, three-year remote TAC support. Power cord not included.   |
| ICX8200-24FX     | RUCKUS ICX 8200 Switch, 16×1/10GbE SFP+ ports, 8×25 GbE SFP28 stacking/uplink-ports, three-year remote TAC support. Power cord not included.   |

| Part Number      | RUCKUS ICX 8200 Power Supplies, Fans and Accessories   |
|------------------|--|
| ICX8200-PREM-LIC | ICX 8200 Layer 3 premium license. Enables advanced layer 3 features (OSPF, VRRP, PIM, PBR, VRF, GRE)   |
| RPS23-E          | Hot-swap 920 W AC PoE power supply, front to back airflow. Only applicable to the ICX8200 models with hot swap power supplies (up to 2 per switch) Power cord not included |
| ICX-FAN13-E      | Hot-swap fan tray front to back airflow. Only applicable to the ICX8200 models with hot swap fans (up to 2 per switch)   |
| XBR-R000295      | 1U, 1.5U, and 2U Universal Kit for Four-Post Racks   |
| ICX7000-RMK      | Two-post fixed rack mount kit  |
| ICX7000-C12-RMK  | Rack mount kit for compact switches  |
| ICX7000-C12-WMK  | Wall Mount Bracket Kit for compact switches  |
| ICX-DIN-MNT      | DIN rail mount kit   |
| CC-USBC-USBA     | USB 2.0 Cable, Type-C to Type-A, 1 meter (for USB Type-C console port)   |
| CC-RJ45-DB9      | Console cable RJ45-RJ45 with RJ-45-DB9 Adapter (for RJ-45 console port)  |

## **RUCKUS ICX 8200 Ordering Information**

| Part Number       | Power Cords   |
|-------------------|---|
| PCUSA2            | C13 POWER CORD for USA, NEMA5-15/C13, 13A, 125V                         |
| PCEURO            | C13 Power Cord for Europe   |
| PCAUS             | C13 POWER CORD FOR AUSTRALIA  |
| PCCHINA2-IEC309   | C13 Power Cord for China, 250V 10A                                      |
| PCINDIA           | C13 6 FOOT AC POWER CORD FOR INDIA                                      |
| PCJAPAN           | C13 Power Cord for Japan version  |
| PCSWISS-C1312G-HF | C13 POWER CORD for Switzerland, SEV1011 TO C13, 10A, 250V, HALOGEN-FREE |
| PCUK              | C13 Power Cord for United Kingdom                                       |
| PC-C13C14         | C13/C14 15A Power Cord  |

### Warranty

RUCKUS ICX 8200 Switches are covered by the RUCKUS Assurance Limited Lifetime Warranty. For details, visit <u>www.ruckusnetworks.</u> <u>com/warranty</u>.

### **Best-in-Class Support**

RUCKUS ICX 8200 switches are supported by next-business-day advance replacement where available, as well as software defect repairs and maintenance updates. 3 years remote TAC support is included with the product purchase. Many on-site and TAC support options are available and can be purchased bundled with the product or separately.

### Legal Disclaimer

Product features, functionality and specifications may change or be discontinued without notice. Nothing in this document shall be deemed to create a warranty of any kind, either express or implied, statutory or otherwise, including but not limited to, any implied warranties of merchantability, fitness for a particular purpose, noninfringement of third-party rights or availability with respect to any products and services.

Refer to <u>www.commscope.com/ruckus</u> for the latest version of this document.

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### About RUCKUS Networks

RUCKUS Networks builds and delivers purpose-driven networks that perform in the demanding environments of the industries we serve. Together with our network of trusted go-to-market partners, we empower our customers to deliver exceptional experiences to the guests, students, residents, citizens and employees who count on them.

#### www.ruckusnetworks.com

Visit our website or contact your local RUCKUS representative for more information.

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