RUCKUS® AV switches—ICX® 8200

Enterprise-class stackable access switch for Pro AV

The RUCKUS AV ICX 8200 switches are switches designed purposely for professional AV networks. These intelligent, scalable AV switches levels up the professional AV-over-IP performance and reliability to the enterprise-class functionality at an affordable price.

The RUCKUS ICX 8200 raises the bar with 25 GbE for uplinks or stacking, 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, cost effectiveness, and "pay as you grow" scalability of a stackable solution.

Benefits

Gigabit access and 25G uplink/stacking ports for multi-location end-to-end AV networking

- 8, 24 and 48 Gigabit Ethernet ports
- Up to 4X 10/25 Gbps SFP28 uplink/stacking ports
- All ICX 8200 switches are interoperable and can stack together

Power next-generation access points (APs) and power over Ethernet (PoE) devices

- PoE+ 802.3at, 30 watts per port on all ports
- Redundant power supply boots up the total PoE planning up to 1,440 W PoE budget

Easy-setup AV profile for instant AV network setup

- RUCKUS Unleashed™ switches discover and management for quick and intuitive web GUI switch settings
- Easy-to-use AV profile with verified presets, letting you set up your AV network within minutes
- Templates optimized for popular pro AV end points including Dante, NDI, Crestron, and Q-Sys

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

Enhanced availability

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

Services and support included

- Three years remote TAC support included with every ICX 8200 model
- Limited lifetime warranty

RUCKUS AV ICX 8200 switches

These stackable RUCKUS ICX 8200 models offer a single integrated power supply, one RJ45 Ethernet port for out-of-band network management, one USB Type-C port for console management, and one USB port for external file storage.

	**ICX 8200-C08PFV PoE** • Designed for AV rack, in-wall, or desktop installations • 8X 1/100/1000 Mbps RJ45 802.3at PoE+ ports • 2X 1/10 GbE uplink/stacking SFP+ ports • 124 W PoE budget • Fan-less
	**ICX 8200-24PV PoE** • Designed for AV rack or in-wall installations • 24X 1/100/1000 Mbps RJ45 802.3at PoE+ ports • 4X 1/10/25 GbE uplink/stacking SFP28 ports • 370 W PoE budget
	**ICX 8200-48P PoE** • 48X 1/100/1000 Mbps RJ45 802.3at PoE+ ports • 4X 1/10/25 GbE uplink/stacking SFP28 ports • 370 W PoE budget
	**ICX 8200-48PF PoE** • 48X 1/100/1000 Mbps RJ45 802.3at PoE+ ports • 4X 1/10/25 GbE uplink/stacking SFP28 ports • 740 W PoE budget
	**ICX 8200-48PF2 PoE** • 48X 1/100/1000 Mbps RJ45 802.3at PoE+ ports • 4X 1/10/25 GbE uplink/stacking SFP28 ports • 1,440 W PoE budget with two PSUs (740 W with one PSU) • Dual hot-swappable power supplies and fans

Specifications subject to change.

RUCKUS ICX 8200 feature/model comparison

	RUCKUS ICX8200-C08PFV	RUCKUS ICX8200-24PV	RUCKUS ICX8200-48P	RUCKUS ICX8200-48PF	RUCKUS ICX8200-48PF2
Basic switch information					
Switching capacity (data rate, full duplex)	56 Gbps	248 Gbps	296 Gbps	296 Gbps	296 Gbps
Forwarding capacity (data rate, full duplex)	42 Mpps	184 Mpps	220 Mpps	220 Mpps	220 Mpps
10/100/1000 Mbps RJ45	8	24	48	48	48
1/10 Gbps SFP/SFP+ uplinks	2				
1/10/25 Gbps SFP/SFP+/SFP28 uplinks		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 (15.4 W per port)	8	24	48	48	48
Max PoE+ Class 4 ports (30 W per port)	4	12	12	24	48 (2 PSU)
Energy-efficient Ethernet (802.3az)	Yes				
Base IPv4/v6 Layer 3 routing (static routing, RIP)	Yes				
Advanced IPv4/v6 Layer 3 (OSPF, VRRP, VRF, GRE, PIM, PBR)	With license				
Aggregated stacking bandwidth (data rate, full duplex)	240 Gbps	1.2 Tbps			
Stacking density (maximum switches in a stack)	12				
Stacking ports (maximum ports usable for stacking)	Up to 2×10 GbE SFP+	Up to 4×25 GbE SFP28			
Maximum stacking distance (distance between stacked switches)	10 km				

Specifications subject to change.

RUCKUS ICX 8200 feature/model comparison

	RUCKUS ICX8200-C08PFV	RUCKUS ICX8200-24PV	RUCKUS ICX8200-48P	RUCKUS ICX8200-48PF	RUCKUS ICX8200-48PF2
Power					
Alternating current (AC) power connector	C14				
Input voltage and frequency	AC: 100 to 240 VAC @ 50 to 60 Hz				
Power supply hold-up time	10 ms	20 ms	20 ms	10 ms	10 ms
Maximum power supply rating (AC)	240 W	525 W	525 W	880 W	920 W × 2
PoE power budget (AC)	124 W	370 W	370 W	740 W	740 W (1 PSU) 1,440 W (2 PSU)
Switch power usage (25°C) 10% traffic* (no PoE load) 100% traffic** (full PoE load)	18 W 150 W	36 W 445 W	49 W 451 W	51 W 854 W	86 W 1,667 W
Airflow	Fanless	Front and side to back or fanless mode ***			Front and side to back
Switch power dissipation (25°C) 10% traffic* (no PoE load) 100% traffic** (full PoE load)	61 BTU/hr 514 BTU/hr	124 BTU/hr 256 BTU/hr	167 BTU/hr 276 BTU/hr	174 BTU/hr 389 BTU/hr	294 BTU/hr 775 BTU/hr
Mechanical and environment					
Net weight	2.27 kg 5.00 lb	4.34 kg 9.57 lb	5.57 kg 12.28 lb	5.51 kg 12.15 lb	6.39 kg 14.08 lb
Dimensions Height	4.40 cm 1.73 inches	4.40 cm 1.73 inches	4.40 cm 1.73 inches	4.40 cm 1.73 inches	4.40 cm 1.73 inches
Width	27.00 cm 10.63 inches	44.00 cm 17.32 inches	44.00 cm 17.32 inches	44.00 cm 17.32 inches	44.00 cm 17.32 inches
Depth	21.40 cm 8.42 inches	28.00 cm 11.02 inches	37.00 cm 14.57 inches	37.00 cm 14.57 inches	37.00 cm 14.57 inches
Acoustics (25°C, min fan speed)	Fanless	41.0 dBA	41.0 dBA	41.0 dBA	51.0 dBA
MTBF (25°C)	2,007,096 hr	1,550,360 hr	1,297,288 hr	1,070,987 hr	561,966 hr
Management port					
USB Type-C port (For console management)	Yes				
RJ45 serial port (For serial console management)			Yes		
USB Type-A port (For external file storage)	Yes				
RJ45 Ethernet port (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.

*** In fanless mode, 25 GbE ports are restricted to 10 GbE max speed and PoE budget is restricted to 150 W max per switch.

Specifications subject to change.

RUCKUS AV ICX 8200 specifications

Features	Specifications	
Connector options	• 10/100/1000 Mbps RJ45 • 1/10 Gbps SFP+ ports • 1/10/25 Gbps SFP28 ports • Out-of-band Ethernet management: 10/100/1000 Mbps RJ45	• USB Type-C port with serial communication device class support • File transfer: USB port, standard-A plug • For the latest information about supported optics, please visit www.ruckusnetworks.com.
Memory	• DRAM: 4 GB • NVRAM (eMMC): 8 GB • Packet buffer size: 4 MB	
Maximum MAC addresses	• 32k	
Maximum VLANs	• 4,095	
Maximum PVLANs	• 32	
Maximum STP (spanning trees instances)	• 253	
Maximum VEs	• 512	
Maximum ARP entries	• 8,192	
Maximum routes (in hardware)	• 16k IPv4, 4k IPv6 • Next hop address: 8k	
Trunking	• Maximum ports per LAG: 8 • Maximum link aggregation groups: 128	
Maximum jumbo frame size	• 9,216 bytes	
QoS priority queues	• Eight per port	
Multicast groups	• 4096 (Layer2 IGMP) 512 (Layer2 MLD) • 4096 (IPv4 PIM) 512 (IPv6 PIM)	
Quality of Service (QoS)	• ACL mapping and marking of ToS/DSCP (CoS) • ACL mapping and marking of 802.1p • ACL mapping to priority queue • Classifying and limiting flows based on TCP flags • DiffServ support	• Honoring DSCP and 802.1p (CoS) • MAC Address mapping to priority queue • Priority queue management using weighted round robin (WRR), strict priority (SP), and a combination of WRR and SP
Traffic management	• ACL-based inbound rate limiting and traffic policies • Broadcast, multicast, and unknown unicast rate limiting • Inbound rate limiting per port • Outbound rate limiting per port and per queue	
Security	• 802.1X authentication • MAC authentication • Flexible authentication • Web authentication • DHCP snooping • Dynamic ARP inspection • Neighbor discovery (ND) inspection • Bi-level access mode (standard and EXEC level) • EAP pass-through support • IEEE 802.1X username export in sFlow • Protection against Denial of Service (DoS) attacks • Authentication, authorization, and accounting (AAA)	• MAC Address locking MAC port security • Advanced Encryption Standard (AES) with SSHv2 • RADIUS/TACACS/TACACS+ • Secure copy (SCP) • Secure shell (SSHv2) • Protected ports • Local username/password • Change of authorization (CoA) RFC 5176 • Trusted platform module • RADSEC (RFC 6614) • Encrypted Syslog (RFC 5425)

Specifications subject to change.

RUCKUS AV ICX 8200 specifications

Features	Specifications	
SDN features	• OpenFlow1 v1.0 and v1.3 • Operates with OpenDayLight controller • OpenFlow hybrid port mode (supports both OpenFlow traffic forwarding and regular traffic forwarding on the same port)	
High availability	• Layer 3 VRRP/VRRP-E protocol redundancy • Real-time state synchronization across the stack • Hitless failover and switchover from master to standby stack controller • Hot insertion and removal of stacked units • Layer 2 VSRP switch redundancy • In Service Software Update (ISSU)	
Layer 2 feature set	• 802.1s multiple spanning tree • 802.1x authentication • Port loop detection • Auto MDI/MDIX • BPDU Guard, Root Guard • Dual-mode VLANs • MAC-based VLANs, Dynamic MAC-based VLAN activation • Dynamic VLAN assignment • Dynamic voice VLAN assignment • Fast port span • GVRP: GARP VLAN Registration Protocol • IGMP snooping (v1/v2/v3) • IGMP proxy for static groups • IGMP v2/v3 fast leave • Inter-packet gap (IPG) adjustment • Link fault signaling (LFS) • MAC Address filtering	• MAC learning disable • MLD snooping (v1/v2) • Multi-device authentication • Per-VLAN spanning tree (PVST/PVST+/PRST) • Mirroring: Port-based, ACL-based, MAC filter-based, and VLAN-based • PIM-SM v2 snooping • Private VLAN • Remote fault notification (RFN) • Single-instance spanning tree • Trunk groups (static, LACP) • Uni-directional link detection (UDLD) • Metro-Ring Protocol (MRP) v1, v2 • Virtual Switch Redundancy Protocol (VSRP) • Q-in-Q and selective Q-in-Q • VLAN mapping • Topology groups
Base Layer 3 IP routing feature set	• ACL-bas IPv4 and IPv6 static routes • RIP v1/v2, RIPng • ECMP • Port-based access control lists • Layer 3/Layer 4 ACLs	• Host routes • Virtual interfaces • Routed interfaces • Route-only support • Routing between directly connected subnets
Premium Layer 3 IP routing feature set with software license	• IPv4 and IPv6 dynamic routes • OSPF v2, v3 • PIM-SM, PIM-SSM, PIM-DM, PIM passive (IPv4, IPv6) • PBR	• Virtual Route Redundancy Protocol VRRP (IPv4) • VRRP v3 (IPv6) • VRRP-E (IPv4/IPv6) • VRF (IPv4 and IPv6) • GRE

Specifications subject to change.

RUCKUS AV ICX 8200 specifications

Features	Standard compliance	
IEEE standards compliance	• 802.1AB LLDP/LLDP-MED • 802.1D MAC bridging • 802.1p mapping to priority queue • 802.1s multiple spanning tree (MST) • 802.1w rapid reconfiguration of spanning tree (RSTP) • 802.1x port-based network access control (PNAC) • 802.3 CSMA/CD carrier sense multiple access/collision detection (CSMA/CD) • 802.3ab 1000BASE-T • 802.3ad link aggregation (dynamic and static) • 802.1 AX-2008 link aggregation	• 802.3ae 10 Gigabit Ethernet • 802.3af power over Ethernet • 802.3at power over Ethernet Plus • 802.3bz multigigabit Ethernet • 802.3u 100Base-TX • 802.3x flow control • 802.3z 1000Base-SX/LX • 802.3 MAU MIB • 802.1Q VLAN tagging • 802.1BR bridge port extension • 802.3az energy-efficient Ethernet • 802.3bt PoE++
RFC standards compliance	For a complete list of RFCs supported by the ICX 8200 product family, please visit www.ruckusnetworks.com.	

Features	Management features	
Management	• DHCP auto-configuration • Configuration logging • Digital optical monitoring • Display log messages on multiple terminals • Embedded web management (HTTP/HTTPS) • Embedded DHCP server • Industry-standard command line interface (CLI) • CLI activation of optional software features • USB file management and storage • Macro for batch execution • Out-of-band Ethernet management • RSPAN • TFTPTELNET client and server • SSH / SSH V2	• Bootp • SNMPv1/v2c • DHCP server and DHCP relay • SNMPv3 intro to framework • Architecture for describing SNMP framework • SNMP message processing and dispatching • SNMPv3 applications • SNMPv3 user-based security model • SNMP view-based access control model SNMP • sFlow • Network Time Protocol (NTP) • Multiple Syslog servers • SCP • Virtual cable tester (VCT) • For management MIB, please see the ICX technical documentation at www.ruckusnetworks.com.

Specifications subject to change.

RUCKUS AV ICX 8200 specifications

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

Features	Environment
Ambient temperature	• Operational: 0°C to 45°C (32°F to 113°F) at sea level • Non-operational: 40°C to 70°C (-40°F to 158°F)
Relative humidity (non-condensing)	• Operational: 10% to 90% at 50°C (122°F) • Non-operational: 10% to 90% at 70°C (158°F)
Altitude (above sea level)	• Operational 0 to 3,048 m (10,000 ft) • Non-operational: 0 to 12,000 m (39,370 ft)

Specifications subject to change.

Order information

AV Switches

Part number	Descriptions
ICX8200-C08PFV	**RUCKUS AV ICX 8200 compact switch** • 8×10/100/1000 Mbps PoE+ ports • 2×10 GbE SFP+ stacking/uplink ports • 124 W PoE budget • RUCKUS Unleashed AV profile compatible • US power cord and USB-C console cable included • Three-year remote TAC support
ICX8200-24PV	**RUCKUS AV ICX 8200 switch** • 24×10/100/1000 Mbps PoE+ ports • 2×25 GbE SFP28 stacking/uplink ports • 370 W PoE budget / 150 W PoE budget turned off the fan • RUCKUS Unleashed AV profile compatible • US power cord and USB-C console cable included • Three-year remote TAC support
ICX8200-48P	**RUCKUS AV ICX 8200 switch** • 48×10/100/1000 Mbps PoE+ ports • 4×25 GbE SFP28 stacking/uplink ports • 370 W PoE budget / 150 W PoE budget turned off the fan • RUCKUS Unleashed AV profile compatible • Three-year remote TAC support
ICX8200-48PF	**RUCKUS AV ICX 8200 switch** • 48×10/100/1000 Mbps PoE+ ports • 4×25 GbE SFP28 stacking/uplink ports • 740 W PoE budget • RUCKUS Unleashed AV profile compatible • Three-year remote TAC support
ICX8200-48PF2-E2	**RUCKUS AV ICX 8200 switch** • 48×10/100/1000 Mbps PoE+ ports • 4×25 GbE SFP28 stacking/uplink ports • 1,440 W PoE budget • RUCKUS Unleashed AV profile compatible • Three-year remote TAC support

Specifications subject to change.

Accessories

Part number	For	Descriptions
RPS23-E	ICX 8200-48PF2	Hot-swap 920 W AC PoE power supply, front-to-back airflow. Only applicable to the ICX 8200 models with hot-swap power supplies (up to two per switch). Power cord not included.
ICX-FAN13-E	ICX 8200-48PF2	Hot-swap fan tray front-to-back airflow. Only applicable to the ICX 8200 models with hot-swap fans (up to two per switch).
XBR-R000295	ICX 8200-48P/PF/PF2	1U, 1.5U, and 2U universal kit for four-post racks
ICX7000-RMK	ICX 8200-48P/PF/PF2	Two-post fixed rack mount kit
ANX7000-C12-RMK	ICX 8200-C08PFV	Rack mount kit for compact switches
ICX7000-C12-WMK	ICX 8200-C08PFV	Wall mount bracket kit for compact switches
ICX-DIN-MNT	ICX 8200-C08PFV	DIN rail mount kit for compact switches
ICX8200-PREM-LIC	All ICX 8200	ICX 8200 Layer 3 premium license. Enables advanced layer 3 features (OSPF, VRRP, PIM, PBR, VRF, GRE)
CC-USBC-USBA	All ICX 8200	USB 2.0 Cable, Type-C to Type-A, 1 meter (for USB Type-C console port; already included in ICX8200-C08PFV and ICX8200-24PV)
PCUSA2	All ICX 8200	C13 power cord for USA, NEMA5-15/C13, 13A, 125V (already included in ICX8200-C08PFV and ICX8200-24PV)
PCEURO	All ICX 8200	C13 power cord for Europe
PCAUS	All ICX 8200	C13 power cord for Australia
PCCHINA2-IEC309	All ICX 8200	C13 power cord for China, 250 V 10 A
PCINDIA	All ICX 8200	C13 6-ft AC power cord for India
PCJAPAN	All ICX 8200	C13 power cord for Japan version
PCSWISS-C1312G-HF	All ICX 8200	C13 power cord for Switzerland, SEV1011 TO C13, 10 A, 250 V, halogen-free
PCUK	All ICX 8200	C13 power cord for United Kingdom
PC-C13C14	All ICX 8200	C13/C14 15A power cord

Specifications subject to change.

Warranty

RUCKUS AV ICX 8200 switches are covered by the RUCKUS Assurance Limited Lifetime Warranty. For details, visit www.ruckuswireless.com/warranty.

Exceptional support

RUCKUS ICX 8200 switches are supported by next-business-day advance replacement where available, as well as software defect repairs and maintenance updates. Three years remote TAC support is included with the product purchase (extends to 39 months from the original ship date). 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, non-infringement of third-party rights or availability with respect to any products and services.

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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.

PA-119530-EN (12/24)