

RUCKUS ICX 8100 Switch Technical Specifications

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For applicable patents, see:

- www.an-pat.com (Aurora Networks)
- www.rn-pat.com (RUCKUS Networks)

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System Specifications

System Component	Description
Power inlet	AC power
Power supplies	Integrated power supplies, Non-PoE models use 65 W AC and DC power supplies. PoE models use 370 W AC power supplies.
Fans	Embedded fan assemblies with intake or exhaust airflow
Cooling	Forced-air cooling front-to-back or back-to-front
System architecture	Non-blocking shared-memory switch
System processors	AlleyCat5X packet processor, 1.5 GHz

Ethernet

System Component	Description	Maximum Ports Supported
1 GbE RJ-45 ports	10/100/1000 Mbps RJ-45 port	• 8 (ICX8100-C08PF) • 16 (ICX8100-C16P) • 24 (ICX8100-24) • 24 (ICX8100-24P) • 48 (ICX8100-48) • 48 (ICX8100-48P) • 48 (ICX8100-48PF)

LEDs

PWR LED Color	Description
Off	No Power
Solid amber	Power Supply fault Not factory reset mode Cloud connection or Cloud configuration status can be any
Flashing amber only	Factory Reset mode Power supply can be good or faulty Cloud connection or Cloud configuration status can be any
Solid green	Power supply is good. No Cloud connection
Flashing green only	Power supply is good No Cloud connection
Alternating Flashing Green and Amber	Cloud connection in progress or Cloud configuration in progress

System Component	Description
Ports	Port LEDs indicate: • Link and traffic activity (the default mode) • Link speed • PoE status (for PoE-capable devices only) • Stack ID mode

Others

System Component	Description
AC power cord	IEC 320-C14

Weight and Physical Dimensions

Model	Height	Width	Depth	Weight (With Basic Modules)
ICX8100-C08PF	4.40 cm	27.00 cm	21.40 cm	2.11 kg
	1.73 inches	10.63 inches	8.42 inches	5.00 lb
ICX8100-C16P	4.40 cm	27.00 cm	21.40 cm	3.44 kg
	1.73 inches	10.63 inches	8.42 inches	7.58 lb
ICX8100-24	4.40 cm	44.00 cm	28.00 cm	3.6 kg
	1.73 inches	17.32 inches	11.02 inches	10.93 lb
ICX8100-24P	4.40 cm	44.00 cm	28.00 cm	4.3 kg
	1.73 inches	17.32 inches	11.02 inches	12.28 lb

Model	Height	Width	Depth	Weight (With Basic Modules)
ICX8100-48	4.40 cm	44.00 cm	37.00 cm	4.61 kg
	1.73 inches	17.32 inches	14.57 inches	9.57 lb
ICX8100-48P	4.40 cm	44.00 cm	37.00 cm	5.3 kg
	1.73 inches	17.32 inches	14.57 inches	12.15 lb
ICX8100-48PF	4.40 cm	44.00 cm	37.00 cm	5.6 kg
	1.73 inches	17.32 inches	14.57 inches	12.34 lb

Environmental Requirements

Condition	Operational	Non-operational
Ambient temperature	0°C to 45°C (32°F to 113°F) at sea level	-40°C to 70°C (-40°F to 158°F)
Relative humidity (non-condensing)	10% to 90% at 50°C (122°F)	5% to 95% at 70°C (158°F)
Altitude (above sea level)	0 to 3,048 m (10,000 feet)	0 to 12,000 m (39,370 feet)
Shock	20 G, 11 ms, half-sine wave	33 G, 11 ms, half-sine wave
Vibration	1 G sine, 0.4 G _{rms} random, 5-500 Hz	2.4 G sine, 1.1 G _{rms} random, 5-500 Hz
Airflow	Nominal: 10-14 cubic feet per minute (CFM), Maximum: 56-84 CFM	N/A
Heat Dissipation (+/- 5%)	Refer to the Power Consumption Specification sections	N/A
Operating noise	ICX8100-24P: 23.2 dBA ICX8100-48P: 24.5 dBA ICX8100-48PF: 39 dBA	N/A

Power Supply Specifications (per PSU)

All the AC PSUs use a C14 inlet and connect to standard AC power.

Power Consumption (Typical Configuration) Alternating-Current (AC)

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

Part Number (Input Power +/-5%)	@100 VAC Input	@200 VAC Input	Minimum Number of Power Supplies
ICX8100-C08PF	18.1 W 61.78 BTU/hr	18 W 61.44 BTU/hr	1PSU
ICX8100-C16P	24 W 83 BTU/hr	24 W 82.5 BTU/hr	1PSU
ICX8100-24	31.1 W 106.15 BTU/hr	31.4 W 107.17 BTU/hr	1PSU
ICX8100-24P	37 W 126.28 BTU/hr	36.5 W 124.58 BTU/hr	1PSU
ICX8100-48	45.40 W 154.95 BTU/hr	47.10 W 160.77 BTU/hr	1PSU
ICX8100-48P	50.00 W 170.65 BTU/hr	49.10 W 167.58 BTU/hr	1PSU
ICX8100-48PF	21 W 145 BTU/hr	20 W 138 BTU/hr	1PSU

Power Consumption (Typical Configuration) Direct Current (DC)

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

Model Name (Input Power +/-5%)	DC 12 V Input	DC 54 V Input
ICX 8100-48PF	32 W 108 BTU/hr	4 W 14 BTU/hr
ICX 8100-48PF-X	32 W 108 BTU/hr	4 W 14 BTU/hr

Power Consumption (Maximum Configuration) Alternating-Current (AC)

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.

Part Number (Input Power +/-5%)	@100 VAC Input	@200 VAC Input	Minimum Number of Power Supplies
ICX8100-C08PF	154.2 W 526.3 BTU/hr	150.6 W 514.01 BTU/hr	1PSU
ICX 8100-C16P	157 W 543.3 BTU/hr	157 W 534 BTU/hr	1PSU
ICX8100-24	38.7 W 132.09 BTU/hr	38.7 W 132.09 BTU/hr	1PSU
ICX8100-24P	459 W 1566.6 BTU/hr	445 W 1518.82 BTU/hr	2PSUs
ICX8100-48	53.1 W 181.23 BTU/hr	54.1 W 184.48 BTU/hr	1PSU
ICX8100-48P	465 W 1587.08 BTU/hr	451 W 1539.3 BTU/hr	2PSUs
ICX8100-48PF	898 W 3065 BTU/hr	848 W 2895 BTU/hr	1PSU

Power Consumption (Maximum Configuration) Direct-Current (DC)

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.

Model Name (Input Power +/-5%)	DC 12 V Input	DC 54 V Input
ICX 8100-48PF	37 W 129 BTU/hr	745 W 2541 BTU/hr
ICX 8100-48PF-X	39 W 132 BTU/hr	745 W 2445 BTU/hr

Data Port Specifications (Ethernet)

Part Number	Port Type	Number of Ports (in Module)	Description
ICX8100-C08PF	1 GbE	2	SFP ports, 1 Gbps, compatible with optical transceivers, or direct attached copper cable
	1 GbE	8	10/100 Mbps/1 GbE RJ-45 ports

Part Number	Port Type	Number of Ports (in Module)	Description
ICX8100-C16P	1 GbE	2	SFP ports, 1 Gbps, compatible with optical transceivers, or direct attached copper cable
	1 GbE	16	10/100 Mbps/1 GbE RJ-45 ports
ICX8100-24	1 GbE	4	SFP ports, 1 Gbps, compatible with optical transceivers, or direct attached copper cable
	1 GbE	24	10/100 Mbps/1 GbE RJ-45 ports
ICX8100-24P	1 GbE	4	SFP ports, 1 Gbps, compatible with optical transceivers, or direct attached copper cable
	1 GbE	24	10/100 Mbps/1 GbE RJ-45 ports with up to 30 W per port PoE support
ICX8100-48	1 GbE	4	SFP ports, 1 Gbps, compatible with optical transceivers, or direct attached copper cable
	1 GbE	48	10/100 Mbps/1 GbE RJ-45 ports
ICX8100-48P	1 GbE	4	SFP ports, 1 Gbps, compatible with optical transceivers, or direct attached copper cable
	1 GbE	48	10/100 Mbps/1 GbE RJ-45 ports with up to 30 W per port PoE support
ICX8100-48PF	10 GbE	4	SFP ports, 1 Gbps, compatible with optical transceivers, or direct attached copper cable
	1 GbE	48	10/100 Mbps/1 GbE RJ-45 ports with up to 30 W per port PoE support

Serial Port Specifications (Pinout USB Type-C)

Pin	Signal	Description
A1	USB-C_GND	Ground
A2	Reserved	Not used
A3	Reserved	Not used
A4	USB_TYPE_C_5V_IN	5 V bus power
A5	USB-C_CC1	Configuration channel
A6	USB-C_AD1+	Data A positive
A7	USB-C_AD1-	Data A negative
A8	Reserved	Not used
A9	USB_TYPE_C_5V_IN	5 V bus power
A10	Reserved	Not used
A11	Reserved	Not used
A12	USB-C_GND	Ground
B1	USB-C_GND	Ground
B2	Reserved	Not used
B3	Reserved	Not used
B4	USB_TYPE_C_5V_IN	5 V bus power
B5	Reserved	Not used
B6	USB-C_BD2+	Data B positive
B7	USB-C_BD2-	Data B negative
B8	Reserved	Not used

Pin	Signal	Description
B9	USB_TYPE_C_5V_IN	5 V bus power
B10	Reserved	Not used
B11	Reserved	Not used
B12	USB-C_GND	Ground

Serial Port Specifications (Protocol)

Parameter	Value
Baud	9600 bps
Data bits	8
Parity	None
Stop bits	1
Flow control	None

Memory Specifications

Memory	Type	Size
Main memory	DDR4	2 GB
Boot flash	SPI flash (dual boot)	8MB x 2
eMMC flash	NAND flash	8 GB

Regulatory Compliance (EMC)

- FCC Title 47 CFR, Part 15, Subpart B, 2012 (for frequency above 1G) Class A
- ICES-003: 2016 Issue 7 (Canada) Class A
- VCCI-CISPR 32: 2016 (Japan) Class A
- AS/NZS CISPR 32(Australia/New Zealand) Class A
- EN 55032: 2015 + A11:2015:2020 Classs A
- EN 55024: 2010 + A1:2015
- EN 55035: 2017+AAA: 2020
- EN 300 386 (V2.1.1)
- BSMI CNS 15936:105 (2016)

Regulatory Compliance (Safety)

- IEC 60950-1 (2nd Edition) Am 1:2009 +Am 2 2013
- EN 60825-1:2007 2014 (2017-6-19 replace 2007 version)
- EN 60825-1:2014

- EN 60825-2:2004+A1 A2
- BSMI CNS 15998-1:109 (2020)
- UL 62368-1:19
- CAN/CSA C22.2 No. 62368-1-19
- IEC 62368-1:2014
- EN 62368-1:2014+A11:2017
- EN 62368-1:2018
- EN IEC 62368-1:2020+A11:2020

Regulatory Compliance (Environmental)

- 2014/35/EU 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 (EU 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, Authorisation 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)



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