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For explanation of following terms, click <u>Tutorial/Q&A</u>

1. Power Consumption/Heat Dissipation Summary

SELECT PRODUCT | CONFIGURE PRODUCT | POWER CALCULATION

2. Quick Facts Power Supply Details
 Configuration Details

Power Consumption/Heat Dissipation Summary					
Si	lot	Line Card			
RI	P0	A99-RP2-SE			
R	P1	A99-RP2-SE			
LC	CO	A99-8X100GE-SE			
LC	C1	A99-8X100GE-SE			
L	C2	A99-8X100GE-SE			
L	C3	A99-8X100GE-SE			
L	C4	A99-48X10	OGE-1G-SE		
L	C5	EMPT	Y-SLOT		
LC	C6	EMPT	Y-SLOT		
LO	C7	EMPTY-SLOT			
LO	C8	EMPTY-SLOT			
LO	C9	EMPTY-SLOT			
Power Supply Options		Percentage of Power Used At 40C			
Six DC 2100W power supplies required with N+1 redundancy		69.29%			
Five DC 2100W power supplies required with NO redundancy		83.15%			
Four AC 3000W power supplies required with N+1 redundancy		72.76%			
Three AC 3000W power supplies required with NO redundancy		97.01%			
Three AC 6000W power supplies required with N+1 redundancy		48.51%			
Two AC 6000W power supplies required with NO redundancy		72.76%			
Three DC 4400W power supplies required with N+1 redundancy		66.14%			
Two DC 4400W power supplies required with NO redundancy		99.22%			
Total Output Current	Total Typical Output Power	Total Output Power At 40C	Total Heat Dissipation At 40C		
44.10Amps	7088.0 Watts	8731.0 Watts	29772.71 BTU/Hr		

		Quick Facts
dialic	Selected Chassis	ASR-9912
	Chassis Slots	19
	Rack Units	30
	Line Card Slots	9
	Selected Supervisor Engine	A99-RP2-SE
THE PROPERTY OF THE PROPERTY O	Selected Fantray	ASR-9912-FAN
	Selected Fabric Module	A99-SFC2(9912 mode)
CONTROL WAS PLANTAGED RESPONDED FROM	Selected Number of Fabric Modules	7
	Selected Voltage	220 Volts AC
	Power Supply Options	Available power supply options 2100W DC 3000W AC 4400W DC 6000W AC

NOTE:

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1. Total Output Current - Total Output Current (amperes) allocated to the line cards and powered devices in the chassis.

Total Output Power At 40C - Total output power (P-Output) that the systems require from the power supply. From the power supply perspective, this is the power out (P-output).

Total Typical Output Power - Power used at 27C ambient temperature with 50% linerate IMIX traffic.

Total Heat Dissipation At 40C - Heat dissipation is a direct function of power used. To get heat in BTU/hr, multiply the power draw in watts by 3.41. Example the power calculator says that a given system draws 2800W. This means the system dissipates (2800*3.41 -->9548 BTU/hr)of heat.

Percentage of Power Used is color-coded with green if the power consumption is up to 80 percent, orange if the power consumption is between 81 and 90 percent, and red if between 91 and 100 percent. 2. • Output Power is the amount of power delivered from the Power Supply to the ASR 9000 router. To figure Input Power, divide output power by 0.92 (conservative typical efficiency of the power supplies).

• Output Power and Heat Dissipation numbers computed by the Cisco Power Calculator are maximum values and can be used for facility power and cooling capacity planning. These figures are not indicative of the actual

power draw or heat dissipation. Typical power draw is up to 30% lower than the maximum value shown. Please contact us at asr9k-power@cisco.com for additional information.

Please note that in order to dimension the number of power supplies needed for a chassis, the 40C or 50/55C power values should be used, depending on whether the worst case ambient temperature considered is 40C or 50/55C

3. The Power Calculator attempts to provide the power budget rules employed in the latest software releases. It does not account for changes in the power management software made in previous versions. Please consult the power management section of the Release Notes for a history of changes to the software power management operation.

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Slot	Line Card	Output Current (A)	Typical Power Used (W)	Power Used At 40C (W)	Heat Dissipation At 40C (BTU/Hr)	Power Used At MAX(50C/55C) (W)	Heat Dissipation At MAX(50C/55C) (BTU/Hr)
SYSTEM-FAN	ASR-9912-FAN		275.0	900.0	3,069.0	1800.0	6,138.0
SYSTEM-FAN	ASR-9912-FAN		275.0	900.0	3,069.0	1800.0	6,138.0
SWITCH_FAB	A99-SFC2(9912 mode)		94.0	103.0	351.23	105.0	358.05
SWITCH_FAB	A99-SFC2(9912 mode)		94.0	103.0	351.23	105.0	358.05
SWITCH_FAB	A99-SFC2(9912 mode)		94.0	103.0	351.23	105.0	358.05
SWITCH_FAB	A99-SFC2(9912 mode)		94.0	103.0	351.23	105.0	358.05
SWITCH_FAB	A99-SFC2(9912 mode)		94.0	103.0	351.23	105.0	358.05
SWITCH_FAB	A99-SFC2(9912 mode)		94.0	103.0	351.23	105.0	358.05
SWITCH_FAB	A99-SFC2(9912 mode)		94.0	103.0	351.23	105.0	358.05
RP0	A99-RP2-SE		390.0	400.0	1,364.0	410.0	1,398.1
RP1	A99-RP2-SE		390.0	400.0	1,364.0	410.0	1,398.1
LC0	A99-8X100GE-SE		1100.0	1150.0	3,921.5	1200.0	4,092.0
LC1	A99-8X100GE-SE		1100.0	1150.0	3,921.5	1200.0	4,092.0
LC2	A99-8X100GE-SE		1100.0	1150.0	3,921.5	1200.0	4,092.0
LC3	A99-8X100GE-SE		1100.0	1150.0	3,921.5	1200.0	4,092.0
LC4	A99-48X10GE-1G-SE		700.0	810.0	2,762.1	850.0	2,898.5
LC5	EMPTY-SLOT		0.0	0.0	0.0	0.0	0.0
LC6	EMPTY-SLOT		0.0	0.0	0.0	0.0	0.0
LC7	EMPTY-SLOT		0.0	0.0	0.0	0.0	0.0
LC8	EMPTY-SLOT		0.0	0.0	0.0	0.0	0.0
LC9	EMPTY-SLOT		0.0	0.0	0.0	0.0	0.0
		Output Current (A)	Typical Power Used (W)	Power Used At 40C (W)	Heat Dissipation At 40C (BTU/Hr)	Power Used At MAX(50C/55C) (W)	Heat Dissipation At MAX(50C/55C) (BTU/Hr)
	Total	44.10Amps	7088.0 Watts	8731.0 Watts	29772.71 BTU/Hr	10805.0 Watts	36845.05 BTU/Hr

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Select Temperature 40C

Power Supply Details At 40C

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Power Supply Options	Percentage of Power used	Total Output Current for this PSU (A)	Total Output Current Used (A)	Total Output Current Remaining (A)
Six DC 2100W power supplies required with N+1 redundancy	69.29%	63.64	44.10	19.54
Five DC 2100W power supplies required with NO redundancy	83.15%	53.03	44.10	8.93
Four AC 3000W power supplies required with N+1 redundancy	72.76%	60.61	44.10	16.51
Three AC 3000W power supplies required with NO redundancy	97.01%	45.45	44.10	1.36
Three AC 6000W power supplies required with N+1 redundancy	48.51%	90.91	44.10	46.81
Two AC 6000W power supplies required with NO redundancy	72.76%	60.61	44.10	16.51
Three DC 4400W power supplies required with N+1 redundancy	66.14%	66.67	44.10	22.57
Two DC 4400W power supplies required with NO redundancy	99.22%	44.44	44.10	0.35