CISCO UCS C220 M6 Server User Guide

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CISCO UCS C220 M6 Server

Specifications

Physical Specifications

Description	Specification
Height	1.7 in. (43.2 mm)
Width	16.9 in. (429.0 mm)
Depth (length)	Server only: 30 in. (762 mm) Server with slide rail: 31.5 in (800.1 mm)
Weight	Server Specifications 1

Environmental Specifications

Description	Specification
Temperature, Operating	
Temperature, Extended Operating	
Humidity condition: Uncontrolled, not to exceed 50% RH start ing condition	
Temperature, non-operating (when the server is stored or transported)	
Humidity (RH), operating	
Humidity (RH), non-operating (when the server is stored or transported)	
Altitude, operating	A maximum elevation of 3050 meters (10,006 fe et)
Altitude, non-operating (when the server is stored or transported)	An elevation of 0 to 12,000 meters (39,370 feet)
Maximum Operating Duration	Unlimited
Sound power level	5.5
Sound pressure level	40

Power Specifications

- **Note:** Do not mix power supply types or wattages in the server.
- Both power supplies must be identical.

1050 W AC Power Supply

Note: For the 80PLUS platinum certification documented in the following table, you can find test results at https://www.clearesult.com/80plus/.

Parameter	Specification
Input Connector	IEC320 C14
Input Voltage Range (V rms)	100 to 240
Maximum Allowable Input Voltage Range (V rms)	90 to 264
Frequency Range (Hz)	50 to 60
Maximum Allowable Frequency Range (Hz)	47 to 63
Maximum Rated Output (W)	800
Limited to 800W when operating at low-line input voltage, 100-127 V	
Maximum Rated Standby Output (W)	36
Nominal Input Voltage (V rms)	100 120
Nominal Input Current (A rms)	9.2 7.6
Maximum Input at Nominal Input Voltage (W)	889 889
Maximum Input at Nominal Input Voltage (VA)	916 916
Maximum Rated Efficiency (%)	90
Minimum rating required to achieve 80PLUS platinum certification.	
1050	208 5.8 1167 1203 90
230 5.2 1154 1190 91	

1050 W V2 DC Power Supply

Parameter	Specification
Maximum Rated Power Factor	0.97
Minimum rating required to achieve 80PLUS platinum certification.	
Maximum Inrush Current (peak A)	15
Maximum Inrush Current (ms)	0.2
Maximum Ride-Through Time	12

Product Usage Instructions

Physical Installation

1. Choose a suitable location for the server, ensuring proper ventilation and access to power outlets.

2. Place the server on a stable surface or install it in a rack using the provided slide rail kit.
3. Connect the necessary cables, including power and network cables, to the server.
4. If using multiple servers, ensure they are properly connected and configured for optimal performance.

Environmental Considerations
Ensure that the server is operated within the specified temperature and humidity ranges to prevent damage and ensure reliable performance. The server is designed to operate in a
controlled environment with a maximum temperature of [insert temperature range] and a maximum humidity of [insert humidity range].

Power Supply Installation

1. Ensure that the power supply type and wattage match the requirements of the server.
2. If installing an AC power supply, connect the input connector (IEC320 C14) to a suitable power source within the specified voltage and frequency ranges.
3. If installing a DC power supply, follow the manufacturer's instructions for proper installation and connection.
4. Verify that the power supply is securely installed and all connections are tight.
5. Repeat the installation process for the second power supply, ensuring it matches the specifications of the first power supply.

Server Configuration
Once the physical installation and power supply installation are complete, you can proceed with configuring the server according to your specific requirements. Consult the server's user manual or software documentation for detailed instructions on configuring the server.

Frequently Asked Questions (FAQ)

- **Q: Can I mix different types or wattages of power supplies in the server?**
  A: No, it is not recommended to mix different types or wattages of power supplies in the server. Both power supplies must be identical to ensure proper operation.
- **Q: Where can I find more specific power information for my exact server configuration?**
  A: You can use the Cisco UCS Power Calculator at **http://ucspowercalc.cisco.com** to get more specific power information for your exact server configuration.

Server Specifications

- This appendix lists the technical specifications for the server.
- Server Specifications, on page 1

Server Specifications

This appendix lists the physical, environmental, and power specifications for the server.

Physical Specifications

The following table lists the physical specifications for the server.

Table 1: Physical Specifications

Description	Specification
Height	1.7 in. (43.2 mm)
Width	16.9 in. (429.0 mm)
Depth (length)	• Server only: 30 in. (762 mm) • Server with slide rail: 31.5 in (800.1 mm)
Weight	• Maximum, fully configured with rail kit: 42.432 lb (19.25 kg) • Maximum, not configured, no rail kit: 22.32 lb (10.13 kg)

Environmental Specifications

As a Class A2 product, the server has the following environmental specifications.

Table 2: Environmental Specifications

Description	Specification
Temperature, Operating	• Dry bulb temperature of 10°C to 35°C (50°F to 95°F) • Maximum temperature change of 20°C (36°F) per hour (a temperature change within a specified period of time and not a rate of change) Humidity condition: Uncontrolled, not to exceed 50% RH starting condition • Derate the maximum temperature by 1°C (33.8°F) per every 305 meters of altitude above 900m
Temperature, Extended Operating	• 5°C to 40°C (41°F to 104°F) with no direct sunlight • Humidity condition: Uncontrolled, not to exceed 50% RH starting condition • Derate the maximum temperature by 1°C (33.8°F) per every 305 meters of altitude above 900m
Temperature, non-operating (when the server is stored or transported)	Dry bulb temperature of 40 °C to 65 °C (-40°F to 149 °F)
Humidity (RH), operating	• 10% to 90% and 28°C (82.4°F) maximum dew-point temperature, non-condensing environment • Minimum to be higher (more moisture) of -12 ˚C (10.4 ˚F) dew point or 8% relative humidity • Maximum to be 24 ˚C (75.2 ˚F) dew point or 90% relative humidity
Humidity (RH), non-operating (when the server is stored or transported)	5% to 93% relative humidity, non-condensing, with a maximum wet bulb temperature of 28 °C across the 20 °C to 40 °C dry bulb range.
Altitude, operating	A maximum elevation of 3050 meters (10,006 feet)
Altitude, non-operating (when the server is stored or transported)	An elevation of 0 to 12,000 meters (39,370 feet)
Maximum Operating Duration	Unlimited
Sound power level Measure A-weighted per ISO7779 LwAd (Bels) Operation at 73°F (23°C)	5.5
Sound pressure level Measure A-weighted per ISO7779 LpAm (dBA) Operation at 73°F (23°C)	40

Power Specifications

- Note Do not mix power supply types or wattages in the server. Both power supplies must be identical.

- You can get more specific power information for your exact server configuration by using the Cisco UCS Power Calculator: **http://ucspowercalc.cisco.com**
- The power specifications for the supported power supply options are listed in the following sections.

1050 W AC Power Supply

Note For the 80PLUS platinum certification documented in the following table, you can find test results at **https://www.clearesult.com/80plus/** .

Parameter	**Specification**			
Input Connector	IEC320 C14			
Input Voltage Range (V rms)	100 to 240			
Maximum Allowable Input Voltage Range (V rms)	90 to 264			
Frequency Range (Hz)	50 to 60			
Maximum Allowable Frequency Range (Hz)	47 to 63			
Maximum Rated Output (W) Limited to 800W when operating at low-line input voltage, 100-127 V	800		1050	
Maximum Rated Standby Output (W)	36			
Nominal Input Voltage (V rms)	100	120	208	230
Nominal Input Current (A rms)	9.2	7.6	5.8	5.2
Maximum Input at Nominal Input Voltage (W)	889	889	1167	1154
Maximum Input at Nominal Input Voltage (VA)	916	916	1203	1190
• Maximum Rated Efficiency (%) • Minimum rating required to achieve 80PLUS platinum certification.	90	90	90	91

Parameter	Specification			
• Maximum Rated Power Factor • Minimum rating required to achieve 80PLUS platinum certification.	0.97	0.97	0.97	0.97
Maximum Inrush Current (peak A)	15			
Maximum Inrush Current (ms)	0.2			
• Maximum Ride-Through Time • Time output voltage remains within regulation limits at 100% load, during input voltage dropout	12			

1050 W V2 DC Power Supply

Note For the 80PLUS platinum certification documented in the following table, you can find test results at **https://www.clearesult.com/80plus/** .

Parameter	Specification
Input Connector	Molex 42820
Input Voltage Range (V rms)	-48
Maximum Allowable Input Voltage Range (V rms)	-40 to -72
Frequency Range (Hz)	NA
Maximum Allowable Frequency Range (Hz)	NA
Maximum Rated Output (W)	1050
Maximum Rated Standby Output (W)	36
Nominal Input Voltage (V rms)	-48
Nominal Input Current (A rms)	24
Maximum Input at Nominal Input Voltage (W)	1154
Maximum Input at Nominal Input Voltage (VA)	1154
• Maximum Rated Efficiency (%) • Minimum rating required to achieve 80PLUS platinum certification.	91
• Maximum Rated Power Factor • Minimum rating required to achieve 80PLUS platinum certification.	NA

Parameter	Specification
Maximum Inrush Current (peak A)	15
Maximum Inrush Current (ms)	0.2
• Maximum Ride-Through Time • This is the time output voltage remains within regulation limits at 100% load, during input voltage dropout	5

1200 W AC Power Supply

This section lists the specifications for each 1200 W AC power supply (Cisco part number UCSC-PSU1-1200W-D).

Table 3: 1200 W AC Specifications

Description	Specification
AC input voltage	Range: 100–230 VAC
AC input frequency	Range: 50 to 60Hz
Maximum AC input current	12.97 A at 100 VAC
Maximum input volt-amperes	1345 VA at 208 VAC
Maximum inrush current	20 A
Maximum hold-up time	12 ms at 1200 W
Maximum output power per PSU	1100 W at 100–120 VAC 1200 W at 208–230 VAC
Power supply output voltage	12 VDC
Power supply standby voltage	12 VDC
Efficiency rating	Climate Savers Platinum Efficiency (80Plus Titanium certified)
Form factor	RSP2
Input connector	IEC320 C14

1600 W AC Power Supply

Note For the 80PLUS platinum certification documented in the following table, you can find test results at **https://www.clearesult.com/80plus/** .

Parameter	Specification			
Input Connector	IEC320 C14			
Input Voltage Range (V rms)	200 to 240			
Maximum Allowable Input Voltage Range (V rms)	180 to 264			
Frequency Range (Hz)	50 to 60			
Maximum Allowable Frequency Range (Hz)	47 to 63			
Maximum Rated Output (W) Limited to 800W when operating at low-line input voltage, 100-127 V	1600			
Maximum Rated Standby Output (W)	36			
Nominal Input Voltage (V rms)	100	120	208	230
Nominal Input Current (A rms)	NA	NA	8.8	7.9
Maximum Input at Nominal Input Voltage (W)	NA	NA	1778	1758
Maximum Input at Nominal Input Voltage (VA)	NA	NA	1833	1813
Maximum Rated Efficiency (%) Minimum rating required to achieve 80PLUS platinum certification.	NA	NA	90	91
Maximum Rated Power Factor Minimum rating required to achieve 80PLUS platinum certification.	NA	NA	0.97	0.97
Maximum Inrush Current (peak A)	30			
Maximum Inrush Current (ms)	0.2			
Maximum Ride-Through Time The time that the output voltage remains within regulation limits at 100% load, during input voltage dropout	12			

2300 W AC Power Supply

Note For the 80PLUS platinum certification documented in the following table, you can find test results at **https://www.clearesult.com/80plus/** .

Parameter	Specification			
Input Connector	IEC320 C20			
Input Voltage Range (V rms)	100 to 240			
Maximum Allowable Input Voltage Range (V rms)	90 to 264			
Frequency Range (Hz)	50 to 60			
Maximum Allowable Frequency Range (Hz)	47 to 63			
Maximum Rated Output (W) Limited to 800W when operating at low-line input volta ge, 100-127 V	2300			
Maximum Rated Standby Output (W)	36			
Nominal Input Voltage (V rms)	100	120	208	230
Nominal Input Current (A rms)	13	11	12	10.8
Maximum Input at Nominal Input Voltage (W)	1338	1330	2490	2480
Maximum Input at Nominal Input Voltage (VA)	1351	1343	2515	2505
Maximum Rated Efficiency (%) Minimum rating required to achieve 80PLUS platinum certification.	92	92	93	93
Maximum Rated Power Factor Minimum rating required to achieve 80PLUS platinum certification.	0.99	0.99	0.97	0.97
Maximum Inrush Current (peak A)	30			
Maximum Inrush Current (ms)	0.2			
Maximum Ride-Through Time Time output voltage remains within regulation limits at 100% load, during input voltage dropout	12			

Power Cord Specifications

Each power supply in the server has a power cord. Standard power cords or jumper power cords are available for connection to the server. The shorter jumper power cords, for use in racks, are available as an optional alternative to the standard power cords.

- **Note** Only the approved power cords or jumper power cords listed below are supported.
- The following tables show the supported power cords supported for less than 2300-Watt server PSUs, and more than 2300-Watt server PSUs.

Table 4: Supported Power Cords for Less than 2300 W Server PSUs

Description	Length (Feet)	Length (Meters)
• CAB-48DC-40A-8AWG • DC power cord, -48 VDC, 40 A, 8 AWG • Three-socket Mini-Fit connector to three-wire	11.7	3.5
• CAB-C13-C14-AC • AC power cord, 10 A; C13 to C14, recessed receptacle	9.8	3.0
CAB-250V-10A-AR AC power cord, 250 V, 10 A Argentina	8.2	2.5
CAB-C13-C14-2M-JP AC Power Cord, C13 to C14 Japan PSE Mark	6.6	2.0
CAB-9K10A-EU AC Power Cord, 250 V, 10 A; CEE 7/7 Plug Europe	8.2	2.5
CAB-250V-10A-IS AC Power Cord, SFS, 250 V, 10 A Israel	8.2	2.5
CAB-250V-10A-CN AC power cord, 250 V, 10 A PR China	8.2	2.5
CAB-ACTW AC power cord, 250 V, 10 A, C13 EL302 Taiwan	7.5	2.3
CAB-C13-CBN AC cabinet jumper power cord, 250, 10 A, C13 to C14	2.2	0.68

CAB-C13-C14-2M AC cabinet jumper power cord, 250 V, 10 A, C13 to C14	6.6	2.0
CAB-9K10A-AU AC power cord, 250 V, 10 A, 3112 plug, Australia	8.2	2.5
CAB-N5K6A-NA AC power cord, 200/240 V, 6 A, North America	8.2	2.5
CAB-250V-10A-ID AC power Cord, 250 V, 10 A, India	8.2	2.5
CAB-9K10A-SW AC power cord, 250 V, 10 A, MP232 plug Switzerland	8.2	2.5
CAB-250V-10A-BR AC power Cord, 250 V, 10 A Brazil	8.2	2.5
CAB-9K10A-UK AC power cord, 250 V, 10 A (13 A fuse), BS1363 plug United Kingdom	8.2	2.5
CAB-9K12A-NA AC power cord, 125 V, 13 A, NEMA 5-15 plug North America	8.2	2.5
CAB-AC-L620-C13 AC power cord, NEMA L6-20 to C13 connectors	6.6	2.0
CAB-9K10A-IT AC power cord, 250 V, 10 A, CEI 23-16/VII plug Italy	8.2	2.5
CAB-C13-C14-3M-IN AC power cord jumper, C13 to C14 connector India	9.8	3.0
CAB-C13-C14-IN AC power cord jumper, C13 to C14 connector India	4.6	1.4
CAB-9K10A-KOR Power Cord, 125 V AC, 13 A, KSC8305 plug Korea	6	1.8
CAB-JPN-3PIN 90-125 V AC, 12 A, NEMA 5-15 plug Japan		2.4
R2XX-DMYMPWRCORD No power cord; PID option for ordering server with no power cord	NA	NA

Table 5: Supported Power Cords for More than 2300 W Server PSUs

Description	Length (Feet)	Length (Meters)
CAB-C19-CBN Cabinet Jumper Power Cord, 250 VAC, 16A, C20 to C19 connector		
CAB-S132-C19-ISRL S132 to IEC320 C19 connector Israel	14	
CAB-IR2073-C19-AR IRSM 2073 to IEC320 C19 connector Argentina	14	
CAB-BS1363-C19-UK BS-1363 to IEC 320 C19 connector UK	14	
CAB-SABS-C19-IND SABS 164-1 to IEC 320 C19 connector India		
CAB-C2316-C19-IT CEI 23-16 to IEC 320 C19 Italy	14	

CAB-L520P-C19-US NEMA L5-20 to IEC 320 C19 US	6	
CAB-US515P-C19-US NEMA 5-15 to IEC 320 C19 US	13	
CAB-US520-C19-US NEMA 5-20 to IEC 320 C19 US	14	
CAB-US620P-C19-US NEMA 6-20 to IEC-C19 US	13	
CAB-C19-C20-IND Power Cord C19 to C20 connector India		
UCSB-CABL-C19-BRZ AC power cord NBR 14136 to C19 connector Brazil	14	
CAB-9K16A-BRZ AC Power Cord, 250 V, 16 A, Source Plug EL224 to C19 connector Brazil		
CAB-ACS-16 AC Power Cord, 16A Switzerland		
CAB-AC-16A-AUS AC Power Cord, 250 V, 16 A, C19 connector Australia		
CAB-C19-C20-3M-JP AC Power Cord C19 to C20 connector, Japan PSE mark Japan	10	3

CAB-AC-C19-TW AC Power Cord, 250 V, 16 A, C19 connectors Taiwan		
CAB-AC-C6K-TWLK AC Power Cord, 250 V, 16 A, twist lock NEMA L6-20 plug US		
CAB-AC-2500W-EU AC Power Cord, 250 V, 16 A Europe		
CAB-AC-2500W-INT AC Power Cord, 250 V, 16A International		
CAB-9K16A-KOR AC Power Cord, 250 V, 16 A, Source Plug Korea		
CAB-AC-2500W-ISRL AC Power Cord, 250 V, 16 A Israel		
CAB-AC16A-CH AC Power Cord, 16 A China		
R2XX-DMYMPWRCORD No power cord; PID option for ordering server with no power cord	NA	NA

Documents / Resources

	CISCO UCS C220 M6 Server [pdf] User Guide UCS C220 M6 Server, UCS, C220 M6 Server, M6 Server, Server

References

- Cisco UCS Calculator
- 80 PLUS®. PSU Certification Program | CLEAResult
- User Manual

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