



Technical Documentation for EU Regulation 2019/424 laying down ecodesign requirements for servers and data storage product pursuant to Directive 2009/125/EC

2020-02-13

The following information is based on IBM's knowledge as of the date of this document, which may be based on its records and information from third parties. This documentation applies to finished products that IBM newly puts on the market in the European Union and other jurisdictions which require this Technical Documentation as of the above date.

| Product Information | | | |
|---------------------|----------|-------------|--|
| Machine Type(s) | Model(s) | Part Number | Product Type |
| 9183 | 22X | - | 2-socket, rack mount, resilient server |

Manufacturer's name, registered trade name and registered trade address:

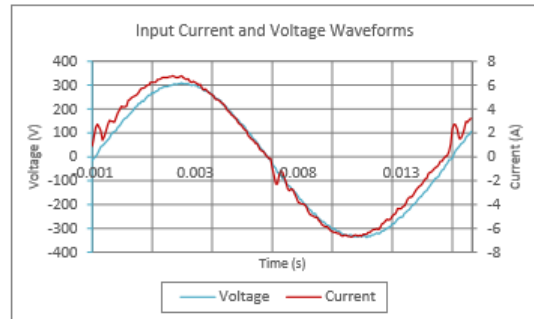


Year of manufacture

2020

Power Supply Unit (PSU) efficiency, power factor and rated power output:

| | |
|---------------|---------------------|
| ID Number | SO-1368 |
| Manufacturer | AcBel Polytech Inc. |
| Model Number | R1CA2202A |
| Serial Number | N/A |
| Year | 2017 |
| Type | 1U |
| Test Date | 02/06/18 |



Input AC Current Waveform (ITHD = 4.87%, 50% Load)

| Rated Specifications | Value | Units |
|----------------------|---------|-------|
| Input Voltage | 200-240 | Volts |
| Input Current | 15 | Amps |
| Input Frequency | 50/60 | Hz |
| Rated Output Power | 2,000 | Watts |

Note: All measurements were taken with input voltage at 230 V nominal and 60 Hz.

| I _{RMS} | PF | I _{THD} | Load | Fraction of Load | Input Watts | External Fan (W)* | DC Terminal Voltage (V)/ DC Load Current (A) | | Output Watts | Efficiency |
|------------------|------|------------------|------|------------------|-------------|-------------------|--|------------|--------------|------------|
| | | | | | | | 12V | 12Vsb | | |
| 1.11 | 0.94 | 8.11% | 10% | Low | 240 | 3.36 | 12.07/16.41 | 12.09/0.3 | 202 | 83.88% |
| 1.96 | 0.97 | 5.89% | 20% | Light | 437 | 3.36 | 12.06/32.82 | 12.07/0.59 | 403 | 92.30% |
| 4.68 | 0.99 | 4.87% | 50% | Typical | 1067 | 3.36 | 12.03/82.06 | 12.04/1.48 | 1005 | 94.22% |
| 9.48 | 1.00 | 4.85% | 100% | Full | 2178 | 18.48 | 11.98/164.12 | 11.99/2.96 | 2002 | 91.95% |

* Fan power is not included in the efficiency calculations

1 socket configuration

Idle State Power High End Configuration

N/A

Idle State Power Low End Configuration

N/A



List of extra components for additional idle power allowances (High End Configuration):

- CPU Performance : **N/A**
- Additional PSU installed explicitly for power redundancy : **N/A**
- HDD installed : **N/A**
- SSD installed : **N/A**
- Installed memory greater than 4 GB : **N/A**
- Installed buffered DDR channels greater than 8 channels : **N/A**
- Installed I/O devices greater than two ports of ≥ 1 Gbit, onboard Ethernet
 - = 1 Gb/s : **N/A**
 - > 1 Gb/s and < 10 Gb/s : **N/A**
 - ≥ 10 Gb/s and < 25 Gb/s : **N/A**
 - ≥ 25 Gb/s and < 50 Gb/s : **N/A**
 - ≥ 50 Gb/s : **N/A**
- Other: **N/A**

List of extra components for additional idle power allowances (Low End Configuration):

- CPU Performance : **N/A**
- Additional PSU installed explicitly for power redundancy : **N/A**
- HDD installed : **N/A**
- SSD installed : **N/A**
- Installed memory greater than 4 GB : **N/A**
- Installed buffered DDR channels greater than 8 channels : **N/A**
- Installed I/O devices greater than two ports of ≥ 1 Gbit, onboard Ethernet
 - = 1 Gb/s : **N/A**
 - > 1 Gb/s and < 10 Gb/s : **N/A**
 - ≥ 10 Gb/s and < 25 Gb/s : **N/A**
 - ≥ 25 Gb/s and < 50 Gb/s : **N/A**
 - ≥ 50 Gb/s : **N/A**
- Other: **N/A**

Maximum power for high end configuration

N/A

Maximum power for low end configuration

N/A

Active state efficiency and performance in active state for high end configuration

N/A

Active state efficiency and performance in active state for low end configuration

N/A

Declared operating condition class for high end configuration

N/A

Declared operating condition class for low end configuration

N/A

This product has been tested in order to verify that it will function within the boundaries of the declared operating condition class.



Idle state power at the higher boundary temperature of the declared operating condition class (High End Configuration):

N/A

Idle state power at the higher boundary temperature of the declared operating condition class (Low End Configuration):

N/A

2 socket configuration

Idle State Power High End Configuration

349.6 Watts

Idle State Power Low End Configuration

275.6 Watts

List of extra components for additional idle power allowances (High End Configuration):

- CPU Performance : 2
- Additional PSU installed explicitly for power redundancy : 1
- HDD installed : 2
- SSD installed : 0
- Installed memory greater than 4 GB : 156 GB
- Installed buffered DDR channels greater than 8 channels : 24
- Installed I/O devices greater than two ports of ≥ 1 Gbit, onboard Ethernet
 - = 1 Gb/s : 1
 - > 1 Gb/s and < 10 Gb/s : 0
 - ≥ 10 Gb/s and < 25Gb/s : 0
 - ≥ 25 Gb/s and < 50Gb/s : 0
 - ≥ 50 Gb/s : 0
- Other: 0

List of extra components for additional idle power allowances (Low End Configuration):

- CPU Performance : 2
- Additional PSU installed explicitly for power redundancy : 1
- HDD installed : 2
- SSD installed : 0
- Installed memory greater than 4 GB : 92 GB
- Installed buffered DDR channels greater than 8 channels : 8
- Installed I/O devices greater than two ports of ≥ 1 Gbit, onboard Ethernet
 - = 1 Gb/s : 1
 - > 1 Gb/s and < 10 Gb/s : 0
 - ≥ 10 Gb/s and < 25Gb/s : 0
 - ≥ 25 Gb/s and < 50Gb/s : 0
 - ≥ 50 Gb/s : 0
- Other: 0

Maximum power for high end configuration

674.4 Watts

Maximum power for low end configuration

408.4 Watts

Active state efficiency and performance in active state for high end configuration

14.9



Active state efficiency and performance in active state for low end configuration
9.2

Declared operating condition class for high end configuration
A2

Declared operating condition class for low end configuration
A2

This product has been tested in order to verify that it will function within the boundaries of the declared operating condition class.

Idle state power at the higher boundary temperature of the declared operating condition class (High End Configuration):
394.6 Watts

Idle state power at the higher boundary temperature of the declared operating condition class (Low End Configuration):
320.6 Watts

3 socket configuration

Idle State Power High End Configuration
N/A

Idle State Power Low End Configuration
N/A

List of extra components for additional idle power allowances (High End Configuration):

- CPU Performance : **N/A**
- Additional PSU installed explicitly for power redundancy : **N/A**
- HDD installed : **N/A**
- SSD installed : **N/A**
- Installed memory greater than 4 GB : **N/A**
- Installed buffered DDR channels greater than 8 channels : **N/A**
- Installed I/O devices greater than two ports of ≥ 1 Gbit, onboard Ethernet
 - = 1 Gb/s : **N/A**
 - > 1 Gb/s and < 10 Gb/s : **N/A**
 - ≥ 10 Gb/s and < 25Gb/s : **N/A**
 - ≥ 25 Gb/s and < 50Gb/s : **N/A**
 - ≥ 50 Gb/s : **N/A**
- Other: **N/A**

List of extra components for additional idle power allowances (Low End Configuration):

- CPU Performance : **N/A**
- Additional PSU installed explicitly for power redundancy : **N/A**
- HDD installed : **N/A**
- SSD installed : **N/A**
- Installed memory greater than 4 GB : **N/A**
- Installed buffered DDR channels greater than 8 channels : **N/A**



- Installed I/O devices greater than two ports of ≥ 1 Gbit, onboard Ethernet
 - = 1 Gb/s : **N/A**
 - > 1 Gb/s and < 10 Gb/s : **N/A**
 - ≥ 10 Gb/s and < 25 Gb/s : **N/A**
 - ≥ 25 Gb/s and < 50 Gb/s : **N/A**
 - ≥ 50 Gb/s : **N/A**
- Other: **N/A**

Maximum power for high end configuration

N/A

Maximum power for low end configuration

N/A

Active state efficiency and performance in active state for high end configuration

N/A

Active state efficiency and performance in active state for low end configuration

N/A

Declared operating condition class for high end configuration

N/A

Declared operating condition class for low end configuration

N/A

This product has been tested in order to verify that it will function within the boundaries of the declared operating condition class.

Idle state power at the higher boundary temperature of the declared operating condition class (High End Configuration):

N/A

Idle state power at the higher boundary temperature of the declared operating condition class (Low End Configuration):

N/A

4 socket configuration

Idle State Power High End Configuration

N/A

Idle State Power Low End Configuration

N/A

List of extra components for additional idle power allowances (High End Configuration):

- CPU Performance : **N/A**
- Additional PSU installed explicitly for power redundancy : **N/A**
- HDD installed : **N/A**
- SSD installed : **N/A**
- Installed memory greater than 4 GB : **N/A**
- Installed buffered DDR channels greater than 8 channels : **N/A**
- Installed I/O devices greater than two ports of ≥ 1 Gbit, onboard Ethernet



- = 1 Gb/s : **N/A**
- > 1 Gb/s and < 10 Gb/s : **N/A**
- ≥ 10 Gb/s and < 25Gb/s : **N/A**
- ≥ 25 Gb/s and < 50Gb/s : **N/A**
- ≥ 50 Gb/s : **N/A**
- Other: **N/A**

List of extra components for additional idle power allowances (Low End Configuration):

- CPU Performance : **N/A**
- Additional PSU installed explicitly for power redundancy : **N/A**
- HDD installed : **N/A**
- SSD installed : **N/A**
- Installed memory greater than 4 GB : **N/A**
- Installed buffered DDR channels greater than 8 channels : **N/A**
- Installed I/O devices greater than two ports of ≥ 1 Gbit, onboard Ethernet
 - = 1 Gb/s : **N/A**
 - > 1 Gb/s and < 10 Gb/s : **N/A**
 - ≥ 10 Gb/s and < 25Gb/s : **N/A**
 - ≥ 25 Gb/s and < 50Gb/s : **N/A**
 - ≥ 50 Gb/s : **N/A**
- Other: **N/A**

Maximum power for high end configuration

N/A

Maximum power for low end configuration

N/A

Active state efficiency and performance in active state for high end configuration

N/A

Active state efficiency and performance in active state for low end configuration

N/A

Declared operating condition class for high end configuration

N/A

Declared operating condition class for low end configuration

N/A

This product has been tested in order to verify that it will function within the boundaries of the declared operating condition class.

Idle state power at the higher boundary temperature of the declared operating condition class (High End Configuration):

N/A

Idle state power at the higher boundary temperature of the declared operating condition class (Low End Configuration):

N/A



Secure data functionality:

http://www.ibm.com/support/knowledgecenter/POWER9/p9eah/p9eah_secure_data_deletion.htm

http://www.ibm.com/support/knowledgecenter/en/linuxonibm/liaau/Linux_secure_delete.html



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