

World Wide Field Communication – MGC-100

- **Power Limitation with older AC and DC MGC-100 chassis**
- **Upgrading older MGC-100 Chassis with Plus Modules**
- **Power Redundancy on Older MGC-100 Chassis with (3) Power Supplies**

Upgrading older MGC-100 chassis (both AC and DC) with MGC “plus” modules MAY require upgrading both the Chassis and Power Supplies. This document describes the differences, details and corrective actions.

Upgrading older MGC-100 Chassis with Plus Modules

Older MGC-100 chassis (ASY10003F) have 10 amp fuses which are not able to support a fully loaded system with plus cards (e.g. Audio+, IP+, Video+). This limitation is due to the 10 Amp fuse, which cannot be upgraded in the field.

MGC-100 Redundant Power Supply Issue

Please be aware that when using old 300W power supplies (PWR049E) with an MGC-100 chassis (both AC and DC) that consumes more than 600W, the third power supply is no longer redundant.

What are the various types of MGC Chassis and Part Numbers?

There are several MGC-100 chassis types which correspond to the 6 Power Supply types listed. The DC and NEBS chassis exist, but are rare in comparison to standard 110/220 VAC systems.

- Older MGC-100 chassis with 10 amp fuse (ASY1003A - ASY1003F) – these can easily be identified as the front power supply panel is marked PWR. These units exist in the field, but are no longer shipping. See figure 1.
- The new MGC-100 chassis with 15 amp circuit breaker (ASY1003G) - shipping as of March 2004 – can be identified as the front power supply panel is marked POWER. See Figure 2.
- The new DC compliant chassis (ASY2023D-R5) with new 450W DC power supply replaces old DC chassis (ASY2023A-ASY2023C)

What are the various types of MGC Power Supplies?

There are six types of MGC-100 power supplies:

- Old AC 300W power supply (PWR0549E)
- New AC 450W power supply (PWR2013B)
- Old DC 300W power supply (PWR1130A)
- New DC 450W power supply (PWR2012A-LO)
- Old NEBS DC 300W power supply (PWR2011-A)
- New NEBS DC 450W power supply (PWR2011B-LO)

What is the maximum number of cards that can be installed in the older MGC-100 chassis with 300 watt power supplies (110 volts AC)?

Total Number of Cards Supported in chassis:	Number of other cards - old and plus, excluding Video (Worst Case):	Number of Video+8 Cards:
16	16	0
15	14	1
14	12	2
13	10	3
12	8	4
11	6	5
10	4	6
9	2	7

Table A: MGC-100 with three 300 Watt Power Supplies and 10-amp Fuse in 110 Volt AC installations. Japan may be less.

What is the maximum number of cards that can be installed in the new MGC-100 chassis with 450 watt power supplies (110 Volts AC)?

Total Number of Cards Supported in chassis:	Number of other cards - old and plus, excluding Video (Worst Case):	Number of Video+8 Cards:
16	8	8
15	6	9
14	4	10

Table B: MGC-100/MGC+100 with three 450 watt PS and 15-amp Circuit breaker in 110 Volt AC Installations. Japan may be less.

Note: Video+8 modules require the most power (75 Watts each). The above maximum configuration is based on the "worst case" power consumption. Please use the Power Configurator for accurate analysis of your configuration.

Frequently Asked Questions:

Q1: What should I do if I want to increase my system capacity?

A1: Please work with your Certified Polycom Reseller or Polycom Sales Representative to evaluate your system power requirements.

Q2: If I have an older 300 watt chassis, do I need to upgrade?

A2: This depends on your system configuration. Please work with your Certified Polycom Reseller or Polycom Sales Representative to evaluate your system power requirements.

Q3: What will the Polycom Reseller or Sales Representative do?

A3: They will ask for a list of type of card in your system, the number of power supplies you have, and the local voltage (110/220). They will put this information into the MGC Power Configurator, to determine how many Amps your system is using.

Q4: What if I want to do a quick calculation to determine how many watts my system is using?

A4: You should work with a Polycom representative, but here are some “rough” numbers that you can use:

MGC Controller = 30 watts

Older modules = 30 watts each

Older video = 55 watts each (double video = 110 watts)

Newer + modules = 40 watts each

Newer Video+8 modules = 75 watts each

Q5: Can I buy 450 Watt AC power supplies and put them into my older chassis?

A5: Yes. Polycom is only selling the 450 Watt AC Power Supply, so it is possible to install them in your existing system. However, the older Fuse can only supply 10-amps, so you will not receive any additional benefit from the newer supply – it should be considered a direct replacement only. Do not attempt to exceed the stated power requirements of the 10-amp fuse by adding new cards.

Q6: How do I know if I exceeded the power consumption of the MGC Chassis?

A6: The most common side effect is “blowing” fuses. If you are experiencing this issue, you may need to remove newer cards from the system and acquire a new Chassis with higher wattage power supplies.

Frequently Asked Questions (cont.):

Q7: Why do the “Plus” cards require so much power?

A7: The new MGC Plus cards have additional features and increased capacity that require additional power.

Q8: Do some cards require more power than others?

A8: Yes. The Video Modules require the most power. Older video cards require 55 watts each and Video+8 modules require 75 Watts.

Q9: What if I am experiencing problems after a Hardware Upgrade?

A9: Please contact your Certified Polycom Reseller or Polycom Global Services for assistance.

Q10: If I order a new MGC-100 Chassis, does it come with a fuse or circuit breaker?

A10: Polycom is only shipping the 15-amp circuit breaker in all MGC-100 and MGC+100 chassis. The 10-amp fuse configuration was discontinued in 2004.

Q11: If I purchased an MGC+, do I have the latest power supplies?

A11: Yes. The MGC+ chassis only shipped with the highest rated power supplies and 15-Amp Circuit Breaker.

Q12: Can I just upgrade the fuse in the original MGC Chassis?

A12: No. The system meets UL standards and testing that limit the rating of the system to 10 Amps. Since these systems cannot be safely upgraded to meet higher power requirements, you must purchase a new Chassis with the 15-amp Circuit Breaker already installed.

Q13: If I purchased the 450 watt Power Supplies, do I also need to purchase a 15 Amp chassis?

A13: Most likely, but it depends on the power requirements of your system configuration. Please contact your Certified Polycom Reseller or Polycom Sales Representative for assistance.

Q14: If I have an active maintenance contract, can I get Power Supplies and Chassis upgrades for free?

A14: No. Hardware Upgrades are not included in maintenance contracts.

Frequently Asked Questions (cont.):

Q15: Does this issue affect international installations?

A15: It depends. Here are a few things that need to be considered:

- 1) The Power issue is related to lower 110/120 volt installations, which require higher current. 220/240 volt installations typically do not exceed the 10-amp ratings. If your country adheres to 110/120 volt standards, you will experience these limitations.
- 2) The maximum wattage of the Power Supplies is the same, regardless of the voltage. If you have three power supplies and exceed the combined wattage of two, you no longer have redundancy. Specifically, if you have three 300 watt supplies, you no longer have redundancy when you exceed 600 watts.
- 3) The voltage in Japan has been reported as low as 90 VAC, which increases the current requirements and decreases the number of cards that can be installed. Please work with your Certified Polycom Reseller or Polycom Sales Representative to evaluate your system power requirements.

Q16: If I have an older NEBS or DC chassis, can I replace just the power supply?

A16: No. For NEBS and DC systems, you MUST purchase a new chassis with new 450 Watt DC Power Supplies. The new Power Supplies cannot be installed in either the old NEBS or old DC chassis.

Q17: Do these limitations affect other MGC products?

A17: No, these limitations do not apply to the MGC-25, MGC-50, or MGC+50 REDIConvene.

Q18: If I am a Reseller or Channel Partner, where do I find the MGC Power Configurator?

A18: The Power Configurator is part of the MGC Configurator Utility available on the Polycom Resource Center.

Q19: If I am not using Plus cards in my MGC, do I need to upgrade?

A19: Probably not. However, we recommend working with your Certified Polycom Reseller or Polycom Sales Representative to evaluate your system power requirements.

Power Supply, Fuse, and Circuit Breaker images:



Figure 1.

Original 300 Watt PS on Left; New 450 Watt PS on Right.



Figure 2:

Older 10-Amp fuse on Left; Newer 15-Amp Circuit Breaker on Right.