

QUICK START GUIDE

MediaStar 770 Rack Dual Redundant PSU Upgrade Guide



The MediaStar 770 Rack has traditionally been supplied with a 'swappable' 771 single power supply module (PSU). In the event of a PSU failure, the faulty PSU module can be quickly and easily swapped out, minimising the disruption to the whole rack installation. However, as soon as the PSU fails, all the 'blades' in the rack will power down and their IP services will be lost.

A dual redundant 'hot-swap' power supply upgrade is now available for all existing 770 single PSU racks shipped from January 2011. This provides a new PSU card-frame and two 726 independent mains power supply modules (PSUs), each individually capable of powering the entire rack. In the event of a PSU failure, the other PSU will automatically take over without disruption of the 'blade' processor modules. This is particularly useful in systems where the highest levels of reliability are required.

Any 770 rack with rectangular rear panel apertures can be upgraded to a 770-DR using this 770-DR-UG upgrade kit. **NOTE: The upgraded 770-DR rack will only have 8 'blade' slots available, so when upgrading a completely full 9 'blade' 770 rack, the 9th blade must be re-housed in another 770 rack or in a 769 single 'blade' chassis.**

This document describes the 770 to 770-DR rack upgrade procedure. It should only be carried out by suitably qualified service personnel. Service personnel are persons having appropriate technical training and experience necessary to be aware of hazards to which

What's in the box:

- 725 PSU cradle
- 2 726 power supply modules
- 2 wide head screws
- Fan aperture cover
- Rear panel safety warning
- IEC mains cable


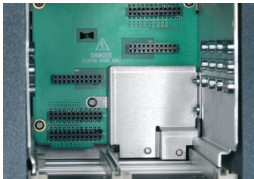
they may be exposed in performing this task and of measures to minimize the risks for themselves or other persons.

It is important that all the instructions and safety precautions listed here are carried out. Read these instructions fully before starting, and ensure you understand their meaning. If you do not understand these instructions, then please refer to your MediaStar equipment reseller or Cabletime (the Manufacturer).

All the IP services being provided by the 'blades' in a 770 rack will be lost while it is powered down. This upgrade may therefore need to be scheduled outside normal working hours or with a suitable notification of the temporary disruption of services.

Electrical static discharge precautions should be taken when handling any electronic modules during this upgrade process. **NOTE: Where a 770 rack is fitted with Dual Redundant Power supplies, hazardous mains voltages will still be present inside the rack until BOTH mains cables have been removed.**

770 Dual Redundant PSU Upgrade Instructions

1. Prior to starting work, ensure that the existing 770 rack installation conforms to the requirements described in the latest version of the document 'MediaStar 770 Rack Installation Guide' (part number 200-2320). This document can be downloaded from www.cabletime.com.
 2. Remove the IEC mains cable from the rear of the rack. This removes power from the entire rack and stops the output from all the installed 'blades'.
 3. Remove the 'blade' or blanking panel in the slot immediately to the left of the power supply. Remember to unplug the cables at the rear face of the 'blade' before undoing the thumbscrews and pulling it out the rack.
 4. Unscrew the four domed-head screw fasteners on the front panel of the power supply module, and pull the power supply module forwards, out the front of the rack.
 5. Look inside the rack and locate the three sleeved mains wires coming from the IEC connector at the back. Bend these over towards the right hand side of the rack.
 
 6. Remove the backing from the self-adhesive fan aperture cover and fix it to the inside of the rack right hand end panel so that it covers all the fan inlet apertures.
 7. Remove the transit bracket from the front of the PSU cradle, and slide it into the rack ensuring the metal sides are located in the plastic guide rails.
 
- Carefully push the cradle PCB home in the upper right corner (with some 'jiggle') so the electrical connectors are fully engaged
8. On the rear face of the rack, screw the two wide-headed screws into the cradle fixings, ensuring the screw heads overlap the rear panel metalwork. These will hold the cradle in place when PSU modules are pulled out.
 9. Insert the new 726 modules into the rack. Carefully locate the PSU's base in-between the corresponding pair of circular guide spigots mounted in the sides of the rack, and gently push the module in (with some 'jiggle' to help the connectors engage) until the PSU front panel is flush with the rack.
 10. Secure the 726 modules in place by tightening the two domed-head screw fasteners on each front panel.
 11. Insert the TWO IEC mains power cables into the rear of the rack and turn the mains supplies on.
 12. On the power supply module(s), the front panel 'POWER' indicator should be illuminated (blue) and the 'FAN' indicator should be green. This indicates the power supply is working within voltage limits and the fans are operating. The 'FAULT' indicators should be off. If either red 'FAULT' indicator is on and the blue 'POWER' indicator is flashing, re-check the IEC mains cable has a live electrical mains supply on it. If the upper PSU is showing this fault, check the rear panel IEC mains fuse has not blown.
 13. Remove the backing from the self-adhesive rear panel safety warning label and fix it in the top left-hand corner on the rear face of the rack. Ensure it does not obstruct any of the apertures. This label includes important safety warnings that are required because there are now multiple mains voltage inputs into the rack.
 14. Check all the processor modules in the rack are powered and functioning as expected.
 15. Dispose of the old 771 PSU module in an appropriate manner or keep it as a spare for another 770 rack. This module is classified as electrical waste and should not be disposed of with household waste.

Technical Specifications

| | |
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| POWER INPUT | 100 – 240 VAC, 2.2 – 1A, 50/60 Hz 200 Watts from two IEC mains connectors for dual redundant 770-DR racks. Mains supplies should be independent for full redundant operation. |
| ENCLOSURE POWER DISSIPATION | 200 Watts maximum, dependent on the type of 'blades' fitted. |
| EXTERNAL LNB POWER DRAIN FROM DVB-S2 'BLADES' | 3A total 450mA per 774 or 784 DVB-S2 'blade' |
| DIMENSIONS | 19" rack mounting, 3U high |
| WEIGHT | 770-DR: 4.1 Kg without processor modules 8.3 Kg with 8 processor modules |

Declaration of Conformity



Cabletime Limited declares that the products listed below, when installed and operated as described here, conform to the requirements of the directives shown:

Product names: MediaStar 770-DR Rack
Product part numbers: 770-DR

Directives:

2014/30/EU Electromagnetic Compatibility (EMC) Directive
2014/35/EU Low Voltage Directive
2011/65/EU RoHS2

The standards applied are:

EN55032:2012/AC 2013 Electromagnetic compatibility of multimedia equipment – Emissions requirements.
EN55024:2010 (including corrigendum June 2011) Information Technology equipment – Immunity characteristics.
EN61000-3-2:2014 Electromagnetic compatibility – Limits for harmonic current emissions.
EN61000-3-3:2013 Electromagnetic compatibility – Limitation of voltage changes, voltage fluctuation and flicker.

IEC 60950-1:2005+A1:2009+A2:2013 Information Technology Equipment. Safety Requirements.
EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013
UL 60950-1:2007/R:2014-10
CAN/CSA C22.2 No. 60950-1:2007/A2:2014-10

IEC 62368-1:2014 Audio/video, information and communication technology equipment.
Safety Requirements.

EN 62368-1:2014
UL 62368-1/2014
CSA/CAN C22.2 No. 62368-1-14

CB Certification Applicable to all CB scheme subscribing territories.

I hereby declare that the products listed here conform to the directives shown above when installed and used according to their respective manuals.

Keith Watts
Technical Director

July 2017

United States of America

Cabletime Limited declares this equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules Subpart B (15.107, 15.109). These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with part 15 of the FCC Rules.

Operation is subject to the following conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

Correct Disposal of this Product

This marking on the product, accessories or literature, indicates that the product and its electronic accessories should not be disposed of with other household waste at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.



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