



Instruction Manual

1T-DA-68x Series HDMI 2.0 Distribution Amplifiers

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1.0 SAFETY PRECAUTIONS

Read all instructions before attempting to unpack, install or operate this equipment, and before connecting the power supply.



- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

2.0 INTRODUCTION

The 1T-DA-68x series of HDMI 2.0 Distribution Amplifiers with HDCP 2.2 is an advanced solution for splitting a single HDMI input to multiple HDMI outputs. It provides a high-performance solution for distributing HDMI signals with video output up to 4K2K@60Hz (YUV444) resolutions and HDR (High Dynamic Range Imaging) support, which gives the most life like video experience. Support is also offered for up to 32 audio channels with sampling rates up to 192kHz and passthrough of 7.1 channels of digital audio including high resolution digital audio formats such as LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus, DTS-HD Master Audio and Dolby Atmos. The 1T-DA-68x series also supports HDR (High Dynamic Range), which allows a higher luminance to radiance contrast ratio creating colorful pictures for a better experience. A screw on power adapter cable prevents inadvertent disconnection of power and integrated flanges allow for easy mounting to a wall or under a table.

3.0 APPLICATIONS

Entertainment Room/Home Theater

Lecture Room/Hall Presentation

Show Room/Demo Room

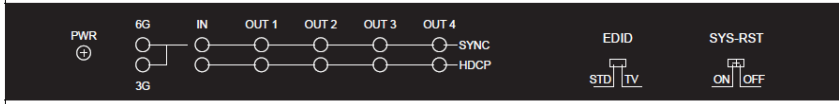
Public Commercial Display

4.0 FEATURES

- HDMI 2.0a compliant
- 4K2K@60 4:4:4
- HDR
- HDCP 2.2 compliant
- 3D pass through
- Supports 7.1 digital audio, Dolby TrueHD, Digital Plus, Atmos, and DTS
- EDID management
- Flat wall mounting

5.0 OPERATION CONTROLS AND FUNCTIONS

FRONT PANEL



PWR: This LED will illuminate when the device is connected to an active power supply.

6G/3G: When the input source bandwidth is 6G, the 6G LED will illuminate, when input source detects as 3G, the 3G LED will illuminate.

IN SYNC: When input detected, the LED will illuminate. LED will **blink** when source is **not stable**, when input is not connected, the LED light will be off.

IN HDCP: When Input HDCP has been detected, the LED will illuminate, the LED will **blink** when HDCP is not supported. The LED is off when no HDCP is detected.

OUT SYNC: When an output is detected, the LED will illuminate, the LED will **blink** when the output is unstable. The LED will be off when output is not connected.

OUT HDCP: When output HDCP is working, the LED will illuminate. **The LED will blink** when HDCP is not supported. The LED will be off when no HDCP is detected.

EDID: Choose Standard (STD) mode or TV mode. TV mode will automatically detect and store output 1 sink EDID data. STD mode will set to standard 1080p and PCM 2 channel.

SYS-RST: Switch the dip from off to on, the unit will trigger the outputs to HDMI input 1 immediately, when dip stays on, the unit will trigger cycle every 8-10 minutes. This function requires CEC support on the display, the Purpose of this function is to guarantee that a display will remain on the correct input. For example, a user use may switch to different input connected to display and this reset function will force the display to switch back to the HDMI input1.

INPUT: Connect with HDMI source.

OUTPUT: Connect to HDMI TV/display or HD amplifier for output display.

SERVICE: This is reserved for firmware update use only.

DC 5V: Connect the adapter which included in the package and connect to AC wall outlet for power supply.

6.0 SPECIFICATIONS

TECHNICAL SPECIFICATIONS

Input	1x HDMI 2.0a 1x USB (FW only)
Outputs	1T-DA-682; 2x HDMI 1T-DA-684; 4x HDMI 1T-DA-688; 8x HDMI
Video support	VGA to WUXGA (RB), 408i to 1080p@24/50/60, 4K@24/25/30, 4K@50/60 (YUV444)
Video Bandwidth	600 MHz / 18 Gbps
Audio	Embedded
HDCP compliance	HDCP2.2
Cable Distances	15m@1080p/8-bit 10m@1080p/12-bit, 5m@4K2K/30 3m@4K2K/60_YUV444
Power	1T-DA-682; 5V 2.6A DC 1T-DA-684; 5V 2.6A DC 1T-DA-688; 5V 3A DC Replacement PSU: PS-05-30-LK
Consumption (max)	1T-DA-682; 4.56w 1T-DA-684; 5.4w 1T-DA-688; 9.5w
Operating temp	0° to 40°C (32° to 104°F)
Humidity	20% to 90% Non-condensing
Dimensions (H x W x D)	1T-DA-682; 25 x 128 x 108mm 1T-DA-684; 25 x 232 x 108mm 1T-DA-688; 25 x 240 x 103mm
Weight (Net)	1T-DA-682; 358g 1T-DA-684; 616g 1T-DA-688; 690g
Warranty	2 Years
MTBF	1T-DA-682; 1,157,069 hours 1T-DA-684; 1,106,351 hours 1T-DA-688; 411,643 hours
Regulatory compliance	FCC, CE, UL, RoHS

SUPPORTED RESOLUTIONS

Resolution	Input	Output
640×480@60/72/75/85	√	√
720×400@85	√	√
800×600@56/60/72/75/85	√	√
1024×768@60/70/75/85	√	√
1152×864@75	√	√
1280×720@60	√	√
1280×768@60/75/85	√	√
1280×800@60	√	√
1280×960@60	√	√
1280×1024@60	√	√
1360×768@60	√	√
1366×768@60	√	√
1400×1050@60	√	√
1440×900@60	√	√
1600×900@60	√	√
1600×1200@60	√	√
1680×1050@60	√	√
1920×1080@60	√	√
1920×1200@60	√	√
1920×1440@60	√	√
2560×1600@60	√	√
1440×576i@50	√	√
1440×480i@59.94/60	√	√
720×480p@59.94/60	√	√
720×576p@50	√	√
1280×720p@50/59.94/60	√	√
1920×1080i@50/59.94/60	√	√
1920×1080p@23.97/24/25/29.97/30/50/59.94/60	√	√
3840×2160@24/25/30/50/60	√	√
4096×2160@24/25/30/50/60	√	√

7.0 LIMITED WARRANTY

tvONE™ warrants the original purchaser that the equipment it manufactures or sells will be free from defects in materials and workmanship for a fixed term from the date of purchase. The warranty term for specific product lines is defined below.

1. tvONE™ branded products based on tvONE's CORIO™ technology are warranted for a period of five years from the date of purchase. This includes products with the model number prefix of C2, C3, 1T-C2, CX, A2 or S2.
2. tvONE branded products, other than those based on tvONE's CORIO technology, mentioned above, or ONERack™ products, mentioned below, are warranted for a period of three years from the date of purchase. This includes products with the model number prefix of 1T, with the exception of 1T-C2.
3. Magenta™ branded products are warranted for a period of three years from the date of purchase.
4. ONERack branded products are warranted for a period of one year from the date of purchase.
5. LCD Monitors are warranted for a period of three years from the date of purchase, with the exception of the LCD panels integrated into the monitors that are supplied by third parties. LCD panels are limited to the term and conditions of the warranty offered by the respective LCD panel manufacturer. Such specific LCD panel warranties are available upon request to tvONE.

Should a product, in tvONE's opinion, prove defective within this warranty period, tvONE, at its discretion, will repair or replace this product without charge. Any defective parts replaced become the property of tvONE. This warranty does not apply to those products which have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not originally intended.

If repairs are necessary under this warranty policy, the original purchaser must obtain a Return Authorization Number from tvONE and return the product to a location designated by tvONE, freight prepaid. After repairs are complete, the product will be returned, freight prepaid.

LIMITATIONS - All products sold are “as is” and the above Limited Warranty is in lieu of all other warranties for this product, expressed or implied, and is strictly limited to the stated number of years from the date of purchase. tvONE assumes no liability to distributors, resellers or end-users or any third parties for any loss of use, revenue or profit.

tvONE makes no other representation of warranty as to fitness for the purpose or merchantability or otherwise in respect of any of the products sold. The liability of tvONE with respect to any defective products will be limited to the repair or replacement of such products. In no event shall tvONE be responsible or liable for any damage arising from the use of such defective products whether such damages be direct, indirect, consequential or otherwise, and whether such damages are incurred by the reseller, end-user or any third party.

8.0 REGULATORY COMPLIANCE

This product has been tested for compliance with appropriate FCC and CE rules and regulations. The power adaptor/supply has been tested for compliance with appropriate UL, CUL, CE, PSE, GS Rules, regulations and/or guidelines. This product and power adaptor is RoHS compliant.

9.0 LIABILITY STATEMENT

This product is intended for professional use. This product is not intended for use in a medical environment and does not have the required certifications for such use. Similarly, use aboard any aircraft or spacecraft while in flight or as an adjunct to any surface, airborne or marine navigation system or any offshore marine activity, including control of any watercraft, or any use similar to those specifically herein mentioned is prohibited. Use in the aforementioned circumstances would require additional testing and certification.

No warranty is made either expressed or implied including but not limited to any implied warranties of merchantability or fitness for a particular purpose. In no event shall the supplier or manufacturer of this product be liable for errors found within, or be liable for any direct, indirect or consequential damages or loss in connection with the purchase or use of this hardware, software or manual. The sole and exclusive liability to the supplier and manufacturer regardless of the form of action shall not exceed the replacement cost of the materials described herein.

tvONE reserves the right to revise any of its hardware and software products following its policy to modify and/or improve its products where necessary or desirable. This statement does not affect the legal rights of the user in any way.

By using this equipment, you have indicated that you have agreed to the terms listed above. If you do not wish to agree or the above terms are contrary to your conditions of purchase you may return the equipment, unused, to your supplier.

All third-party trademarks and copyrights are recognized. The tvONE logo, Magenta logo, CORIO word and the CORIO logo are registered trademarks of tvONE. All other trademarks are the property of their respective holders.

10.0 CONTACT US

www.tvone.com

info@tvone.com

tvONE NCSA
NORTH, CENTRAL AND SOUTH AMERICA
621 B Wilmer Avenue
Cincinnati, Ohio 45226
USA

Toll Free: +1-800-721-4044

US Main: +1-513-666-4210

US Tech: +1-513-666-4220

Sales: sales@tvone.com

Support: tech.usa@tvone.com

tvONE EMEA
EUROPE, MIDDLE EAST, AFRICA AND ASIA PACIFIC
Continental Approach, Westwood Industrial Estate,
Margate, Kent CT9 4JG, UK

Tel: +44-1843-87331

Fax: +44-1843-873312

Sales: sales.europe@tvone.com

Support: tech.europe@tvone.com

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