



Instruction Manual

**1T-CT-770 3G/HD/SD-SDI over Fiber
Extender System**

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1.0 INTRODUCTION

Thanks for purchasing this 1T-CT-770 Series 3G/HD/SD-SDI Extender over Fiber System from TV One. The individual components of this 3G/HD/SD-SDI Extender over Fiber product consists of the 1T-CT-771 Transmitter and the 1T-CT-772 Receiver which constitute a system used to transmit 3G/HD/SD-SDI signals at resolutions up to 1080p, over a single Fiber Optic cable. The 1T-CT-771-772 system can achieve signal distribution distances of up to 30km (18.6 miles) for signals with 1080p resolution and 30km (18.6 miles) for signals using 1.485G infrastructure.

Our professional video conversion products have been serving the industry for over twenty years. TV One offers a full line of high quality Seamless Switchers, Video Scalers, Up/Down/Cross Converters, Analog-Digital Converters (SD/HD-SDI, HDMI, DVI), Format Converters, Standards Converters, TBC/Frame Synchronizers, Matrix Routing Switchers, Signal Distribution Amplifiers and Cat.5 Transmission Systems.

1.1 Liability Statement

Every effort has been made to ensure that this product is free of errors. TV One cannot be held liable for the use of this hardware or any direct or indirect consequential damages arising from its use. It is the responsibility of the user of the hardware to check that it is suitable for his/her requirements and that it is installed correctly. All rights reserved. No parts of this manual may be reproduced or transmitted by any form or means electronic or mechanical, including photocopying, recording or by any information storage or retrieval system without the written consent of the publisher.

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1.2 Features

This 1T-CT-770 3G/HD/SD-SDI Extender over Fiber systems have many features that enable them to perform in a superior manner. Among these features you will find:

- Resolutions to 1080p @ 60Hz
- 1080p signal distribution up to 30km (18.6 miles)
- Signal Re-clocking is standard.
- Supports SMPTE 424M, 3G-SDI, 292M, HD-SDI, 259M, SD-SDI
- Data Transfer Rate up to 3Gbps
- Supports high definition input up to 1080P, output resolution follows input

2.0 SPECIFICATIONS

Video I/O	
1T-CT-771 Tx-SDI Input	1x via BNC Connector
1T-CT-772 Rx-SDI Output	1x via BNC Connector
Fiber I/O	
1T-CT-771 Tx – Fiber Output	1x via ST Connector
1T-CT-772 Rx – Fiber Input	1x via ST Connector
Fiber Optic Cable Requirement	
Single Mode	9/125um or 8/125um
Supported Signals & Protocols	
Industry Standards	SMPTE 424M, 292M, 259M
Video Performance	
Maximum Resolution	Up to 1080p/60Hz
Power Budget	
Link Power Budget	11dB Minimum
Nominal Signal Level	
800 mV/p-p	+/- 50 mV
Maximum Range	
1T-CT-771/772 System	30km (18.6 Mi)1080p, 30km (18.6 mi) 1.485G
Environmental	
Operating Temperature	-20° to +70° C (-4° to +158° F)
Operating Humidity	5% to 95%, Non-condensing
Storage Temperature	-30° to +85° C (-22° to +185° F)
Storage Humidity	5% to 95%, Non-condensing
Warranty	
Limited Warranty	3 Years Parts and Labor
Regulatory Approvals	
Encoder/Decoder Unit	FCC, CE, RoHS
Power Supply	PSE, UL, CUL, FCC, CE, PSE, TUV-GS, RoHS
Mechanical	
Size (HWD)	19.5x19.5x82.7mm (0.76x0.76x3.25")
Weight	56g (0.12lbs) each
Power Requirement	
External Power Supply	5 VDC@1.5A, Locking DC
Accessories Included	
2x Power Adapter	US, UK or Euro
1x User Manual	
Model Numbers	
1T-CT-770	3G/HD/SD-SDI Over Fiber System
1T-CT-771	3G/HD/SD-SDI Over Fiber Transmitter
1T-CT-772	3G/HD/SD-SDI Over Fiber Receiver

3.0 CHECKING PACKAGE CONTENTS

Before attempting to use this unit, please check the packaging and make certain the following items are contained in the shipping carton:

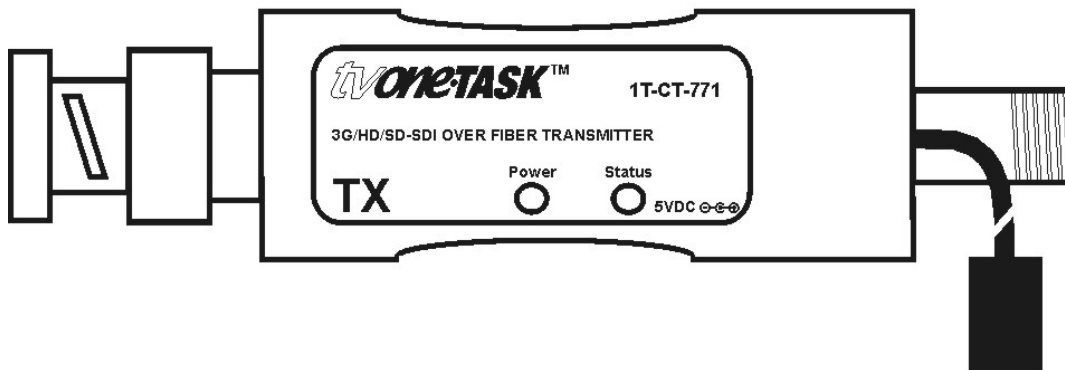
- 1x Transmitter, 1X Receiver
- 2x Power Adapter
- 1x Operations Manual

Note: Please retain the original packing material should the need ever arise to return the unit. If you find any items are missing, contact your reseller or TV One immediately. Have the Model and Serial Number and Invoice available for reference when you call.

4.0 CONNECTING THE HARDWARE

Please study the panel drawings below and become familiar with the signal input, outputs and power requirements/inputs. *Note: The resolution capability of the remotely located display devices must be capable of displaying the output of the source device. Before connecting the extender system, verify that the display device on the receiving end can support the output resolution and signal format by connecting it directly to the source device.*

4.2 1T-CT-771 Transmitter



Connect the SDI source device's output directly to the 1T-CT-771 Transmitter via the BNC connector. (Use of an intermediate cable is permitted after you have verified operation of the entire path without an intermediate cable. This ensures that the system is working properly and removes the variable of an intermediate cable that is too long or of poor quality. Once the system's functionality is verified, you can attempt to use an intermediate cable.)

Connect the Fiber Optic cable to the Fiber Out connector of the Transmitter. Defer connecting the AC adapter until the Fiber Optic cable is connected to both the Transmitter and the Receiver.

CAUTION: DO NOT look into the fiber connector of the transmitter when there is no fiber optic cable connected to the unit and power is applied.)

4.3 1T-CT-772 Receiver



At the remote location, connect the Fiber Optic cable to the Fiber input of the Receiver.

Connect the SDI Out BNC connector of the 1T-CT-772 Receiver directly to the input of the remote display or other device. (Use of an intermediate cable is permitted after you have verified operation of the entire path without an intermediate cable. This ensures that the system is working properly and removes the variable of an intermediate cable that is too long or of poor quality. Once the system's functionality is verified, you can attempt to use an intermediate cable.)

Connect the supplied AC adapters first to the Transmitter and Receiver and then to the AC sockets.

Note: There are no user controls provided on either the 1T-CT-771 Transmitter or the 1T-CT-772 Receiver. It's important that you verify that the source functions properly with the display device before you attempt to use any of the extender system components by connecting the source and destination devices together using only a short coaxial cable. Failure to do this would introduce an unwanted variable that would then have to be resolved should the system not function as expected.

5.0 OPERATING THE UNITS

The Power LED will illuminate on each unit as soon as power is applied via the +5 VDC AC adapters. The Status LED on both units will illuminate when a link has been established.

Once the connections have been made and power applied, there are no operational adjustments required. It is recommended however that the power on sequence be as follows: 1T-CT-771 Transmitter, 1T-CT-772 Receiver, SDI source device and SDI destination device – in that order.

6.0 TROUBLESHOOTING

Other than faulty or poorly connected cables, there are seldom problems with these Video Extender products.

If there is no image present at the remote location, connect the display device directly to the source to make certain that the problem is not in the display. If an image is present under those circumstances, make certain the transmitter and receiver(s) are receiving power. Next make certain the Fiber Optic cable is defect free (and of the proper specification). Lastly, check that the ST connectors are securely attached to the cable at each end and fully plugged in to the units. After trying the above suggestions should the problem still persist, contact your dealer for additional suggestions before contacting TV One. Should the dealer's technical personnel be unable to assist you, contact TV One via our support website: <http://tvone.crmdesk.com>. Create a technical support request on the site and our support team will respond within a short period of time.

7.0 LIMITED WARRANTY

TV One 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. TV One branded products based on TV One'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, 1T-C2, CX, A2 or S2.
2. TV One-task branded products, other than those based on TV One's CORIO technology mentioned above, 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. 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 TV One.

Should a product, in TV One's opinion, prove defective within this warranty period, TV One, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of TV One. 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 TV One and return the product to a location

designated by TV One, 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 two years from the date of purchase. TV One assumes no liability to distributors, resellers or end-users or any third parties for any loss of use, revenue or profit.

TV One 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 TV One with respect to any defective products will be limited to the repair or replacement of such products. In no event shall TV One 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

The 1T-CT-770 Series 3G/HD/SD-SDI over Fiber Extender products have 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 Adapter is RoHS Compliant.

9.0 CONTACT INFORMATION

Should you have questions or require assistance with this product in areas not covered by this manual, please contact TV One at the appropriate location shown below.

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