



***Miniature Fiber-Optic  
3G-SDI Extension Module***

*User's Manual  
(SDIX-100, SDIX-100C)*



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## Welcome!

Congratulations on your purchase of the **Miniature Fiber-Optic 3G-SDI Extension module**, SDIX-100, SDIX-100C. This manual contains information that will assist you in installing and operating the product.

## Product Description

### Shipping Group

- ❑ **SDIX-100-Tx, Rx Module:** One (1) set of unit, length as your request.
- ❑ **Option) SDIX-100-Tx/Rx, SDIX-100C-Tx/Rx** (Including re-clocker)
- ❑ **DC 5V 1.5A power adapter :** Two (2) units
- ❑ **+12V power supply cable directly from camera** (Option)
- ❑ **User's Manual**
- ❑ **Plastic hard case**

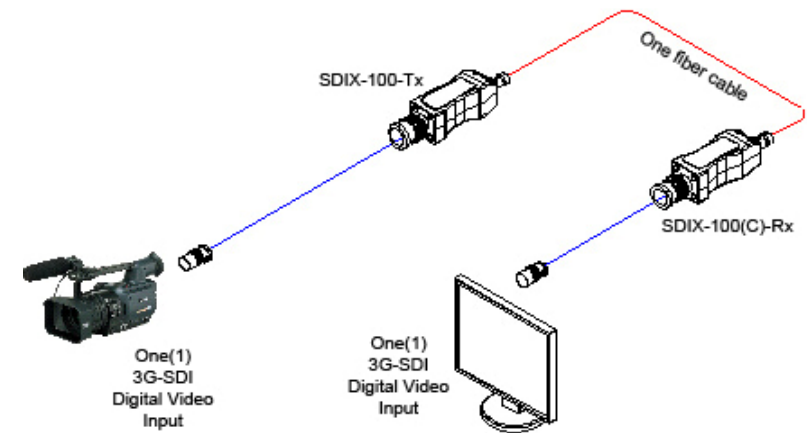
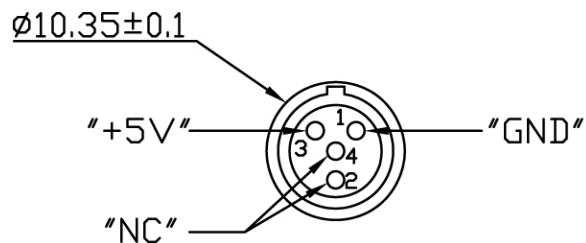


Figure 1 – Fiber-Optic 3G-SDI Extension module, SDIX-100

## System Requirements for Setup

- **Hardware requirements**
  - You have to have a SDI multimedia systems (Camera, OB Van, Broadcasting equipment using SDI signal, SDI Monitor etc.) or it should support the maximum graphic resolution feature of Monitors to be connected.
  - No special requirements of memory size, CPU speed and chipsets, if you've already properly installed your SDI systems.
- **Software requirements**
  - No special restrictions, if you've already properly installed your SDI systems.
- **DC Power Adapter Technical Advisory**
  - The SDIX-100(C) is designed to use only +5V external power.
  - Pin description



## Installation

**Important: Please follow the installation procedure as below. Improper, or no operation may result if the start-up sequence is not correctly followed.**

### Step 1

Carefully unpack the contents of the shipping group.

### Step 2

Connect the plug of the Tx side of SDIX-100 to the receptacle of SDI source (Camera, Broadcasting equipment etc.) directly. Do **NOT** recommend to use any intermediate cable or adapter between them. It may deteriorate the signal transmission performance.



Figure 2 – Tx module of SDIX-100

### Step 3

As shown in Figure 3, plug the +5V power adaptor in the shipping group to the Tx & Rx Module.

Connecting 5V power adaptor to SDIX-100 Cable is indispensable procedure for working.



Figure 3 –SDIX-100 with power adapter

#### Step 4

Connect the Rx side of SDIX-100(C) to the SDI receptacle of a Display directly. Do **NOT** recommend to use any intermediate cable or adapter between them. It may deteriorate the signal transmission performance.



Figure 4 – Rx module of SDIX-100(C)

#### Step 5

Power ON the SDI source and Display.

**Note:** Both of Tx and Rx modules of SDIX-100(C) must be connected by +5V power adaptors.

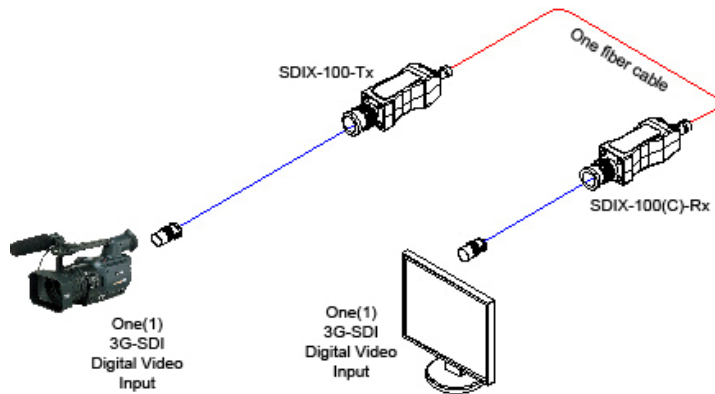


Figure 5 – Whole Connection of SDIX-100(C)

#### Step 7

If the system does not work properly, go to page 1-5, trouble shooting.

## Troubleshooting

### ***The display shows only black screen.***

Ensure that all AC and DC plugs and jacks used by external power supplies are firmly connected.

Ensure that the SDI connector is firmly plugged in to the SDI source and SDI display. Ensure that the Tx and Rx module parts plug correctly to the SDI source and SDI display, respectively.

Check if the SDI source and SDI display are powered on and properly booted. Reset the system by de-plugging and re-plugging the Tx SDI module or Rx SDI module. Re-boot up the system while connecting the SDIX-100(C).

### ***Screen is distorted or displays noises.***

Ensure the quality of SDI source and check the extension length of fiber. SDIX-100 guarantee 30Km@3G

## Maintenance

No special maintenance is required for the SDIX-100 and power supplies. Ensure that the cables and power modules are stored or used in a benign environment free from liquid or dirt contamination.

There are no user serviceable parts. Refer all service and repair issues to Opticis.

## Technical Support and Service

For commercial or general product support, contact your reseller. For technical service, contact Opticis by email [techsupp@opticis.com](mailto:techsupp@opticis.com) or visit its website at [www.opticis.com](http://www.opticis.com).

## Product Specifications

### SDIX-100(C), Fiber-Optic 3G-SDI Extension module

- **Transmission of Multi-rate HD-SDI Digital Video over 1 Fiber :**  
It converts and transport one(1) channel SMPTE-424M, 3G-SDI, SMPTE-292M, HD-SDI or SMPTE-259M, SD-SDI.
- Available both Single-mode and Multi-mode.
- Offers **clock recovery circuit included** model, **SDIX-100C** as an option.
- **Extension limit:** 30km @3G, 1080p 3G-SDI format.
- **Recommended Fiber-optic Cable:** Glass Single-mode fiber with 1310, 1550nm of bandwidth and ST terminated connector.
- **General electrical specification**
  - Data Transfer Rate (Graphic Data) : Max. 3Gbps
  - Link Power Budget : Min.11dB
  - Optical Connector : ST Connector
  - Electric Connector Type from Modules : 75 Ohm BNC (Male)
- **Mechanical specifications of Tx and Rx module parts**
  - Dimensions: 19.5mm / 19.5mm / 82.7mm (W/H/D)
- **Environmental Specifications**
  - Operating temperature: -20°C to 70°C
  - Storage temperature: - 30°C to 85°C
  - Humidity: 5% to 95% RH

### DC Power Adapter

- **Supply Power :** DC 5V, 1.5A
- **Cord DC Jack :** Core is 5V and outer is GND.

## 1-6 Product Specifications

## Warranty Information

### 1 (One) Year Warranty

Opticis warrants this fiber-optic 3G-SDI extension cable to be free from defects in workmanship and materials, under normal use and service, for a period of one (1) year from the date of purchase from Opticis or its authorized resellers.

If a product does not work as warranted during the applicable warranty period, Opticis shall, at its option and expense, repair the defective product or part, deliver to customer an equivalent product or part to replace the defective item, or refund to customer the purchase price paid for the defective product.

All products that are replaced will become the property of Opticis.

Replacement products may be new or reconditioned.

Any replaced or repaired product or part has a ninety (90) day warranty or the remainder of the initial warranty period, whichever is longer.

Opticis shall not be responsible for any software, firmware, information, or memory data of customer contained in, stored on, or integrated with any products returned to Opticis for repair under warranty or not.

### Warranty Limitation and Exclusion

Opticis shall have no further obligation under the foregoing limited warranty if the product has been damaged due to abuse, misuse, neglect, accident, unusual physical or electrical stress, unauthorized modifications, tampering, alterations, or service other than by Opticis or its authorized agents, causes other than from ordinary use or failure to properly use the Product in the application for which said Product is intended.

### Dispose of Old Electrical & Electronic Equipment

(Applicable in the European Union and other European countries with separate systems)



This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.

The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

## 1-7 Warranty Information

## FCC/CE Statement

This device complies with part 15 of FCC Rules and EN 55022/61000-3 for CE certification. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 and 2 of FCC Rules and EN 55022/61000-3 for CE certification. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction guide, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult a service representative for help.

Properly shielded and grounded cables and connectors must be used in order to comply with FCC/CE emission limits. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## UL Statement

This device has completed a UL Commercial Inspection and Testing Services for the multimode DVI cable complied with VW-1 under UL 758. It is validated by the UL file number SV2038 and project number 04CA05353.

## UL/IEC Statement

**This equipment has been tested and found to comply with the limits for medical devices in IEC 60601-1:1994.** These limits are designed to provide reasonable protection against harmful interference in a typical medical installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to other devices, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving device.
  - Increase the separation between the equipment.
  - Connect the equipment into an outlet on a circuit different from that to which the other device(s) are connected.
  - Consult the manufacturer or field service technician for help.
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- Type of protection against electric shock: Class I equipment
  - Degree of protection against electric shock: Not classified - no applied parts
  - Classification according to the degree of protection against ingress of water as detailed in the current edition of IEC 529: IPX0, ordinary equipment
  - This equipment is not suitable for use in the presence of flammable anesthetics or oxygen
  - Mode of operation: continuous operation

## Class A of CE and FCC certification

The SDIX-100 manufactured by Opticis Co., Ltd., which are all certified by IEC/EN61000-3, 4 referred in Accession Number 07-1334-0217 as classified in Class A.

## Opticis Locations

### Headquarters

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For order support, please contact your Distributor or Reseller.

For technical support, check with the Opticis web site [www.opticis.com](http://www.opticis.com) or  
contact [techsupp@opticis.com](mailto:techsupp@opticis.com)