

# FT-FTX1550-10-SCAPC User Manual





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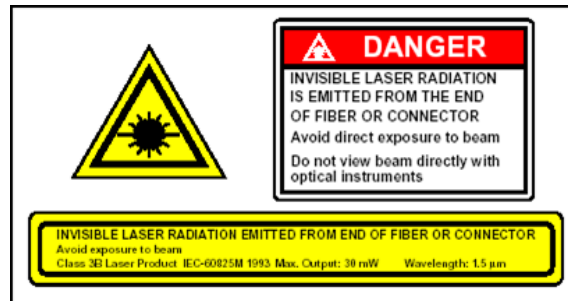
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## Preface

This manual is designed for FT-FTX1550-10-SCAPC optical transmitter with detailed description of product feature, specification and installation. To install this transmitter successfully and use it safely, users must read the manual before installation, and perform the installation and adjustment according to this manual. Otherwise, some practices may lead to property damage or personal injury. Please contact North American Cable Equipment if you have any questions.

## Important User Information

- **Caution:** There are invisible laser beams from Optical output ports, which may cause permanent injury to skin or eyes.
- UPS power supply and air condition environment are highly recommended for the stable and long term optical receiver operation.



- **Read the Manual First:** Review this manual thoroughly before installing or operating the unit.

**Qualified Service Only:** FT-FTX1550-10-SCAPC transmitters should be serviced exclusively by trained, qualified personnel.

**Ensure Proper Grounding:** Before installation or operation, confirm that the transmitter is securely grounded.

**Laser Safety Warning:** FT-FTX1550-10-SCAPC transmitters are Class III laser products. Using controls, adjustments, or procedures other than those specified in this manual may result in hazardous laser radiation exposure.

## Chapter 1 Overview

This CATV Optical transmitter is designed for high performance, reliability, and long-term stability in demanding broadband applications. Featuring advanced optical and RF components, intelligent thermal management, and versatile control options, it ensures consistent signal quality and dependable operation.

## Chapter 2 Features

- **High-Power DFB Laser** – Imported DFB laser with maximum output power up to 16 mW for superior transmission performance.
- **Optimized RF & Optical Stability** – Built-in RF driving amplifier and control circuits maintain excellent C/N ratio; advanced optical power output and thermoelectric cooling circuits ensure stable, long-term operation.
- **Intelligent Cooling** – Automatic fan operation when internal temperature reaches 89.6 - 95°F (32–35°C) for efficient heat management.
- **AGC/MGC Control** – Supports Automatic Gain Control and Manual Gain Control to maintain stable output across varying RF input levels.
- **Smart Monitoring & Alerts** – Internal microprocessor software enables laser monitoring, numeric display, fault alarms, and online management; red flashing alarm when laser parameters are outside the set range.
- **Remote Management** – RS-232 standard connector allows for remote monitoring and control.
- **Flexible Installation & Power** – Fits a standard 19" rack and operates on 90 – 265V AC or - 48V DC power supplies.

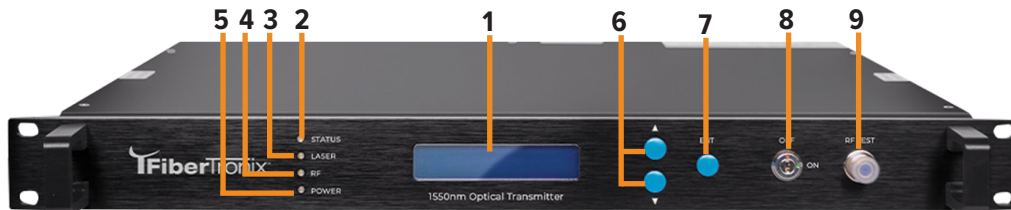
## Chapter 3 Specifications

FT-FTX1550-10-SCAPC	-2	-4	-6	-8	-10	-12	-14	-16
Optical Power	≥02 mW	≥04 mW	≥06 mW	≥08 mW	≥10 mW	≥12 mW	≥14 mW	≥16 mW
Optical Power	3 dBm	6 dBm	7.8 dBm	9 dBm	10 dBm	10.8 dBm	11.5 dBm	12 dBm
Optical Wavelength	1528 - 1570 nm							
Fiber Connector	FC/APC, SC/APC (Optional)							
Working Bandwidth	47 - 862 MHz							
Channels	59							
CNR	≥51							
CTB	≤ -65 dBc							
CSO	≤ -60 dBc							
RF Input Level	80±5 dBμV							
Flatness	≤0.75							
Power Consumption	≤30 W							
Power Voltage	220VAC (90-265), -48VDC (Optional)							
Working Temperature	-4 -149 °F (-20 - 65°C)							
Dimensions	19 x 1.73 x 14.57" (483 x 44 x 370 mm)							
Weight	17.6 lbs (8 kg)							
Warranty	1 Year Limited Warranty							

## Chapter 4 Conversion of Optical Power

mW	1	2	3	-8	5	6	7	8	9	10	11	12	13	14	15	16
dBm	0.0	3.0	4.8	6.0	7.0	7.8	8.5	9.0	9.5	10.0	10.4	10.8	11.1	11.5	11.8	12.0
mW	17	18	19	20	21	22	25	32	40	50	63	80	100	125	160	200
dBm	12.3	12.5	12.8	13.0	13.2	13.4	14	15	16	17	18	19	20	21	22	23

## Chapter 5 Front & Rear Panel Review



### 1. LED Display

- Displays the working parameter of the machine

### 2. Status

- Green: Normal Condition
- Red: No Input or Abnormal Condition

### 3. Laser

- Green: Normal Condition
- Red: Abnormal Condition

### 4. RF

- Green: Normal Condition
- Red: RF input below or above the normal condition.

### 5. Power

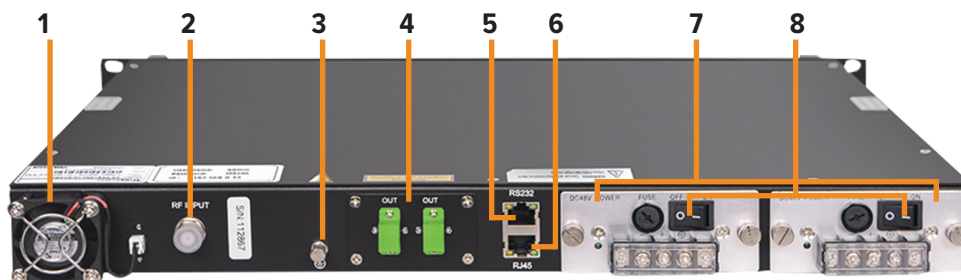
- Green: Two Power Supply Run
- Yellow: One Power Supply Run
- Red: Abnormal

### 6. Up and Down Buttons

### 7. Enter Button

### 8. On/Off

### 9. RF Test



### 1. Fan

- Intelligent fan, it will run when the case temperature reach 32 - 35°C

### 2. RF Input

### 3. Ground

### 4. Opt Out

- Optical Signal Out

### 5. RS232

- Network management for local computers

### 6. RJ45

- SNMP, for remote computer network management

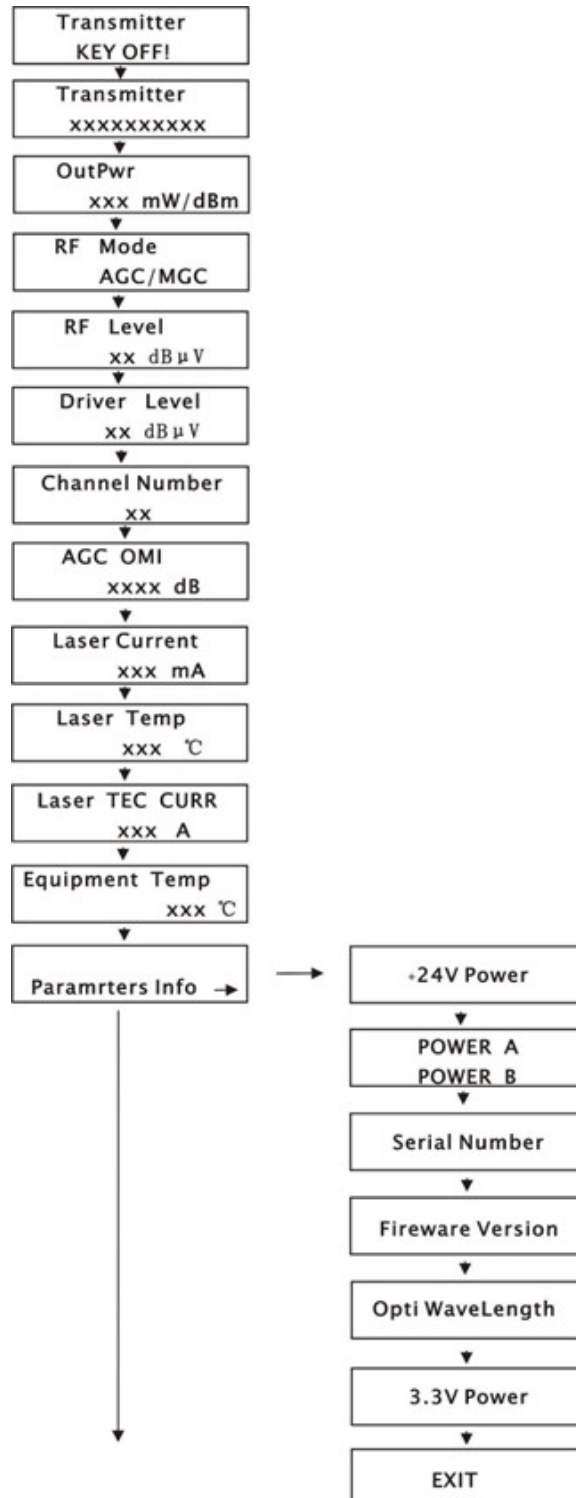
### 7. Power Socket

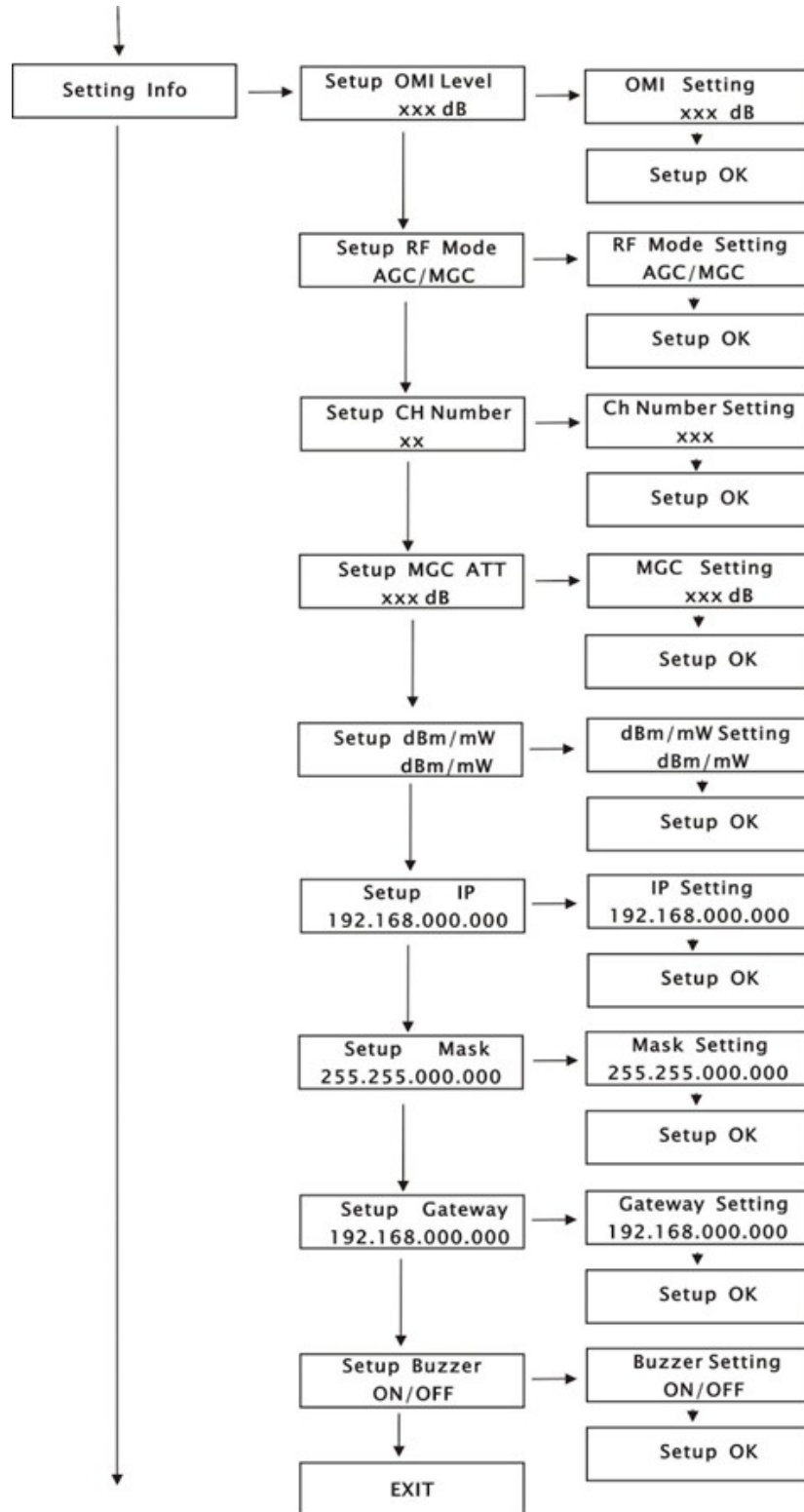
- OFF: AC220V and DC-48V

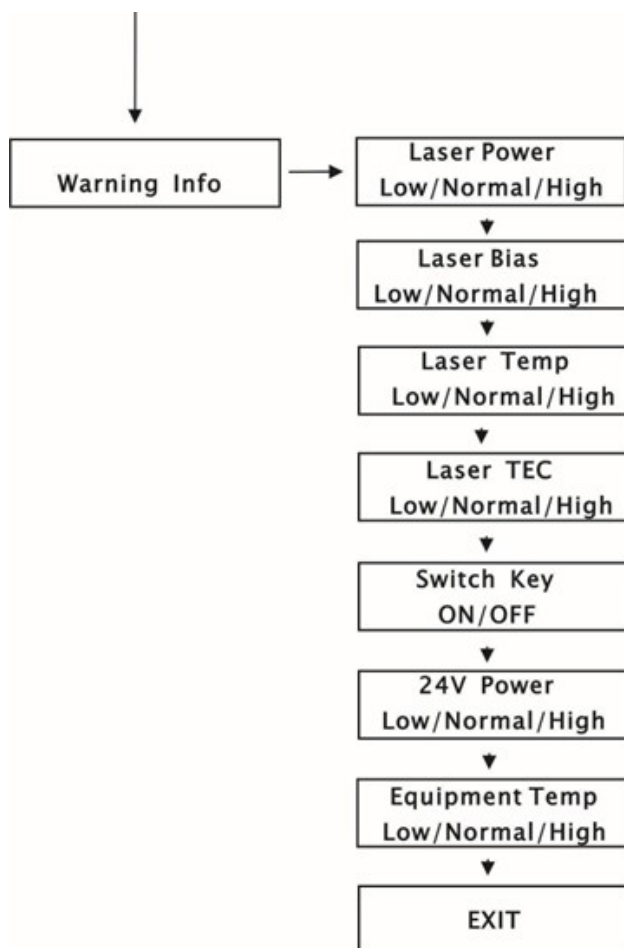
### 8. Power

- ON: Turn on the power
- OFF: Turn off the power

## Chapter 6 Flow Chart



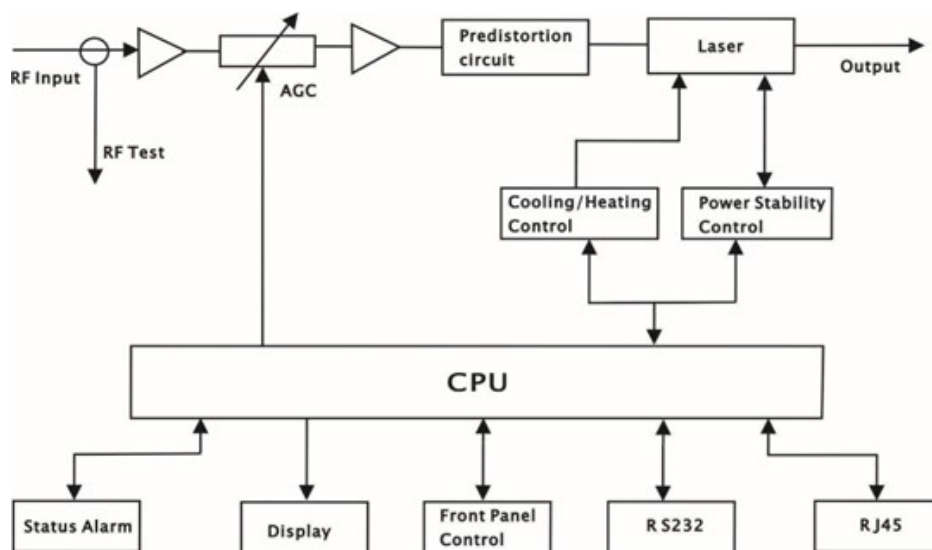




## Chapter 7 Operating Instruction

- **Check Power Supply:** Inspect the machine, shelf, and power to ensure the power supply is functioning properly.
- **Power Specifications:** The machine uses a high-quality, high-stability switch power supply, compatible with voltage ranges from 90V to 265V or -48VDC.
- **Connector Cleaning:** Ensure the connector is clean before installation. Use pure alcohol to clean the fiber connector before making the connection.
- **Power-On Procedure:**
  1. After connecting power, switch on the power at the back of the board.
  2. The screen will display the machine's basic information.
  3. After a few seconds, the laser power will activate automatically.
  4. If functioning correctly, the laser status light will change from red to green, and the screen will display the current working condition.
- **Viewing Parameters:** Press the "STATUS" button to view the machine's parameters in sequence.
- **RF Input Level Check:** If all conditions are normal, verify that the RF input level meets the specifications in the test report.

## Chapter 8 Diagram





## FIBERTRONIX 1-Year Limited Warranty

FIBERTRONIX. (the “Company”) warrants to the Original Purchaser that the item purchased is free from defects in workmanship or material under normal use. This warranty starts on the date of shipment of the hardware to the Original Purchaser.

During the warranty period, the Company agrees to repair or replace, at its sole option, without charge to Original Purchaser, any defective component. To obtain service, the Original Purchaser must return the item to the Company properly packaged for shipping. All defective products must be returned to the Company within thirty (30) days of failure. Products must be returned with a description of the failure and Return Merchandise Authorization (RMA) number supplied by the Company. To receive a RMA number and a return shipping address on where to deliver the hardware, call 610-429-1821. The shipping, and insurance charges incurred in shipping to the Company will be paid by Original Purchaser, and all risk for the hardware shall remain with the Original Purchaser until such time as Company takes receipt of the hardware. Upon receipt, the Company will promptly repair or replace the defective unit, and then return said unit to Original Purchaser, shipping prepaid. The Company may use reconditioned or like-new parts or units, at its sole option, when repairing any hardware. Repaired products shall carry the same amount of outstanding warranty as from original purchase. Any claim under the warranty must include dated proof of purchase or invoice. In any event, the Company’s liability for defective hardware is limited to repairing or replacing the hardware.

This warranty is contingent upon proper use of the hardware by Original Purchaser and does not cover: if damage is due to Acts of God (including fire, flood, earthquake, storm, hurricane or other natural disaster), accident, unusual physical, electrical, or electromechanical stress, modifications, neglect, misuse, operation with media not approved by the Company, tampering with or altering of the hardware, riot, war, invasion, act of foreign enemies, hostilities (regardless of whether war is declared), civil war, rebellion, revolution, insurrection, military or usurped power or confiscation, terrorist activities, nationalization, government sanction, blockage, embargo, labor dispute, strike, lockout or interruption or failure of electricity, air conditioning, or humidity control, Internet, network, or telephone service.

The warranties given herein, together with any implied warranties covering the hardware, including any warranties of merchantability or fitness for a particular purpose, are limited in duration to one year from the date of shipment to the Original Purchaser. Jurisdictions vary with regard to the enforceability of warranty limitations, and you should check the laws of your local jurisdiction to find out whether the above limitation applies to you.

The Company shall not be liable to your for loss of data, loss of profits, lost savings, special, incidental, consequential, indirect, or other similar damages arising from breach of warranty, breach of contract, negligence, or other legal action even if the Company or its agent has been



advised of the possibility of such damages, or for any claim brought against you by another party. Jurisdictions vary with regard to the enforceability of provisions excluding or limiting liability for incidental or consequential damages. You should check the laws of your local jurisdiction to find out whether the above exclusion applies to you.

This warranty allocates risks of product failure between Original Purchaser and the Company. The Company's hardware pricing reflects this allocation of risk and the limitations of liability contained in this warranty. The warranty set forth above is in lieu of all other express warranties, whether oral or written. The agents, employees, distributors, and dealers of the Company are not authorized to make modification to this warranty, or additional warranties binding on the Company. Accordingly, additional statements such as dealer advertising or presentations, whether oral or written, do not constitute warranties by the Company and should not be relied upon.

This warranty gives you specific legal rights. You may also have other rights which vary from one jurisdiction to another.