



# AUTOMATIC **GAIN** OPTICAL RECEIVERS

mod. **AOT-STCxxx**

Apartment Optical Receiver/Termination with **AGC**



ULTRA WIDE RANGE OPTICAL INPUT POWER -1 to -15 dBm

WIDE RANGE OPTICAL WAVELENGTH: 1.280/1.610 nm (can be Filtered)

OPTICAL **AGC** FOR CONSTANT RF OUT LEVEL

SAT-TV-CATV: 47/2.350 MHz

RF OUT LEVELS: 75 dB $\mu$ V

**ADVANCED  
TECHNOLOGY**

FOR PROFESSIONAL  
CABLE & BROADBAND  
NETWORKS



## APPLICATIONS & MAIN FEATURES

- Analog & Digital SAT-TV-CATV apartment Terminal/Receiver
- FTTH Fiber to the Home distribution
- Ultra low Noise Optical Receiver/Termination
- Ultra Wide Range Optical Input Power
- Optical input power LED indication
- Constant RF out level from -1 to -15 dBm ( $\pm 0$  to -18 dBm max) Optical input power, thanks to the microprocessor controlled AGC
- High RF out level & Low IMD distortion
- Compact and elegant Apartment Box

## TECHNICAL SPECIFICATIONS

### OPTICAL

- Optical Wavelength : 1.280/1610 nm (can be filtered)
- Optical Input Range : -1 to -15 dBm (max  $\pm 0$  to -18)
- Optical Return Loss : 45 dB
- Optical Connector : SC/APC
- Optical Input power indication : Led: Green, Yellow, Red, Red flashing

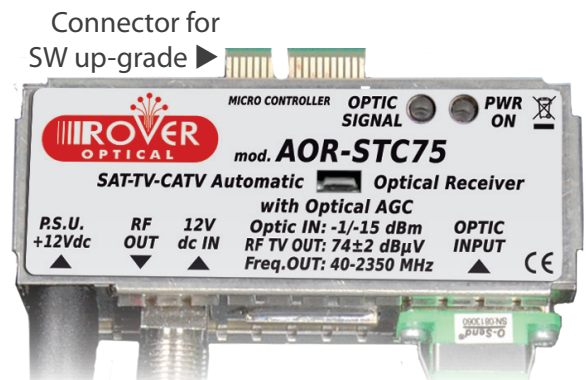
### RF SAT, TV & CATV

- Frequency Range : 47/2.350 MHz
- Receiver Noise Input :  $5 \pm 1$  pA  $\sqrt{\text{Hz}}$
- \* RFOut Level : TV & CATV:  $74 \pm 2$  dBuV
- RF flatness TV & CATV :  $\pm 1,5$  dB typ, 2 max
- RF flatness SAT :  $\pm 1,5$  dB typ, 2,5 max
- RF Impedance :  $75 \Omega$
- RF Output connector : male "F"
- RF Return Loss TV & CATV : 14 dB typ.
- RF Return Loss SAT : 12 dB typ.
- Operating temp. Range :  $-20$  to  $+60^\circ\text{C}$
- Storage temperature Range :  $-40$  to  $+85^\circ\text{C}$

\* Stable RF OUT level with Optical AGC, from -1 to -15 dBm. The SAT RF input level is normally set at the Optical TX 10 dB lower than TV level.

### DIAGNOSTIC LEDs INDICATIONS

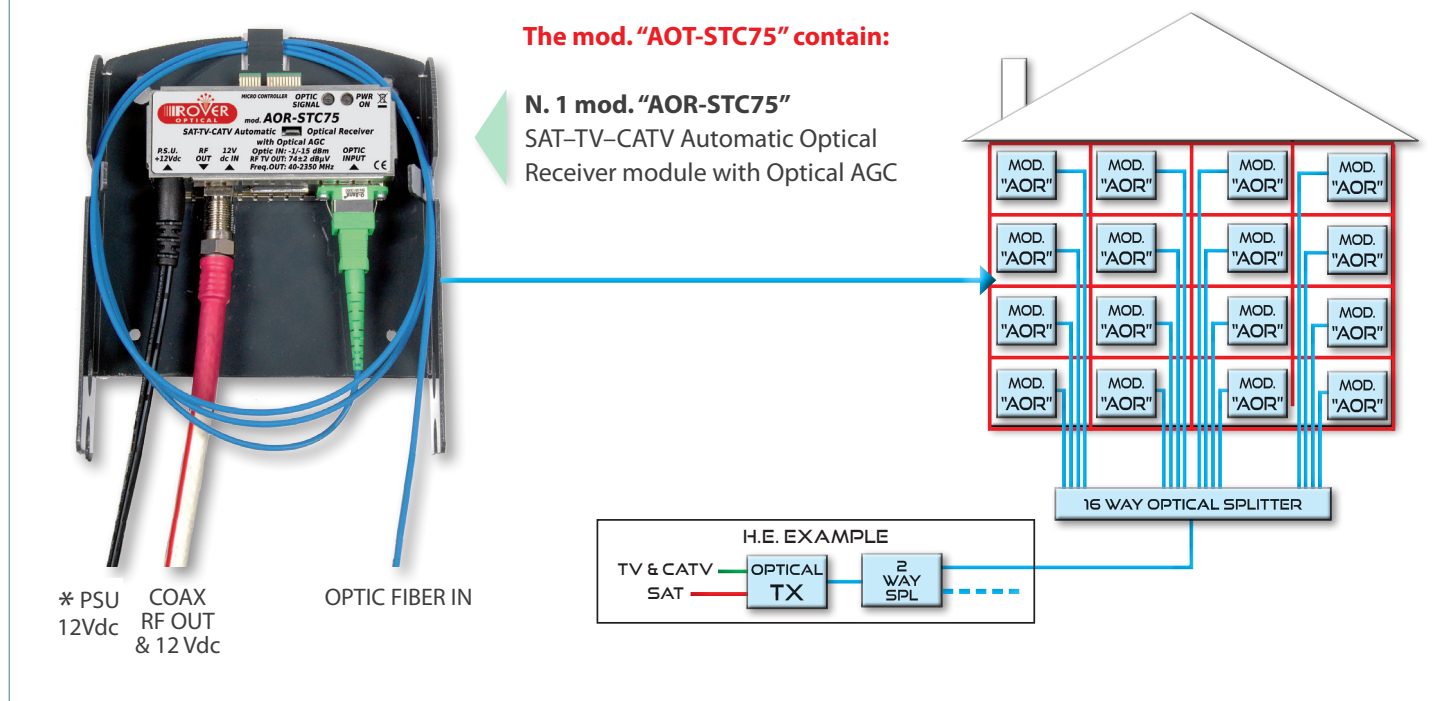
- OPTIC INPUT POWER MONITORING:
  - Too High : RED Led Flashing (over -1 dBm)
  - Normal : GREEN Led (from -1 to -15 dBm)
  - Low : YELLOW Led (from -15 to -17 dBm)
  - Too low : RED Led (below -17 dBm)
- 12 Vdc PSU : Green LED



### GENERAL

- PSU Voltage : 12 Vdc (max 18)
- PSU connector diameter : 2,5 / 5,5
- Power Consumption : 110 mA
- Environment : indoor use
- Dimensions : 11 x 15 x 5 cm
- Weight : 250 g with box
- Fixing : Wall

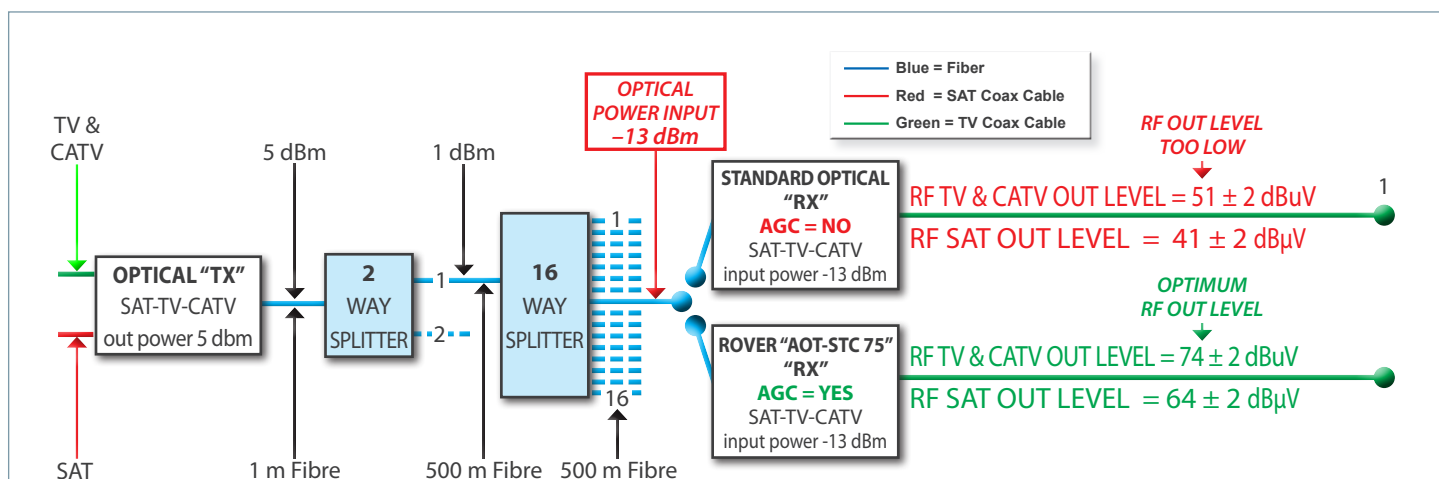
## mod. **AOT-STC 75** 16 to 32 USERS FTTH (Fiber To The Home) APARTMENT INSTALLATION EXAMPLE



\* The Optical Receiver power supply may also come from the Set Top Box, via RF coax cable.

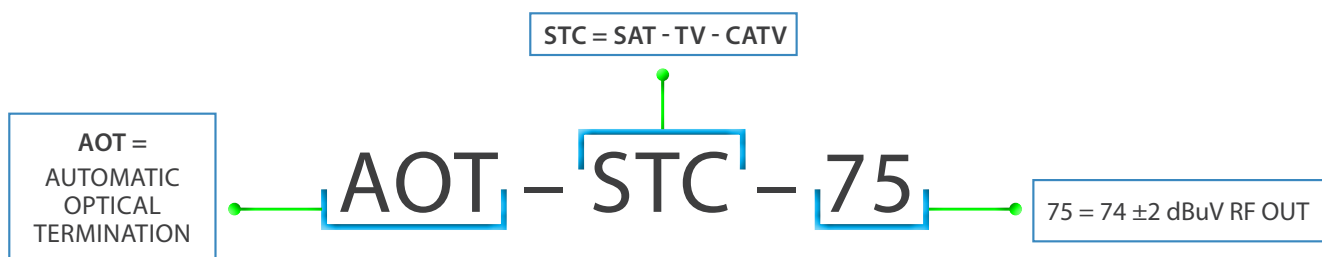
### WHY IS "AGC" SO IMPORTANT IN THE OPTICAL RX?

AGC is important because 1 dB variation of the Received Optical Input Power can cause a 2 dB RF level output variation at the RX.



Example: Medium distance (1 to 5 Km) FTTH Fiber Optic distribution System for large Villas or Condominiums.  
The Standard Optical "RX" without AGC, don't have enough RF level for one socket, while ROVER "AOT-STC75" Ultra Wide Range Optical RX with AGC, maintains the same RF output level of 75 dBuV, for all range of Optical Input power, without Saturation.

## ORDERING CODE DEFINITION



## ORDERING MODEL / CODE EXAMPLE

MODEL / CODE	DESCRIPTION	APPLICATION
<b>AOT-STC-75XXX</b>	AGC Apartment Optical Receiver/Termination, 74 ±2dBu, Constant Output RF level, from -1 to -15 dBm Optical power INPUT	SAT-TV-CATV Condominium FTTH distributions

AOT-STC V5,1 6-11-17



Product  
made in Italy by  
Rover Broadcast.com



Specifications and features are subject to change without notice.

RO.VE.R. Laboratories S.p.A.  
Via Parini, 2 - 25019 Sirmione (BS) Italy  
info@roverinstruments.com • www.roverbroadcast.com