



AON1110E Smart Optical Receiver

Quick Reference Guide

Revision A

ACT AON1110E Smart Optical Receiver

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ACT Document Number: ACT AON1110E Smart Optical Receiver QRG

Quick Reference Guide Revision A

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This document is produced to assist professional and properly trained personnel with installation and maintenance issues for the product. The capabilities, system requirements and/or compatibility with third-party products described herein are subject to change without notice.

For more information, contact ACT: support@ascentcomtec.com



Revision History

Revision	Date	Reason for Change
A	05/28/2023	Initial release

Contents

1 Product Summary 4

2 Performance Characteristics 4

3 Technical Specifications..... 4

4 Block Diagram 5

5 Ordering Informations 5

6 Structure Description 6

7 Relation Table of Input Optical Power and CNR..... 7

8 Device Remote Operation 7

1 Product Summary

AON1110E Series Optical Receiver is part of ACT's Deep Fiber solution, which has been designed to deliver high-quality CATV and other advanced services. This cost-effective compact mini receiver helps operators expand the bandwidth of their existing HFC network while minimizing capital investment. The AON1110E compact node has smart LED, SNMP, and Web GUI for convenient management and is suitable for MDU, FTTB or FTTC applications with high output up to 116 dBμV.

The AON1110E deep fiber node is equipped with an Automatic Gain Control circuit to maintain constant output power with optical input from -9 dBm to +2 dBm. Combined with ACT's converged headend AH1000 optical platform, AON1110E series deep fiber optical node is an ideal product to provide MSOs with an economical, flexible HFC access solution.

AON1110E node provides the web management interface to support the remote monitoring capability in advanced network management system.

2 Performance Characteristics

- Adopt advanced optical AGC control technique, the maximum AGC control range (adjustable) is - 9 to + 2dBm
- RF amplifier part adopts the high performance low power consumption GaAs chip, which makes the output level higher
- EQ and ATT both use the professional electric control circuit, make the control more accurate, operation more convenient
- Built-in Ethernet transponder, support remote network management (optional)
- Compact structure, convenient installation, is the first choice equipment of FTTB CATV network
- External high-reliability, low-power DC power supply

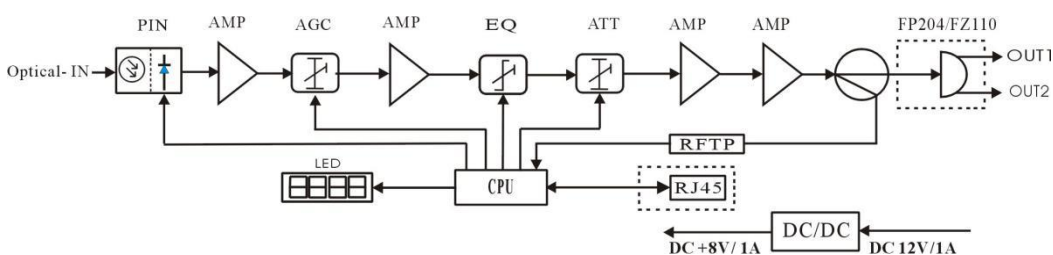
3 Technical Specifications

Item	Unit	Technical Parameters	
Optical Parameters			
Receiving Optical Power	dBm	-9 to +2	
Optical Return Loss	dB	>45	
Optical Receiving Wavelength	nm	1100 to 1600 or 1530 to 1620	
Optical Connector Type		SC/APC or FC/APC	
Fiber Type		Single mode	
Link Parameters			
C/N	dB	≥ 51	42ch, OMI=4.0%, Pin=-
C/CTB	dB	≥ 60	2dBm, EQ=9dB,116dBuV@ FZ120 o
C/CSO	dB	≥ 62	utput, 112dBuV@FP204 output.
RF Parameters			
Frequency Range	MHz	45 to 862/1003	
Flatness In Band	dB	±0.75 (Slope: 5.5±1dB)	
Rated Output Level	dBμV	116 (FZ120)	112 (FP204)
Max Output Level	dBμV	118 (AGC:-7 to +2 tap)	114 (AGC:-7 to +2 two-way splitter)
Output Return Loss	dB	≥16	

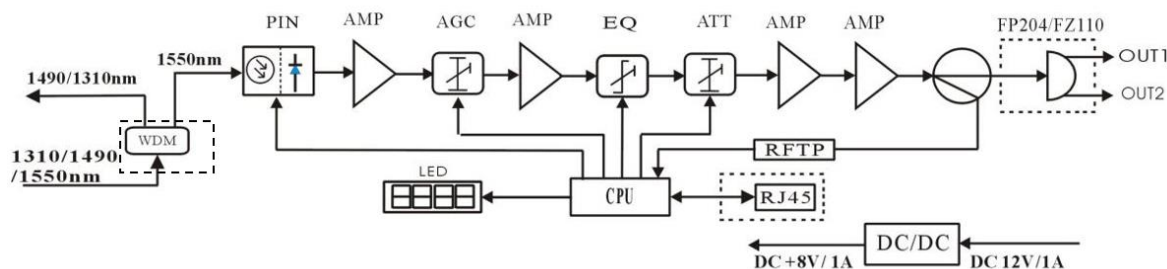
Item	Unit	Technical Parameters
Output Impedance	Ω	75
Electrical EQ Control Range	dB	0 to 20 (0.5dB step)
Electrical ATT Control Range	dB	0 to 20 (0.5dB step)
General Characteristics		
Power Voltage	V	DC12V/1A
Operating Temperature	$^{\circ}\text{C}$	-40 to 60
Power Consumption	W	≤ 8.5
Dimension	mm	178 (L) * 115 (W) * 40 (H)

4 Block Diagram

Standard Optical Receiver



Optical Receiver with PON Passthrough



Note: The circuit in the dashed box is optional configuration circuit.

5 Ordering Information

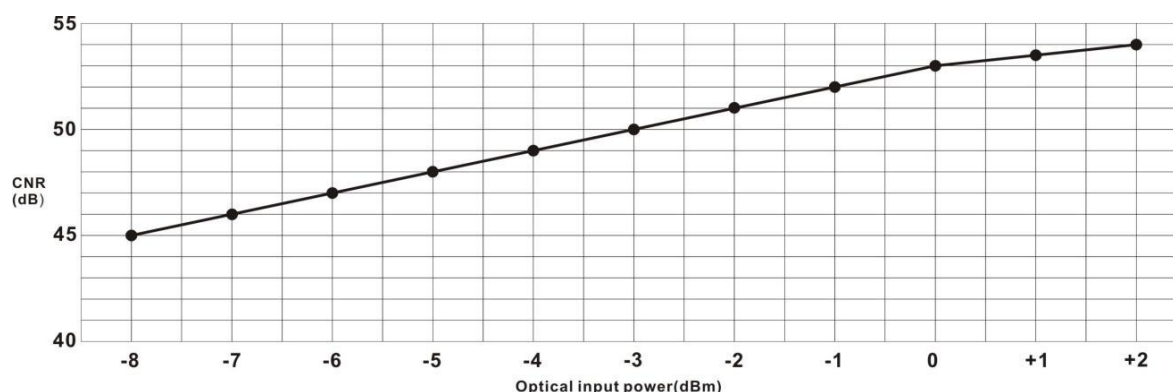
Product Name	Product Description
AON1110E-S-00-AS-2-1	AON1110E 1 GHz single input optical receiver, one RF output with Web GUI and SNMP, SC/APC, Main PS 220V

6 Structure Description



NO.	NC / WF	WD	Remark
1	Status Display Digital Tube	Status Display Digital Tube	
2	Control Mode Selection Button	Control Mode Selection Button	
3	Parameter Adjustment Button: Up	Parameter Adjustment Button: Up	
4	Parameter Adjustment Button: Down	Parameter Adjustment Button: Down	
5	DC12V Power Input	DC12V Power Input	
6	RJ45 Network Management Interface	RJ45 Network Management Interface	
7	Optical Signal Input	Optical Signal Input	
8		Optical Signal Output	Connector type is only for SC
9	RF Output 1	RF Output 1	
10	RF Output 2	RF Output 2	

7 Relation Table of Input Optical Power and CNR



8 Device Remote Operation

8.1 Preparations

8.1.1 Physical Connection

- Use an RJ45 network cable to connect the device's network port to a router/switch/pc.
- Ensure the device power is properly connected (the digital display is lit).

8.1.2 Computer Network Settings (First-Time Connection)

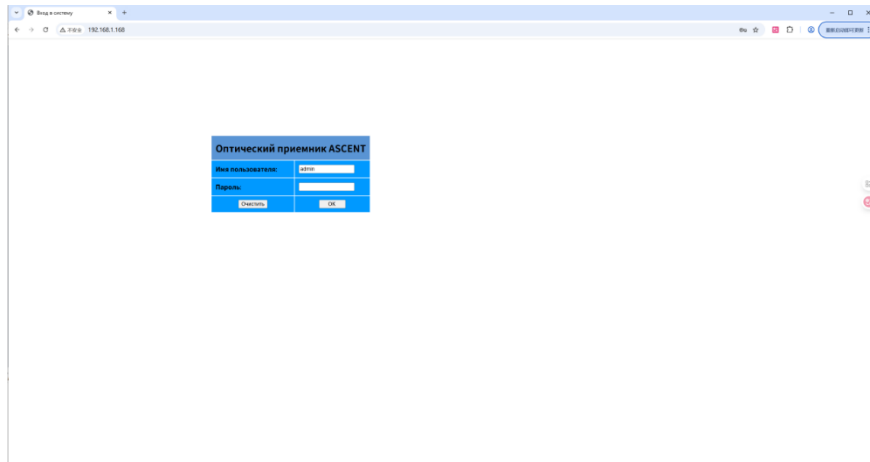
- Set the computer's wired network card IP address to 192.168.1.XXX (where XXX is 2-254, avoiding 168).
- Subnet Mask: 255.255.255.0
- Gateway: 192.168.1.1 (or leave blank)

8.2 Default Login Information

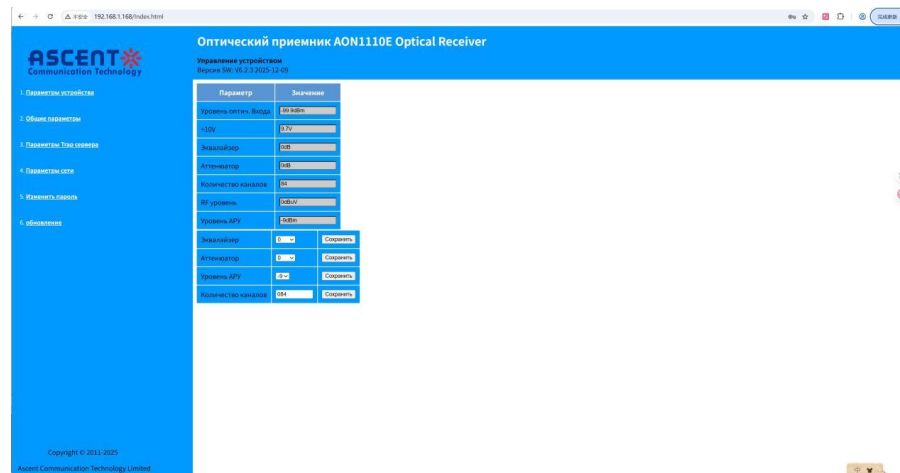
Item	Default Value
Device IP Address	192.168.1.168
Login Username	admin
Login Password	ascent
Web Interface Language	Russian

8.3 Web Interface Navigation

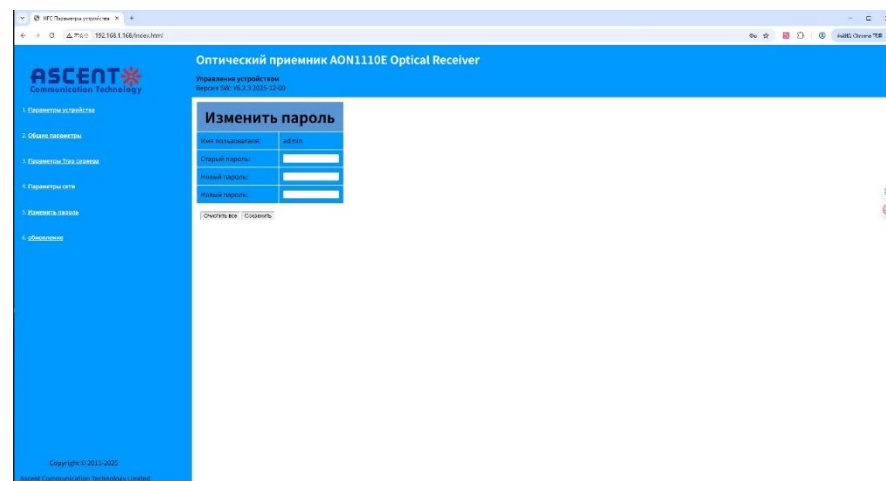
8.3.1 Login



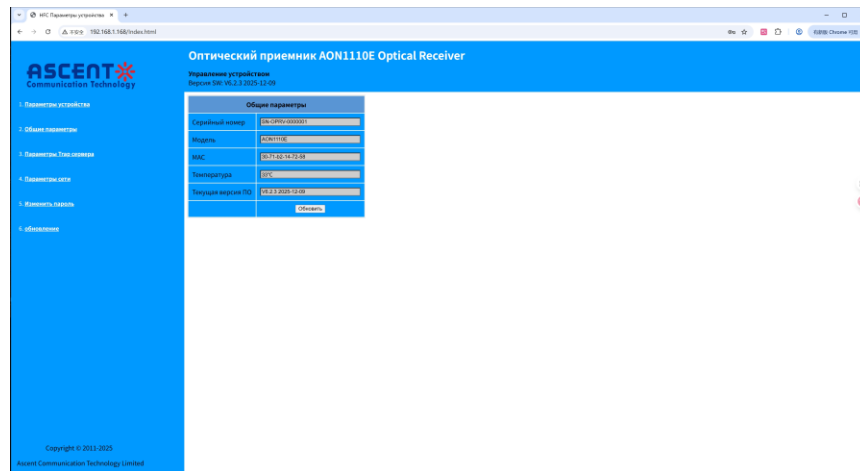
8.3.2 Device Parameter



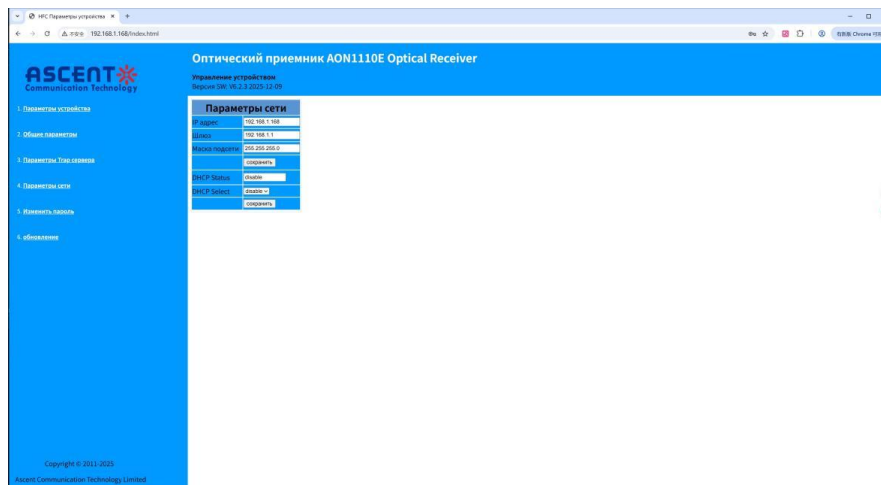
8.3.3 Authentication



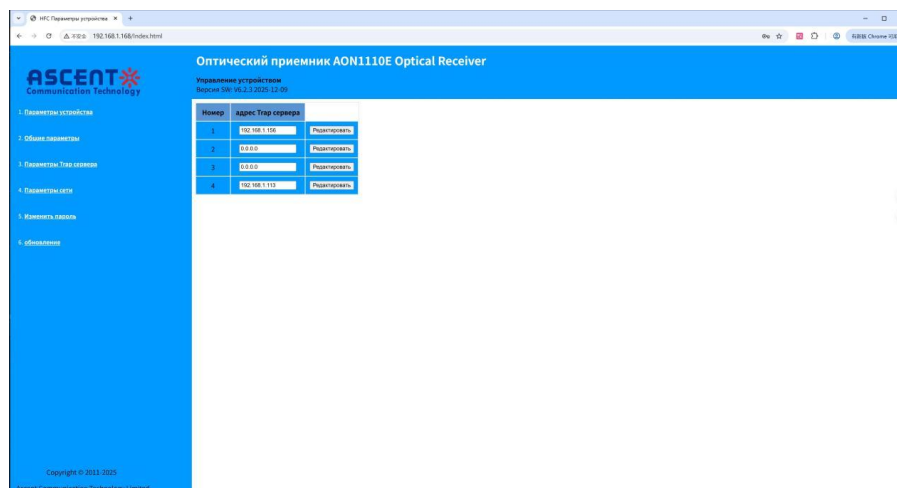
8.3.4 Common



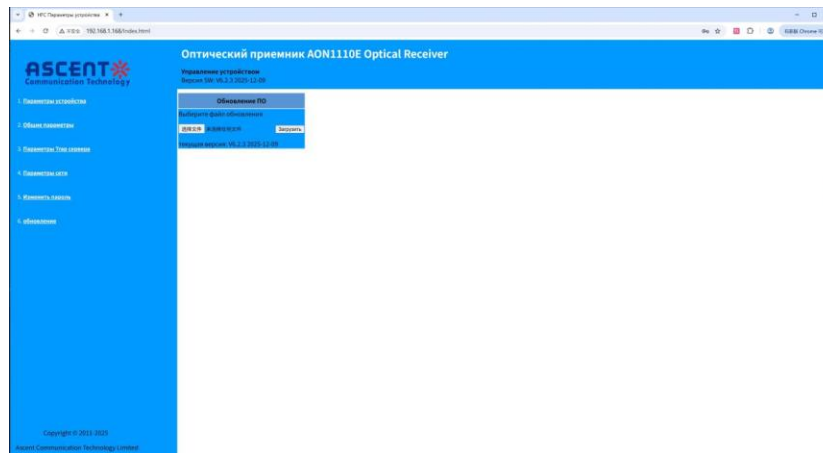
8.3.5 Network



8.3.6 Trap



8.3.7 Update



8.4 Function Display and Operating Instruction

The device front panel has 3 buttons, from left to right accordingly to diagram at chapter 6:

- Button (left) (2) - Control mode selection button
- Button (middle) (3) - Parameter adjustment button: Up
- Button (right) (4) - Parameter adjustment button: Down

The following is the detailed instructions:



8.5 IP Address & Web Login Password Reset

8.5.1 Via Physical Buttons

- Simultaneously press and hold all three buttons together for 5 seconds.
- All digital displays will flash rapidly.
- Release the buttons and wait for the device to reboot.
- The IP address will be restored to default: **192.168.1.168**
- The password will be restored to default: **ascent**



Ascent Communication Technology Ltd

AUSTRALIA

140 William Street, Melbourne
Victoria 3000, AUSTRALIA
Phone: +61-3-8691 2902

Hong Kong SAR

Room 1210, 12th Floor, Wing Tuck Commercial Centre
181 Wing Lok Street, Sheung Wan , Hong Kong SAR
Phone: +852-2851 4722

CHINA

Unit 1933, 600 Luban Road
200023, Shanghai, CHINA
Phone: +86-21-60232616

USA

2710 Thomes Ave
Cheyenne, WY 82001, USA
Phone: +1 203 350 9822

EUROPE

Pfarrer-Bensheimer-Strasse 7a
55129 Mainz, GERMANY
Phone: +49 (0) 6136 926 3246

VIETNAM

11th Floor, Hoa Binh Office Tower
106 Hoang Quoc Viet Street, Nghia Do Ward
Cau Giay District, Hanoi 10649, VIETNAM
Phone: +84-24-37955917

WEB: www.ascentcomtec.com

EMAIL: sales@ascentcomtec.com

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