ASCENT
Communication Technology

AT5000 OPSW Optical Switch

Quick Reference Guide

Revision C

ACT AT5000 1RU Optical Switch

Quick Reference Guide

ACT Document Number: ACT AT5000 OPSW QRG Revision C

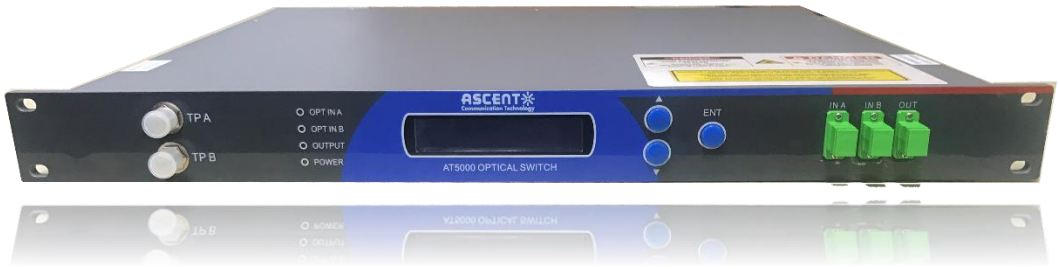
Quick Reference Guide Revision C

Copyright © 2017 Ascent Communication Technology Limited.

All rights reserved. Reproduction in any manner whatsoever without the express written permission of Ascent Communication Technology is strictly forbidden.

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	02/01/2012	Initial release
B	06/01/2012	Format control and front panel update
C	07/11/2017	Updated content

Table of Contents

1 Features 4

2 Before Installation 6

3 Specifications 6

4 Panel Guide 7

5 LED Display 9

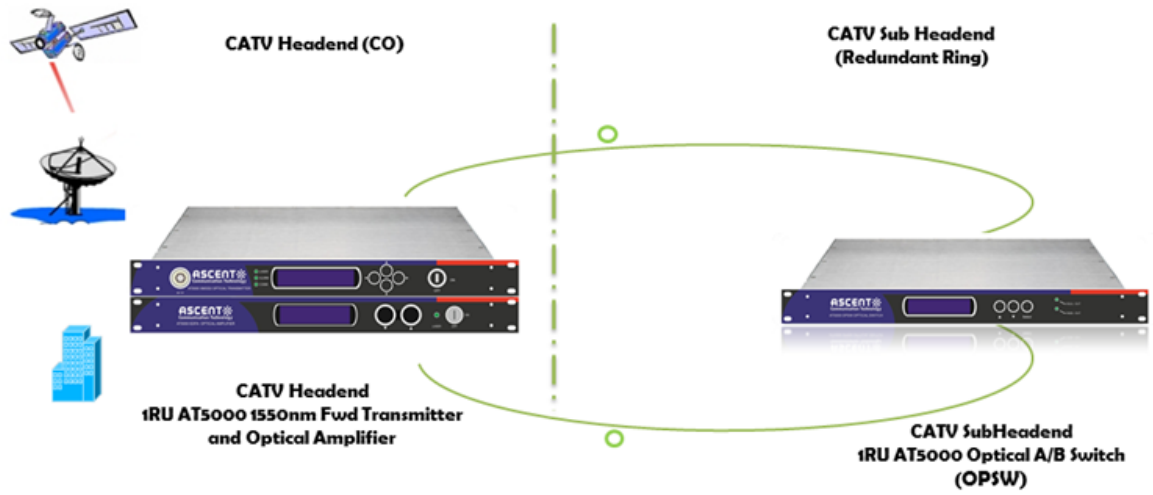
6 WEB Management Interface (Web GUI) 12

1 Features

AT5000 1RU Optical A/B Switch offers a high reliable, flexible, optical fiber route switching platform with low insertion loss and high performance. It is suited for redundant CATV high quality video transmission system, fiber redundant ring, FTTX Video Overlay with 1550nm Optical transmitter and EDFA, to protect the optic path, and fiber ring architecture.

The OPSAB maintains optical output in the event of failure of an optical input. The unit includes an electrically-operated optical switch. The switch can be activated both manually and automatically. Together with ACT 1RU AT5000 XMOD and EDFA optical amplifiers, the 1RU OPSW A/B Switch provides an ideal fiber protection mechanism for long distance video and short, medium video overlay solution in traditional HFC network and also high density FTTX networks to achieve the strict reliability requirement.

AT5000 OPSW receiver is equipped with intuitive front panel LCD display to make operator's life easier. The optical receiver is packaged in a self-contained 19" sub-rack of 1 RU with universal mains power supply and SNMP management.



1. Has both auto and manual function

In auto mode, the default main input is input A with input B for backup. Once there is a failure or the optical power is lower than the set value, it will switch to the backup line. Once conditions are back to normal and the main line is functional again, it will switch to the main line automatically. When the machine is in manual, it can switch to either the main or backup line. The default condition is auto mode.

2. Independent optical RF detector for both inputs

TP A for input A, TP B for input B. When optical input power ≥0 dBm, the RF detector function becomes available. The RF detector will turn on in “Auto” mode; when the detected RF value is lower than the minimum values required, it means there is no RF signal on this input port, and then the detector will switch automatically to another signal input. If it detects an RF signal, the equipments will switch automatically to the normal signal input. If no RF signal is detected on either input, the optical switch will stop working. When the optical input power ≤3 dBm, the RF detect function will turn off to avoid errors. The factory default RF detector function is the “Auto” working mode.

3. Power cut protection function

When the optical switch fails or power cut, it will continue to work in the working line to make sure the network not cut.

4. Dual hot plug-in power supply

If one power supply fails, the operator can change the power supply in working condition, no need to open the machine.

5. Switch power threshold can be changed

The operator can set the switch power threshold by button or by SNMP

6. Works in the -15 dBm to +24 dBm range

7. SNMP support both software and IE

2 Before Installation

1. Please examine this machine, shelf and the power to see if the power supply is good. Keep space at least 4.5 cm in the shelf.

2. Keep the machine good grounded.

3. Please make sure the connector is clean before installation. Please clean the fiber connector with pure alcohol before insert the fiber.

4. After connecting the power, please turn on the power in the back.

3 Specifications

Item	Description
Wavelength	1200 nm to 1600 nm
IL	≤1.0 dBm
Echo Loss	≥55 dB
PDL	≤0.06 dB
Switch Limit	10000000
Switch Range	-15 dBm to +24 dBm
Switch Time	≤10 ms
RF Test Output Level	66 dBm (+3 dBm input)
Power Supply	220 V_{AC} / -48 V_{DC}
Switch	Auto or manual
Network Port	Internet (SNMP), console
Fiber Connector	FC/APC or SC/APC
Relative Humidity	0 % to 95 % (non-condensing)
Operating Temperature	-20 °C to +55 °C
Power Consumption	≤2 W
Dimensions (L × W × H)	483 mm × 270 mm × 44 mm
Weight	3.5 kg

4 Panel Guide

Front panel guide:

TP A and TP B

TP A: RF test port of channel A

TP B: RF test port of channel B

OPT IN A

Green: Input A working

Red: Input A warning

OPT IN B

Green: Input B working

Red: Input B warning

OUTPUT

Green: Working

Red: Warning

POWER

Green: Both power supplies are working

Red: Single power supply is working

LED Display

Displays parameters

IN A and IN B

IN A: Channel A input

IN B: Channel B input

OUT

Optical output

Rear Panel Guide:

PS1 (AC or DC)

Power Supply 1: -48 V_{DC} or 220 V_{AC}, 2 A for fuse

Console

Port standard local management port

ETHERNET

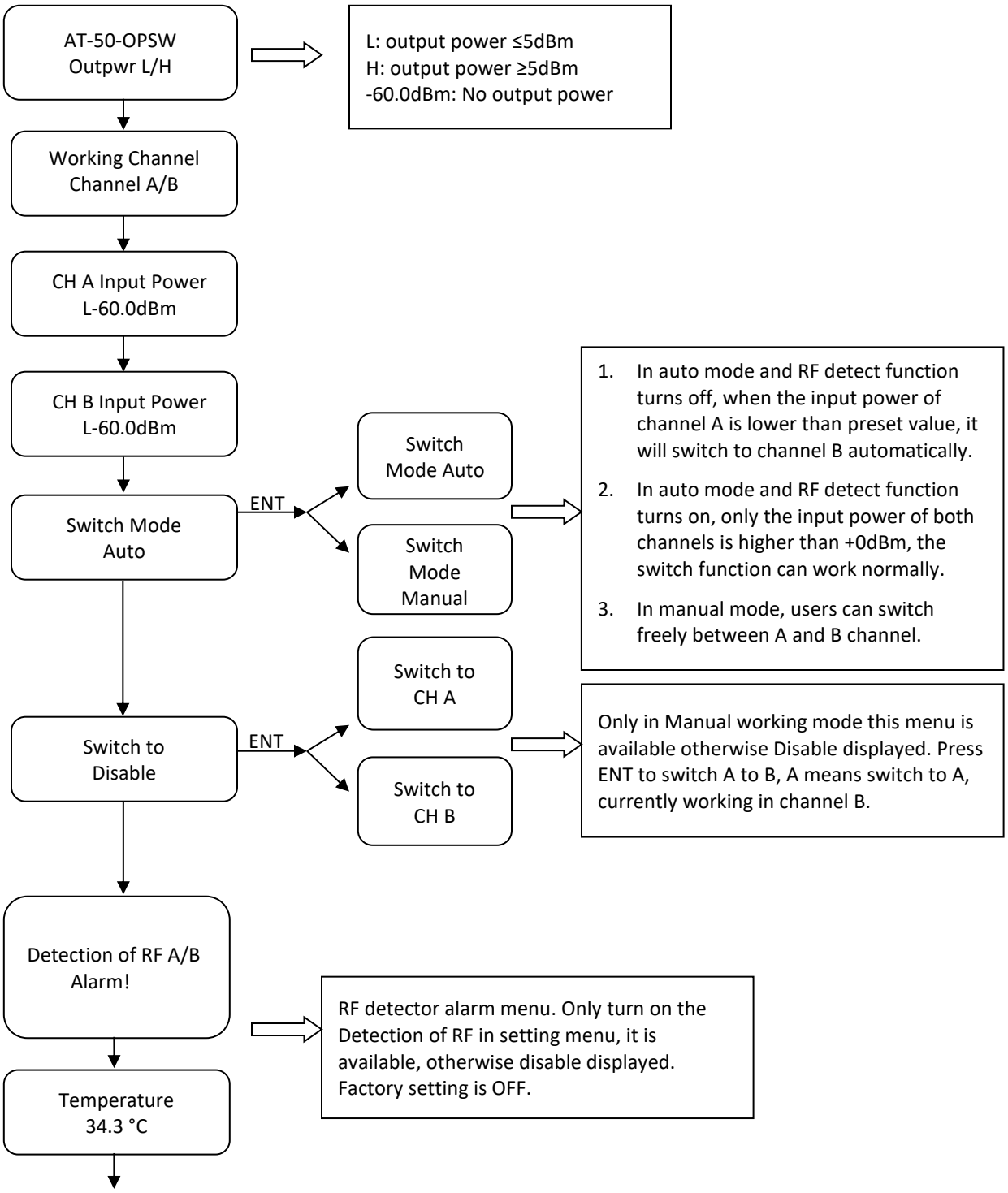
Port standard SNMP management port

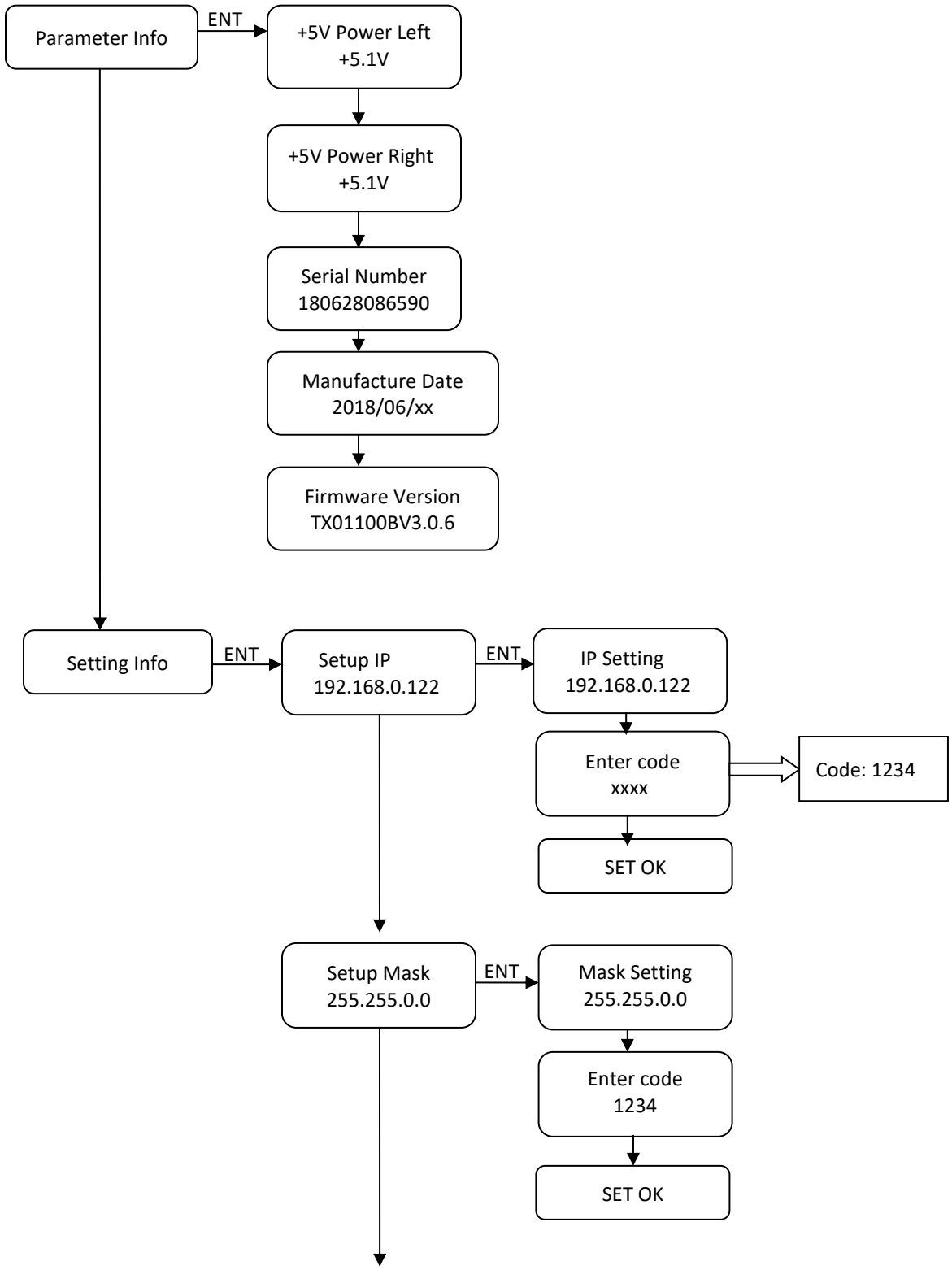
PS2 (AC or DC)

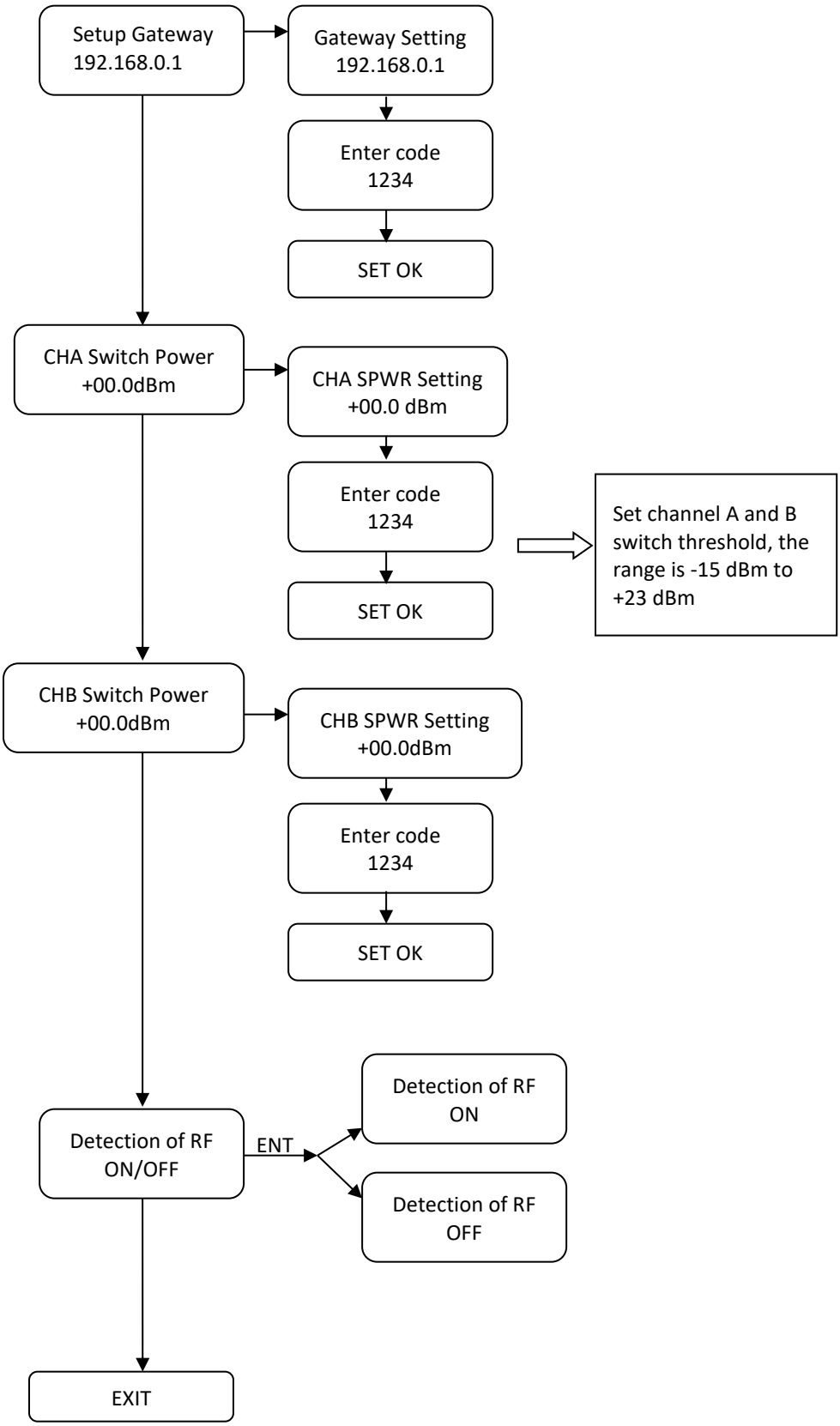
Power Supply 2: -48 V_{DC} or 220 V_{AC}, 2 A for fuse

5 LED Display

Press ↑ ↓and ENT button, you can see the following information




Parameter Info
ENT
+5V Power Left
+5.1V
+5V Power Right
+5.1V
Serial Number
180628086590
Manufacture Date
2018/06/xx
Firmware Version
TX01100BV3.0.6
Setting Info
ENT
Setup IP
192.168.0.122
ENT
IP Setting
192.168.0.122
Enter code
xxxx
Code: 1234
SET OK
Setup Mask
255.255.0.0
ENT
Mask Setting
255.255.0.0
Enter code
1234
SET OK


Setup Gateway
192.168.0.1
Gateway Setting
192.168.0.1
Enter code
1234
SET OK
CHA Switch Power
+00.0dBm
CHA SPWR Setting
+00.0 dBm
Enter code
1234
SET OK
Set channel A and B switch threshold, the range is -15 dBm to +23 dBm
CHB Switch Power
+00.0dBm
CHB SPWR Setting
+00.0dBm
Enter code
1234
SET OK
Detection of RF
ON/OFF
ENT
Detection of RF
ON
Detection of RF
OFF
EXIT

Notes:

1. When the mode is set in “Manual”, the machine can switched automatically, so we advise to set it in “auto”.

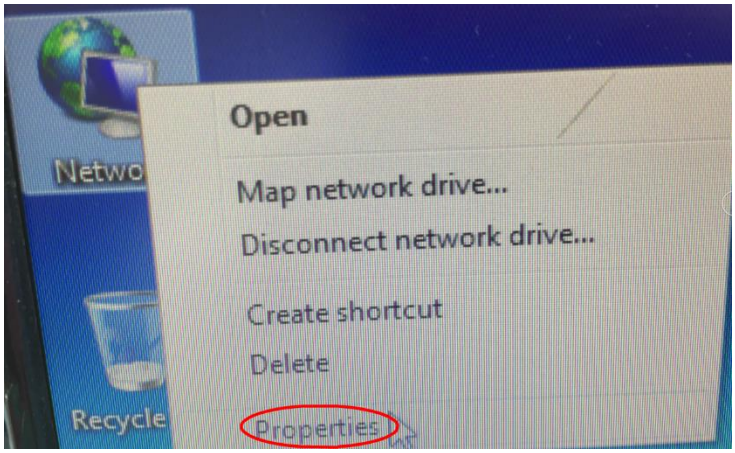
2. In order to protect the fiber connector, turn on the power after the fiber connected.

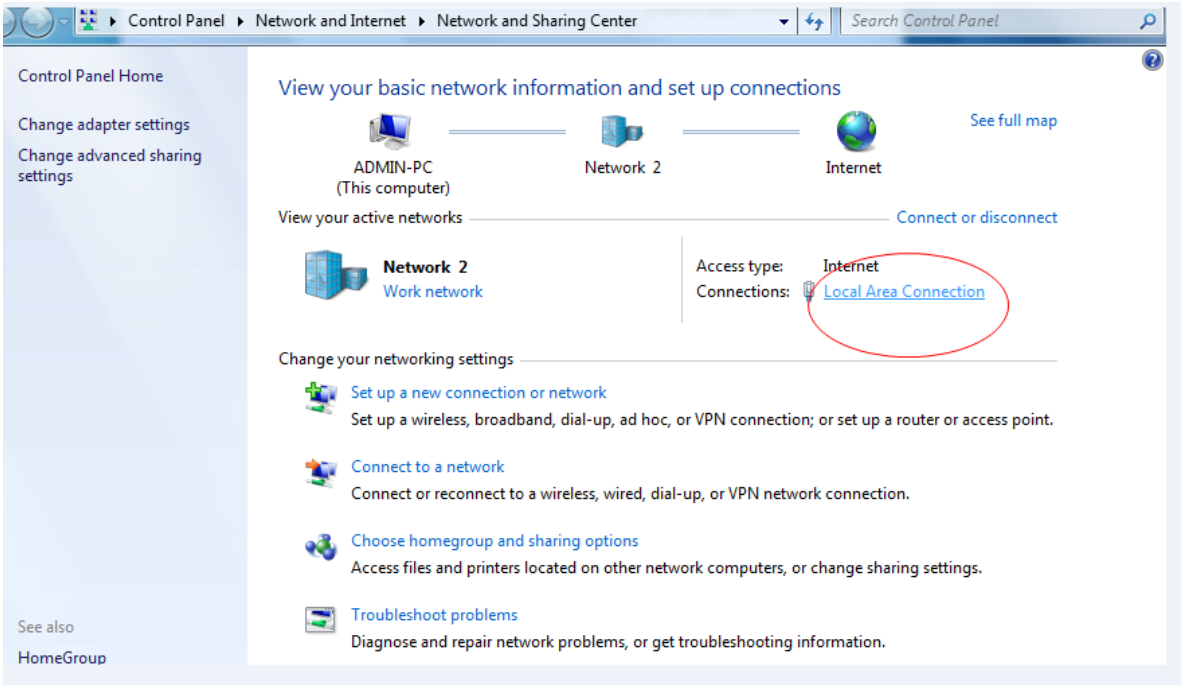
2. Don’t direct the output to human body, Please avoid eyes directly to output.

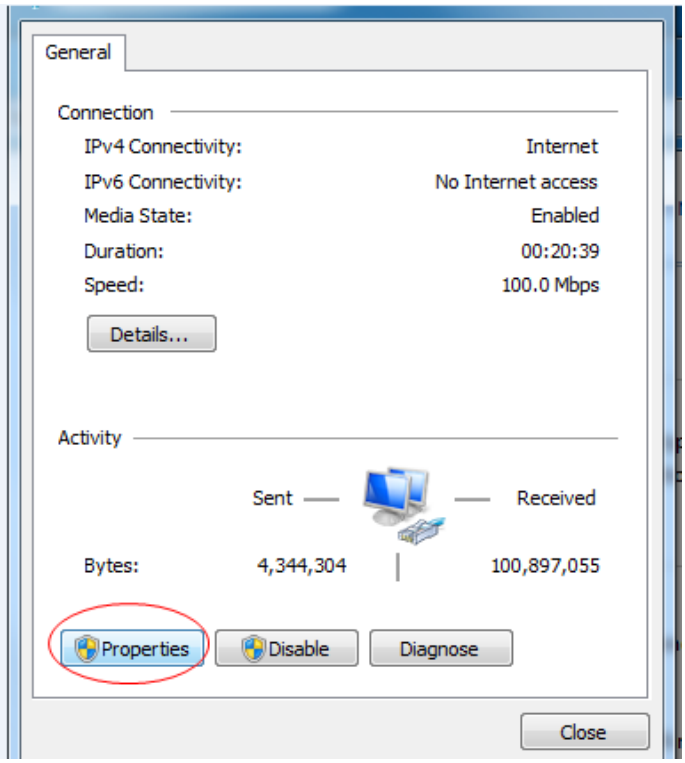
6 WEB Management Interface (Web GUI)

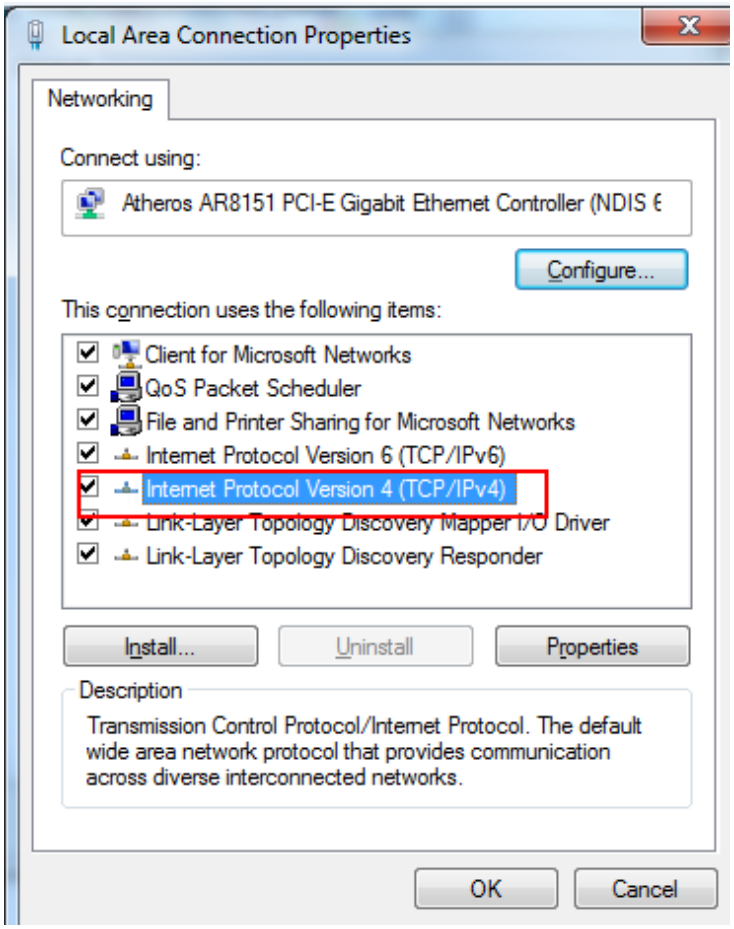
The user can use a web browser to check the working conditions and basic parameters of the amplifier. The amplifier supports IE, Chrome, Firefox, Opera and other web browsers. The following examples are based on Opera browser.

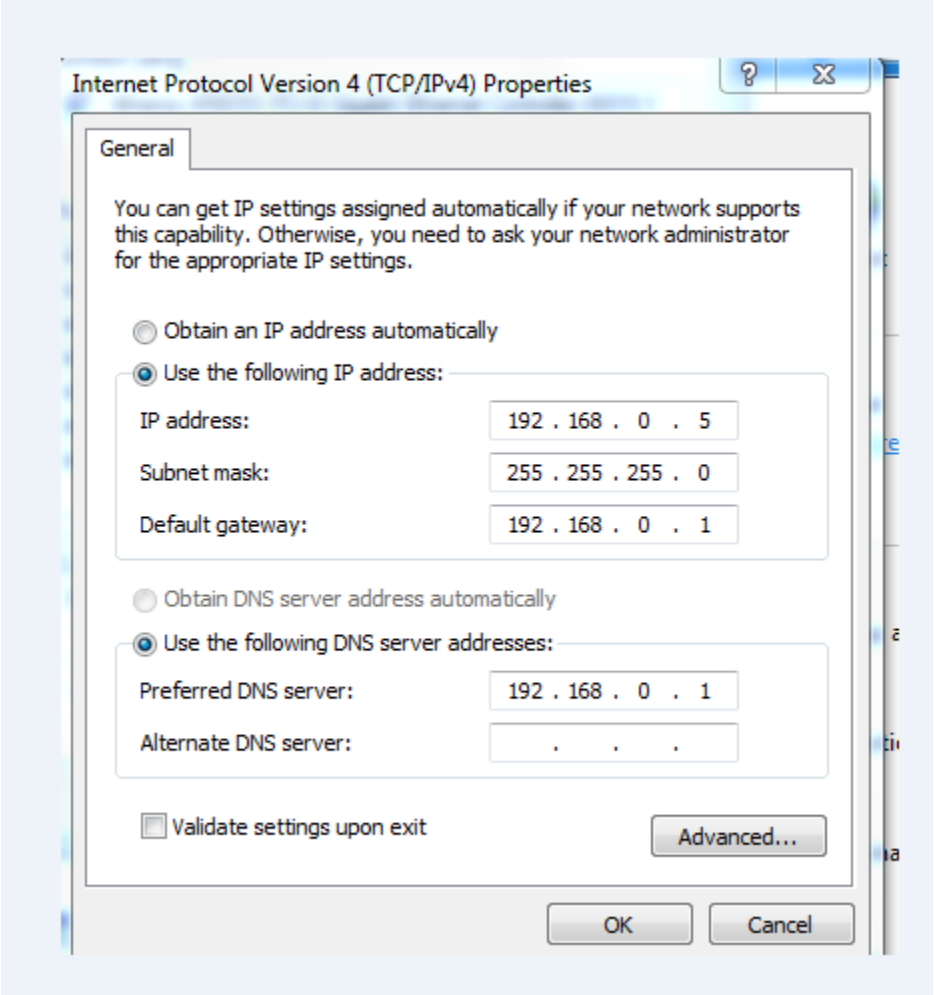
1. Find the IP add in the machine, normally it is 192.168.0.22, set the IP address of the PC in the same range as the following images:



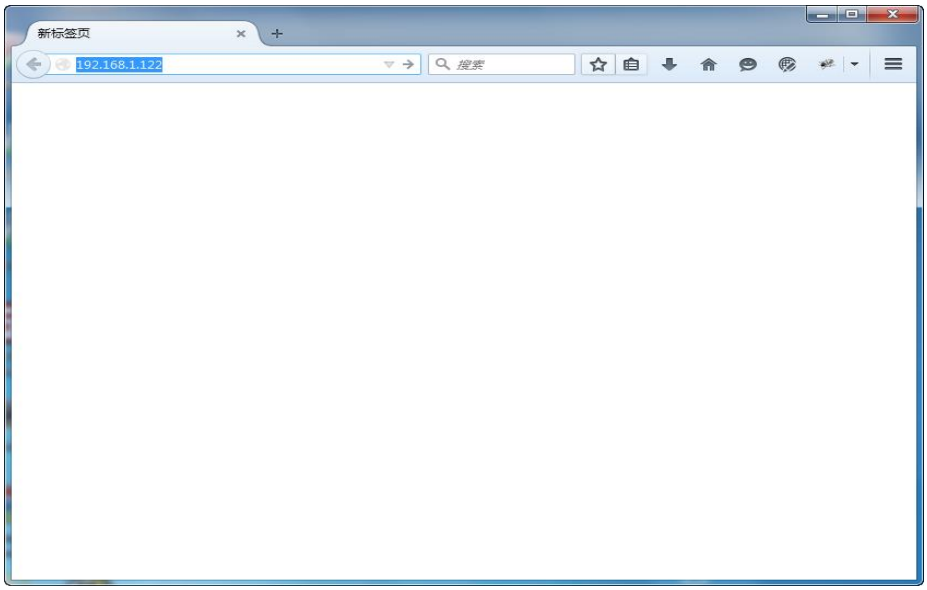

Control Panel ▸ Network and Internet ▸ Network and Sharing Center
Search Control Panel
Control Panel Home
Change adapter settings
Change advanced sharing settings
View your basic network information and set up connections
See full map
ADMIN-PC (This computer)
Network 2
Internet
View your active networks
Connect or disconnect
Network 2
Work network
Access type: Internet
Connections: Local Area Connection
Change your networking settings
Set up a new connection or network
Set up a wireless, broadband, dial-up, ad hoc, or VPN connection; or set up a router or access point.
Connect to a network
Connect or reconnect to a wireless, wired, dial-up, or VPN network connection.
Choose homegroup and sharing options
Access files and printers located on other network computers, or change sharing settings.
Troubleshoot problems
Diagnose and repair network problems, or get troubleshooting information.
See also
HomeGroup


General
Connection
IPv4 Connectivity: Internet
IPv6 Connectivity: No Internet access
Media State: Enabled
Duration: 00:20:39
Speed: 100.0 Mbps
Details...
Activity
Sent
Received
Bytes: 4,344,304 100,897,055
Properties
Disable
Diagnose
Close


Local Area Connection Properties
Networking
Connect using:
Atheros AR8151 PCI-E Gigabit Ethernet Controller (NDIS 6
Configure...
This connection uses the following items:
Client for Microsoft Networks
QoS Packet Scheduler
File and Printer Sharing for Microsoft Networks
Internet Protocol Version 6 (TCP/IPv6)
Internet Protocol Version 4 (TCP/IPv4)
Link-Layer Topology Discovery Mapper I/O Driver
Link-Layer Topology Discovery Responder
Install...
Uninstall
Properties
Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
OK
Cancel



2. Open web browser, input the IP address, For example: 192.168.0.22



Log in to the page.

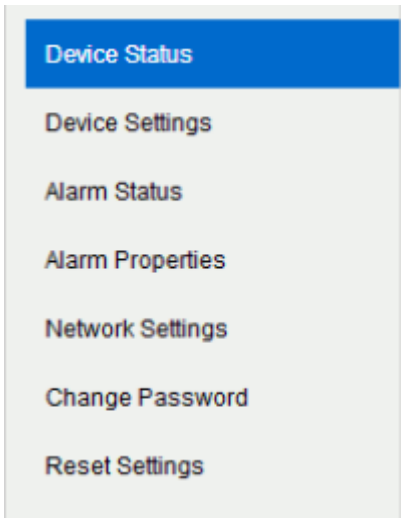
Default user name and password:

User name: ASCENT

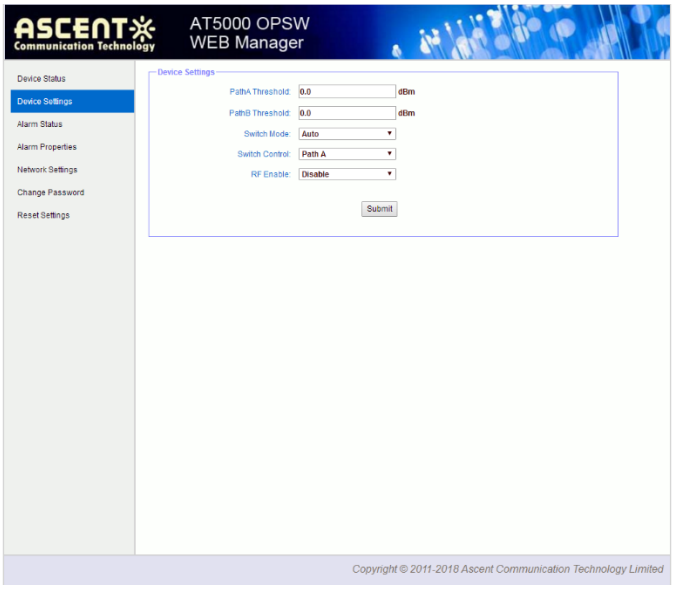
Password: 123456

3. Device status:

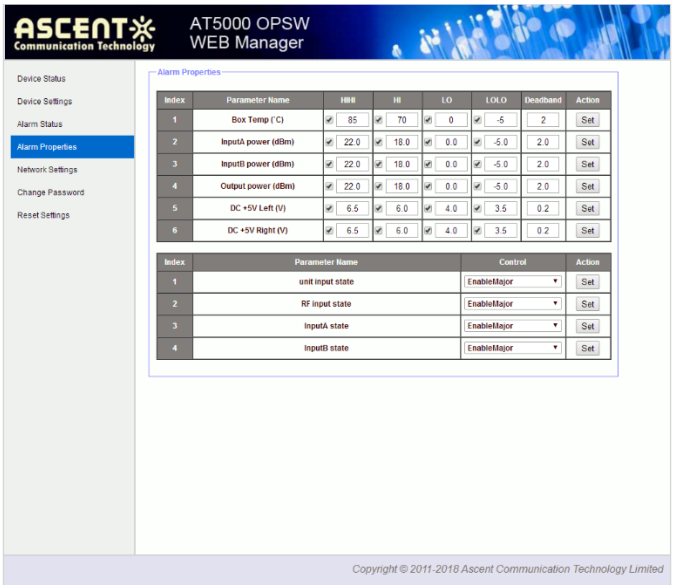
4. Items guide on the left, click to enter:

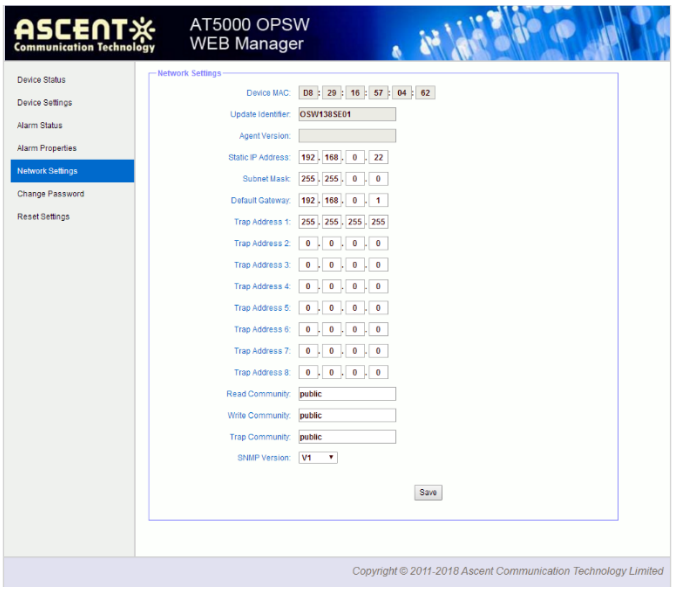

Device Status
Device Settings
Alarm Status
Alarm Properties
Network Settings
Change Password
Reset Settings

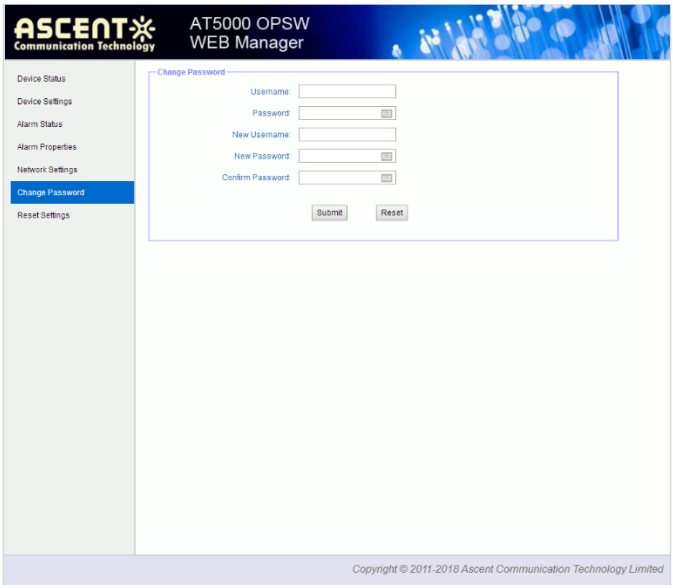
ASCENT Communication Technology
AT5000 OPSW
WEB Manager
Device Status
Device Settings
Alarm Status
Alarm Properties
Network Settings
Change Password
Reset Settings
Device Status
Device Model AT-50-OPSW-RF-M-SC
Serial Number 180628086590
Unit Temprature 34 °C
Switch Mode Auto
RF Enable Disable
RF Status Fault
Index Input Power Threshold Description
1 -60.0 dBm 0.0 dBm Main Path A
2 -60.0 dBm 0.0 dBm Back Path B
Index Output Power Description
1 -60.0 dBm Path A
Index Voltage Name
1 5.1 V Left +5V DC
2 none Right +5V DC
Copyright © 2011-2018 Ascent Communication Technology Limited

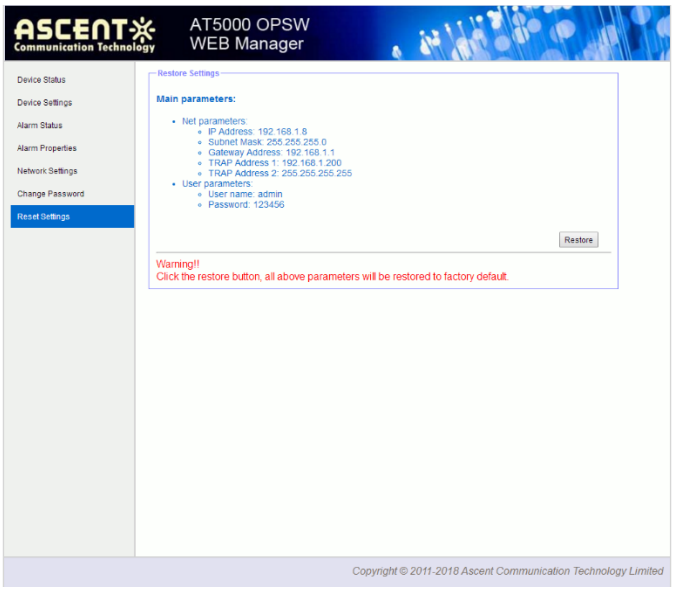

ASCENT Communication Technology
AT5000 OPSW
WEB Manager
Device Status
Device Settings
Alarm Status
Alarm Properties
Network Settings
Change Password
Reset Settings
Device Settings
PathA Threshold: 0.0 dBm
PathB Threshold: 0.0 dBm
Switch Mode: Auto
Switch Control: Path A
RF Enable: Disable
Submit
Copyright © 2011-2018 Ascent Communication Technology Limited

AT5000 OPSW
WEB Manager
Device Status
Device Settings
Alarm Status
Alarm Properties
Network Settings
Change Password
Reset Settings
Alarm Status
Index | Parameter Name | Alarm Status
1 | Box Temp | Nominal
2 | unit input state | DiscreteMajor
3 | RF input state | Nominal
4 | InputA power | LOLO
5 | InputB power | LOLO
6 | InputA state | DiscreteMajor
7 | InputB state | DiscreteMajor
8 | Output power | LOLO
9 | DC +5V Left | Nominal
10 | DC +5V Right | LOLO
Copyright © 2011-2018 Ascent Communication Technology Limited


AT5000 OPSW
WEB Manager
Device Status
Device Settings
Alarm Status
Alarm Properties
Network Settings
Change Password
Reset Settings
Alarm Properties
Index | Parameter Name | HHI | HI | LO | LOLO | Deadband | Action
1 | Box Temp (°C) | 85 | 70 | 0 | -5 | 2 | Set
2 | InputA power (dBm) | 22.0 | 18.0 | 0.0 | -5.0 | 2.0 | Set
3 | InputB power (dBm) | 22.0 | 18.0 | 0.0 | -5.0 | 2.0 | Set
4 | Output power (dBm) | 22.0 | 18.0 | 0.0 | -5.0 | 2.0 | Set
5 | DC +5V Left (V) | 6.5 | 6.0 | 4.0 | 3.5 | 0.2 | Set
6 | DC +5V Right (V) | 6.5 | 6.0 | 4.0 | 3.5 | 0.2 | Set
Index | Parameter Name | Control | Action
1 | unit input state | EnableMajor | Set
2 | RF input state | EnableMajor | Set
3 | InputA state | EnableMajor | Set
4 | InputB state | EnableMajor | Set
Copyright © 2011-2018 Ascent Communication Technology Limited


ASCENT Communication Technology
AT5000 OPSW
WEB Manager
Device Status
Device Settings
Alarm Status
Alarm Properties
Network Settings
Change Password
Reset Settings
Network Settings
Device MAC: D8 : 29 : 16 : 57 : 04 : 62
Update Identifier: OSW138SE01
Agent Version:
Static IP Address: 192 . 168 . 0 . 22
Subnet Mask: 255 . 255 . 0 . 0
Default Gateway: 192 . 168 . 0 . 1
Trap Address 1: 255 . 255 . 255 . 255
Trap Address 2: 0 . 0 . 0 . 0
Trap Address 3: 0 . 0 . 0 . 0
Trap Address 4: 0 . 0 . 0 . 0
Trap Address 5: 0 . 0 . 0 . 0
Trap Address 6: 0 . 0 . 0 . 0
Trap Address 7: 0 . 0 . 0 . 0
Trap Address 8: 0 . 0 . 0 . 0
Read Community: public
Write Community: public
Trap Community: public
SNMP Version: V1
Save
Copyright © 2011-2018 Ascent Communication Technology Limited


ASCENT Communication Technology
AT5000 OPSW
WEB Manager
Device Status
Device Settings
Alarm Status
Alarm Properties
Network Settings
Change Password
Reset Settings
Change Password
Username:
Password:
New Username:
New Password:
Confirm Password:
Submit
Reset
Copyright © 2011-2018 Ascent Communication Technology Limited


ASCENT Communication Technology
AT5000 OPSW
WEB Manager
Device Status
Device Settings
Alarm Status
Alarm Properties
Network Settings
Change Password
Reset Settings
Restore Settings
Main parameters:
Net parameters:
IP Address: 192.168.1.8
Subnet Mask: 255.255.255.0
Gateway Address: 192.168.1.1
TRAP Address 1: 192.168.1.200
TRAP Address 2: 255.255.255.255
User parameters:
User name: admin
Password: 123456
Restore
Warning!!
Click the restore button, all above parameters will be restored to factory default.
Copyright © 2011-2018 Ascent Communication Technology Limited

Ascent Communication Technology Ltd

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

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

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

WEB: www.ascentcomtec.com

HONG KONG SAR
Unit 9, 12th Floor, Wing Tuck Commercial Centre
177 Wing Lok Street, Sheung Wan, HONG KONG
Phone: +852-2851 4722

USA
2710 Thomes Ave
Cheyenne, WY 82001, USA
Phone: +1-203 816 5188

VIETNAM
15 /F TTC Building, Duy Tan Street
Cau Giay Dist., Hanoi, VIETNAM
Phone: +84 243 795 5917

EMAIL: sales@ascentcomtec.com

Specifications and product availability are subject to change without notice.
Copyright © 2017 Ascent Communication Technology Limited. All rights reserved.
Ver. ACT_1RU_OPSW_QRG_V1c_Jul_2017