



**AH10000 Analog
Quad Return
Receiver
Standard Version**

**Quick Reference
Guide**

Revision A

ACT AH1000 Analog Quad Return Receiver Standard Version

Quick Reference Guide

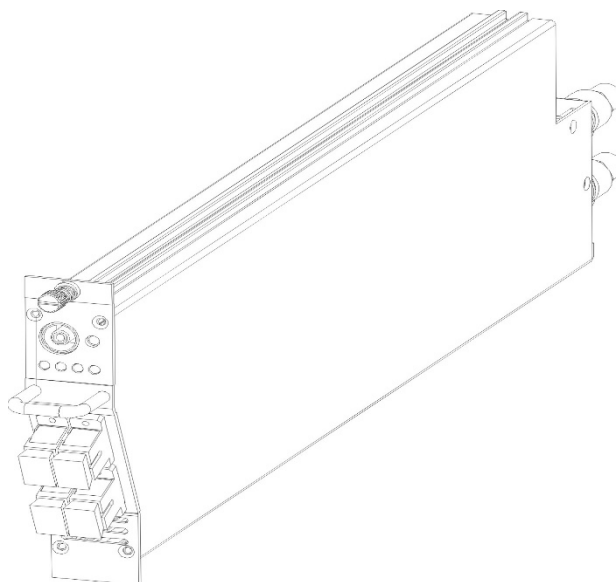
ACT Document Number: ACT Analog Quad Return Receiver Standard Version Quick Reference Guide Revision A

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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	12/15/2015	Initial Release

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Device Description

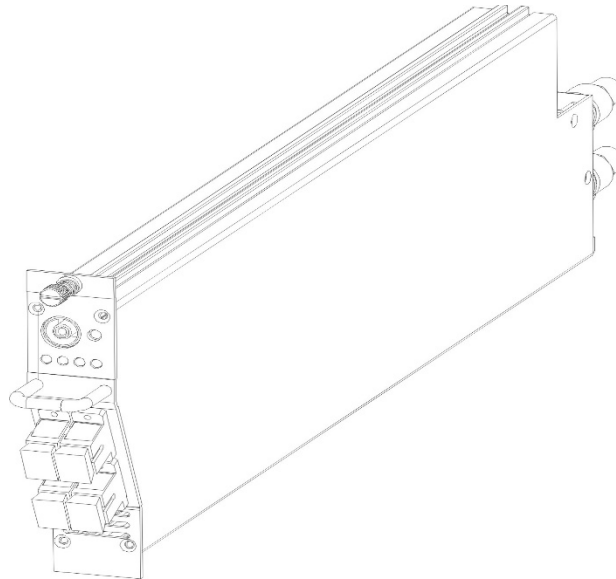


Fig.1 Four-channel return path optical receiver module

Four-channel return path optical receiver module is mainly used for the receiving of return path television image signal, digital television signal, telephone voice signal and data (or compressed data) signal. Adopt high quality optical receiving device; signal amplifier adopt imported low noise GaAs module to ensure the good signal output.

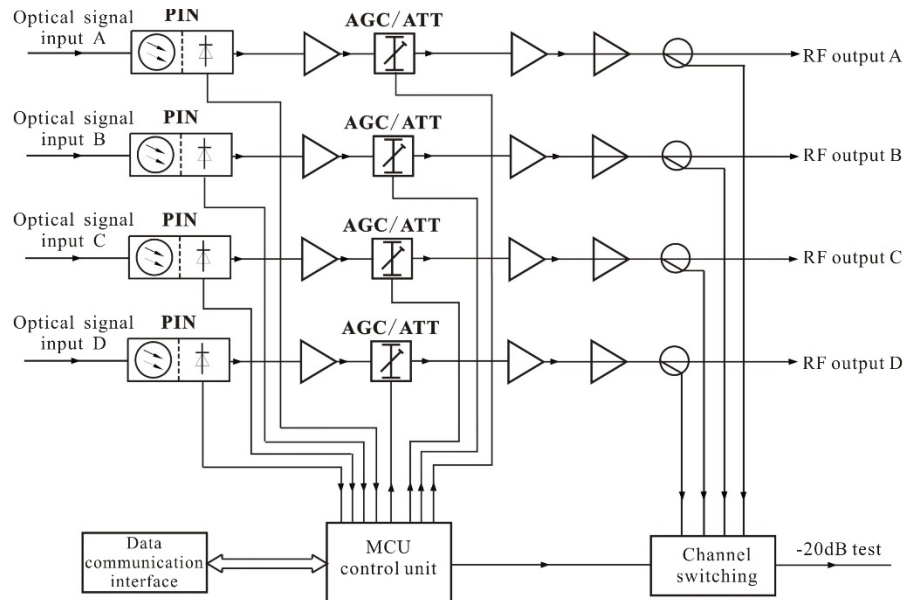
Structure

Its housing is made of metal sheet. This unit can be mounted or pull out from the rack front.

Internal circuit

Each return path optical receiver module includes four optical detectors to receive four-channel optical signal and change them into RF signal, and pre-amplify them independently. The RF output signal will turn off RF output automatically when have optical input power alarm or RF output alarm (RFSwMode AUTO). This module keeps data exchange with status control system CPU by sampling, A/D switching circuit and communication interface circuit.

Block Diagram



Performance Parameters

Item	Technical Parameter
Optical Parameters	
Receiving Optical Power Range	-12 dBm to +2 dBm
Optical AGC Range	-10 dBm to 0
Optical Return Loss	≥45 dB
Optical Receiving wavelength range	1100 nm to 1600 nm
Optical Connector type	SC/APC
Fiber Type	Single mode
RF Parameters	
Frequency Range	5 MHz to 200 MHz
Output Level	97 dBμV (Pin > -10 dBm)
Flatness in Band	≤0.75 dB
Return Loss	16 dB
Output Impedance	75 Ω
Level Adjustable Range	0 to 10 dB
RF Test Port	-20 dB
Stability of RF Output Level	<1 dB
NPR Dynamic Range	15 dB
Link Performance	
C/N	51 dB
C/CTB	65 dB
C/CSO	60 dB
General Characteristics	
Power Consumption	<25 W
Operating Temperature	0 °C to 45 °C
Storage Temperature	-20 °C to 65 °C

Instruction and Connection

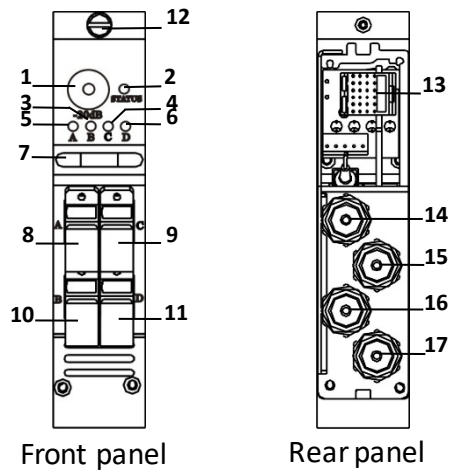


Fig.2 The front panel and rear panel

No.	Name	Comment
1	RF Output Test Port	Actual output level -20 dB
2	RF Detection Channel Select Button	The corresponding channel indicator flashes.
3	Input Optical Power Indicator B	On: means the optical input is normal Off: means the optical input is abnormal Flash: means current status is RF test
4	Input Optical Power Indicator C	On: means the optical input is normal Off: means the optical input is abnormal Flash: means current status is RF test
5	Input Optical Power Indicator A	On: means the optical input is normal Off: means the optical input is abnormal Flash: means current status is RF test
6	Input Optical Power Indicator D	On: means the optical input is normal Off: means the optical input is abnormal Flash: means current status is RF test
7	Module Handle	Used to push/pull the module
8	Optical Power Input A	
9	Optical Power Input C	
10	Optical Power Input B	
11	Optical Power Input D	
12	Module Fixing Screw	For module fixation
13	Module Socket	Connection socket between module and rack
14	RF Output D	Correspond to the D connector on the rear panel of rack
15	RF Output C	Correspond to the C connector on the rear panel of rack
16	RF Output B	Correspond to the B connector on the rear panel of rack
17	RF Output A	Correspond to the A connector on the rear panel of rack

Installation



Note

All assembly work should be done by qualified operators.

Memorize the following precautions before installation:

- Try to avoid collision the previously installed application module in the rack, especially the connected optical fiber.
- Avoid bending, twisting, twitching and squeezing the optical fiber.

Mount the Module into the Rack

Steps are shown in Fig.3:

1. Push the module into the application module slot;
2. When it is in the proper place you will hear a “click”.
3. Then tighten the fixing screw.

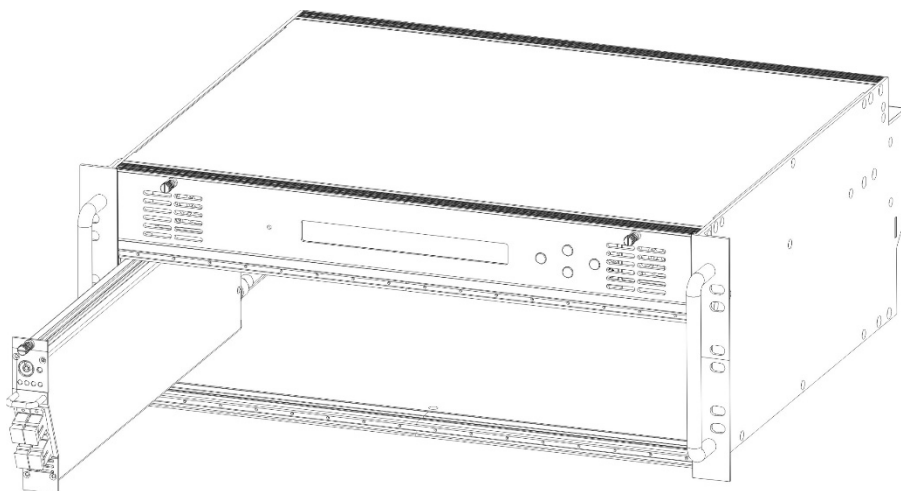
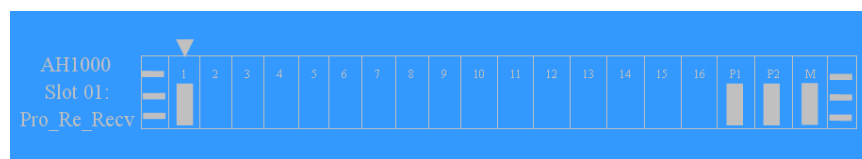


Fig.3 Mount the four-channel return path optical receiver module into the rack

Check the Status Display

- After insert module, the corresponding slot will show “”, as follows:



- Press “Enter” button to open the status display interface of current module, and then press up/down to select the parameters page.
- Press “ESC” button to exit.

Menu Settings

Press “Enter” button to show the status display interface of four-channel return path optical receiver module, as follows:

AH1000 Slot 01:Pro_Re_Recv		ARecvPower	-xx.xdBm
		BRecvPower	-xx.xdBm
		CRecvPower	-xx.xdBm
		DRecvPower	-xx.xdBm

Press up/down button to select the menu item, the drop-down menu content shown as below:

AH1000 Slot 01:Pro_Re_Recv		ARecvPower	-xx.xdBm		
		BRecvPower	-xx.xdBm		
		CRecvPower	-xx.xdBm		
		DRecvPower	-xx.xdBm		
		AOutRFLevel	x.xdBuV		
		BOutRFLevel	x.xdBuV		
		COutRFLevel	x.xdBuV		
		DOutRFLevel	x.xdBuV		
		AOptAGCEn	Enable	Enable	Disable
		BOptAGCEn	Enable	Enable	Disable
		COptAGCEn	Enable	Enable	Disable
		DOptAGCEn	Enable	Enable	Disable
		ARFSwMode	Auto	Auto	Manual
		BRFSwMode	Auto	Auto	Manual
		CRFSwMode	Auto	Auto	Manual
		DRFSwMode	Auto	Auto	Manual
		ARFSwStaus	ON	ON	OFF
		BRFSwStaus	ON	ON	OFF
		CRFSwStaus	ON	ON	OFF
		DRFSwStaus	ON	ON	OFF
		AAtt	0dB	X dB	
		BAtt	0dB	X dB	
		CAtt	0dB	X dB	
		DAtt	0dB	X dB	
		ChanNum	0	xx	
		DevTemp	xx.x°C		
		SN	x-xxxxxx		
		Version	x.xx		
		WorkTime	x.xHour		

Content

A/B/C/DRecvPower

A/B/C/DOutRFLevel

A/B/C/DOptAGCEn

A/B/C/DRFSwMode

Comment

A/B/C/D optical receiving power

A/B/C/D output level

A/B/C/D AGC status,
“Enable”—ON, “Disable”—OFF.

A/B/C/D RF output mode,
“Auto”—automatic mode, “Manual”—manual mode.

A/B/C/DRFSwStaus	A/B/C/D RF output switch, “ON” —turn on, “OFF” —turn off. This switch can be selected ON or OFF under the manual mode, but must be ON under the automatic mode.
A/B/C/DAtt	A/B/C/D RF output attenuation, range0 to 10 dB
ChanNum	Channel number, range 0 to 100
DevTemp	Module temperature
SN	Serial number
Version	Version number
WorkTime	Working hours



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