



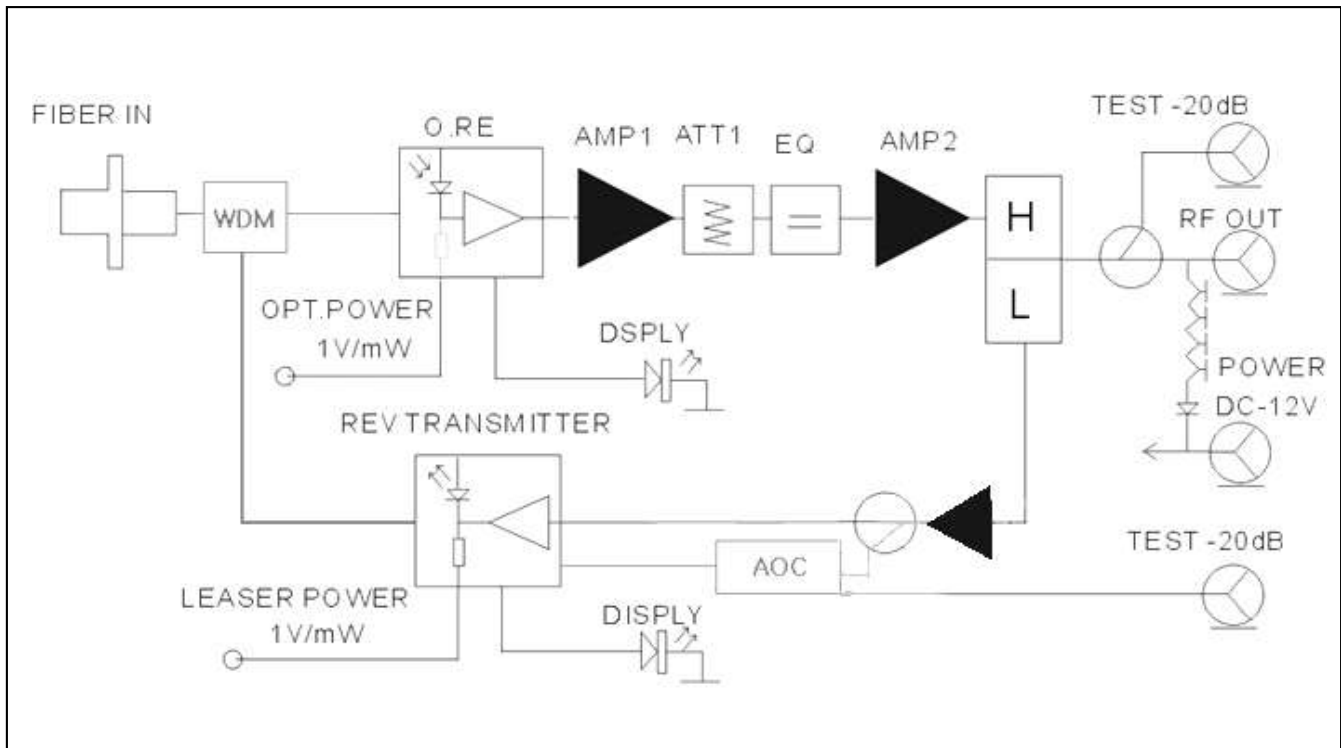
ACION 230 RFoG Optical Network Unit

The ACION 230 RFoG optical network unit with burst mode upstream is a bi-directional optical node for single fiber (WDM) transmission in an RFoG network. It is the ideal platform for delivering video (digital or analog) as well as high-speed data services in a fiber deep or FTTN network. This optical node incorporates superior proven technologies for the RF amplifier and optical components. In the forward receiver path, the node contains an Automatic Gain Control (AGC) circuit to maintain the output level over an input optical power of -6~+2dBm. In the return path, Automatic Optical Control (AOC) circuit is designed to reduce the return noise effectively to lower the power consumption and prolong the working life. The ACION 230 is very compact in size with excellent performance and has very high reliability required by FTTB/FTTH networks.

Features

- Forward and return bi-directional optical transmission through single fiber with SC/APC connector
- Return optical transmitter with burst mode operation
- Automatic Gain Control (AGC) for forward path receiver
- Automatic Optical Control (AOC) circuit in return path for reducing return noise
- Receiver optical power indicator
- Receiver optical power test port
- Return optical power test port
- Return optical power indicator
- Forward output level test port: @ -20 dB
- Return input level test port: @ -20 dB
- Power on/off indicator
- Separate +12 VDC power supply port

Block Diagram



Specifications

ACION 230 Optical Network Unit						
PARAMETERS	CONDITIONS	UNITS	SPECIFICATION			NOTES
Forward Receiver			Min.	Typ.	Max.	
Optical wavelength		nm	1500	1550	1600	
Monitor voltage	$\lambda = 1550$	V/mW		1		
Optical input power	Continuous	mW	0.25	1	2	
Frequency range	Optional	MHz	54		1002	
Flatness of frequency response	f=54 to 1002 MHz	dB		± 0.5		
RF output return loss		dB	16	18		
Reference output level		dBmV		25		
Optical input return loss		dB	45			
CTB	NTSC 79 channel loading	dB			-65	
CSO		dB			-60	
Equivalent input noise	f=55 MHz	PA/(Hz) ^{1/2}			7	

ACION 230 Optical Network Unit						
PARAMETERS	CONDITIONS	UNITS	SPECIFICATION			NOTES
Return Transmitter			Min.	Typ.	Max.	
Optical wavelength		nm	1290	1310	1330	
Optical output power		mW	0.5	1	2	
Monitor voltage	$\lambda = 1310$	V/mW		1		
RF input level		dBmV	5	20	35	
Frequency range*	Optional	MHz	5		42	
Flatness of frequency response	f=5 to 42MHz	dB		± 0.5		
RF input return loss	f=5 to 42MHz	dB	16	18		
Optical output return loss		dB	45			
Optical output return loss		dB	45			
Burst Mode**						
RF input transmit OFF=>ON		dBmV	3	4	5	
RF input transmit ON=>OFF		dBmV	-1	0	1	
OFF output power	Transmitter OFF	mW			0.001	
ON↔OFF transition time		ms			0.01	
General Parameters						
Total current consumption (DC)	@ +8 VDC	mA		350		
Operating mounting base temperature		°C	-20		+55	

*Different diplex frequency splits are available (e.g. 5~ 65/85~1002MHz)

**Burst mode parameters can be adjusted according to customer's request.

Ordering Matrix

ACION 230 Configuration Sheet

Customer: _____

Created By: _____

Order Date: _____

ORDERING MATRIX

2010/11/12

Position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PART NUMBER	A	2	3	0											

- | | |
|---|---|
| <p>5 <input type="checkbox"/> CONFIGURATION
1 = Bi-directional, Single Fiber, Burst Mode</p> | <p>12 <input type="checkbox"/> RETURN TRANSMITTER WAVELENGTH
1 = 1310nm
2 = 1590nm
3 = 1610nm</p> |
| <p>6 <input type="checkbox"/> DIPLEX FREQUENCY SPLIT
4 = 42/53 1002 MHz
6 = 65/85 1002 MHz</p> | <p>13 <input type="checkbox"/> TRANSFORMER TYPE
0 = None
1 = North America
2 = International / Europe
3 = Japan
4 = Australia
5 = Argentina
X = Other (contact product area agent)</p> |
| <p>7 <input type="checkbox"/> FORWARD OUTPUT LEVEL
1 = 25 dBmV</p> | <p>14 <input type="checkbox"/> CUSTOM FEATURE
0 = None
X = Determined by product manager</p> |
| <p>8 <input type="checkbox"/> RETURN INPUT LEVEL
2 = 20 dBmV
3 = 30 dBmV
4 = 40 dBmV</p> | |
| <p>9 <input type="checkbox"/> OPTICAL CONNECTOR TYPE
1 = SC/APC
2 = SC/UPC
3 = FC/APC
4 = FC/UPC</p> | |
| <p>10 <input type="checkbox"/> RETURN TRANSMITTER TYPE
F = FP Laser
D = DFB Laser</p> | |
| <p>11 <input type="checkbox"/> RETURN OUTPUT POWER
1 = 1mW
2 = 2mW
3 = 3mW</p> | |

NOTES:



ACI Communications, Inc.
23307 66th Avenue South
Kent, WA 98032

Rev A 8-2-2016 Printed in U.S.A.
ACI Communications, Inc. reserves the right to discontinue the manufacture or change specifications without prior notice on any parts illustrated in this data sheet. Registered trademarks are the property of their respective owners