



ACION 8000 Series

A8KFT3S 1310nm Forward Optical Transmitter (with full spectrum AGC)

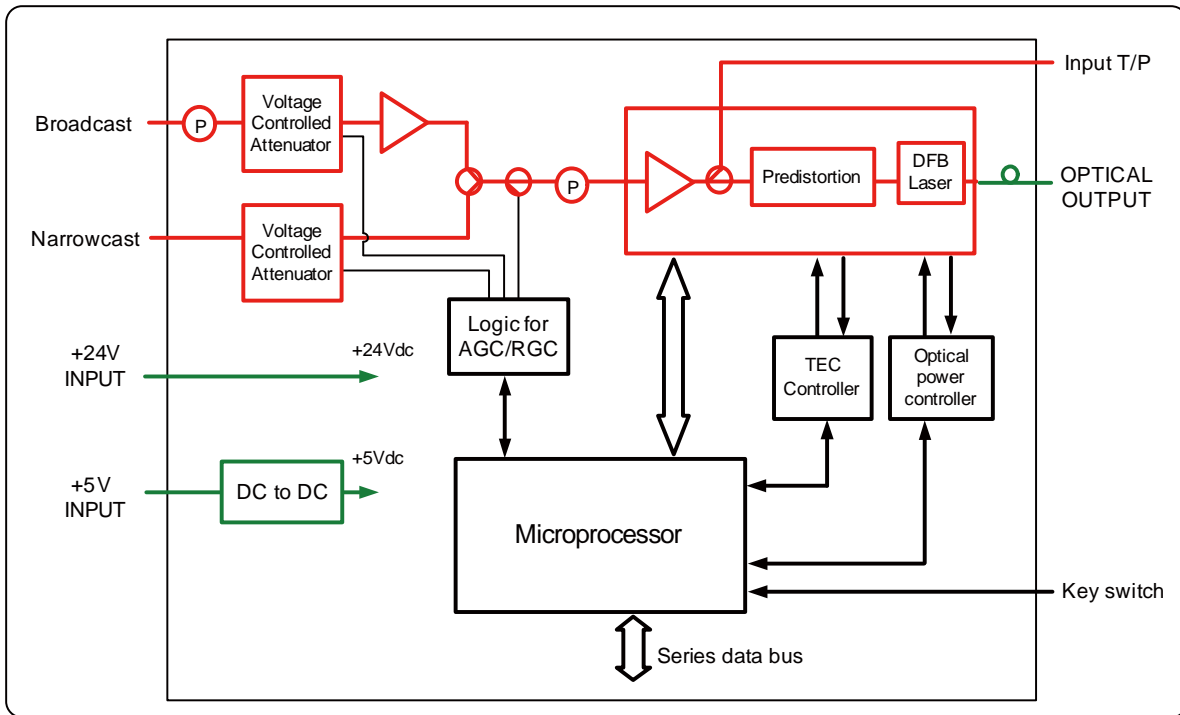
The ACION 8000 A8KFT3S-1310 nm forward optical transmitter is used for HFC or FTTH applications. This compact and cost effective module is 3 RU in height and up to 12 modules can be integrated in the 19-inch high-density chassis (A8KMF3).

The RF transmission bandwidth is up to 1GHz. The high performance AGC and RGC functions provide a very stable optical output for a wide RF input range.

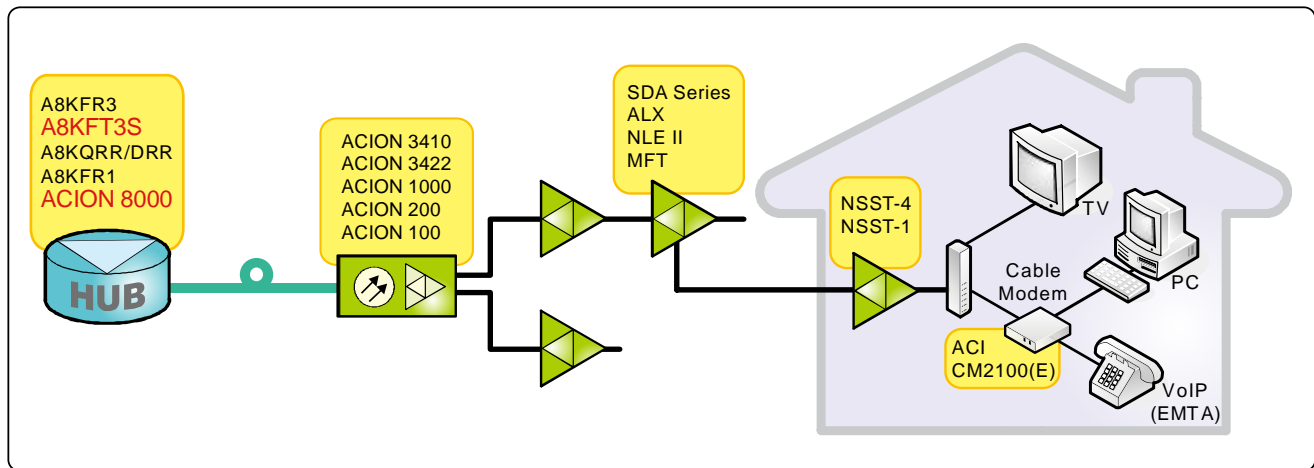
Features

- ◆ Up to 1 GHz transmission bandwidth.
- ◆ Full spectrum AGC.
- ◆ 1310 nm optical wavelength.
- ◆ Plug-in JXP attenuator pads for RF gain control.
- ◆ Hot-swappable.
- ◆ Cooled DFB laser diode with isolator.
- ◆ Remote monitor and control function by HMS or SNMP.
- ◆ RF front-panel test point.
- ◆ Optical connector: SC/APC with shutter (standard), FC/APC or E2000/APC (optional).

Block Diagrams



Application



Specifications

ACI		ACION 8000 Series A8KFT3S 1310 nm Forward Optical Transmitter (with full spectrum AGC)		
PARAMETERS	CONDITIONS	UNITS	SPECIFICATION	NOTES
Optical Specification				
Laser Type			Cooled DFB LD with isolator	
Optical Wavelength		nm	1310 ± 10	
Connector Type			SC/APC (standard) FC/APC, E2000/APC (optional)	
Optical Power		dBm	Standard: 3,6,10,13 Optional: 4,5,7,8,9,11,12,14,15	
RF Parameters				
Operating Bandwidth		MHz	50 to 1003	
Channel Loading	NTSC	channel	79 Analog 75 Digital QAM	
RF Input Return Loss	Worst Case	dB	-16	
Broadcast and Narrowcast RF Input Level	AGC mode	dBmV/ch	15 ± 4	(1)
	MGC mode	dBmV/ch	15	(1)
AGC Loading Range (Full spectrum AGC)	NTSC	CH	10 to 110	(2)
AGC Level Setting		dBmv	21 ± 2	
Remote Gain Control Range	RGC mode	dB	-4 ~ +4 (Total 50Ω RF Input Level 0±0.5)	
Flatness (Peak-to-Valley)	50 to 1003MHz	dB	± 0.5	
Test Point		dB	0 ± 0.5	
Port-to-Port Isolation (Narrowcast to Broadcast)		dB	50	
Distortion Performance				
Composite Second Order (CSO)	Max.	dBc	-65	
Composite Triple Beat (CTB)	Max.	dBc	-70	
Cross-Modulation		dBc	-65	

Specifications

ACI		ACION 8000 Series A8KFT3S 1310 nm Forward Optical Transmitter (with full spectrum AGC)		
		PARAMETERS	CONDITIONS	UNITS
Electrical/Environmental/Mechanical				
RF Connector Type	Rear Panel		F type female	
Module Width		slot	1	
Dimensions	DxHxW	in. (mm)	16.1 x 5.0 x 1.0 (410.0 x 127.0 x 25.9)	
Weight		lbs. (kg)	2.2 (1.0)	
Operating Temperature		°F (°C)	32 to 122 (0 to 50)	
Storage Temperature		°F (°C)	-40 to 149 (-40 to 65)	
Relative Humidity	Non-condensing	%	0 ~ 95	
Power Consumption	Max.	W	15.6	

Notes:

- (1) Typical OMI ~ 3.2% / per channel. QAM carriers @-6dBc
- (2) Loading can be set by end user, and must be multiple for ten, for example, 10ch, 20ch, 30ch.....110ch

Performance Specifications

Carrier-to-Noise

Model #	Output Power	Total Optical Link Loss (dB)																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
A8KFT3S-1310-03-xx	3-4 dBm	54.0	53.0	52.0	51.0	50.0												
A8KFT3S-1310-04-xx	4-5 dBm		54.0	53.0	52.0	51.0	50.0											
A8KFT3S-1310-05-xx	5-6 dBm			54.0	53.0	52.0	51.0	50.0										
A8KFT3S-1310-06-xx	6-7 dBm				54.0	53.0	52.0	51.0	50.0									
A8KFT3S-1310-07-xx	7-8 dBm					54.0	53.0	52.0	51.0	50.0								
A8KFT3S-1310-08-xx	8-9 dBm						54.0	53.0	52.0	51.0	50.0							
A8KFT3S-1310-09-xx	9-10 dBm							53.5	53.0	51.5	51.0	49.5						
A8KFT3S-1310-10-xx	10-11 dBm								53.5	52.0	51.5	50.0	49.5					
A8KFT3S-1310-11-xx	11-12 dBm									53.0	52.0	51.0	50.0	49.0				
A8KFT3S-1310-12-xx	12-13 dBm										53.0	52.0	51.0	50.0	49.0			
A8KFT3S-1310-13-xx	13-14 dBm											53.0	52.0	51.0	50.0	49.0		
A8KFT3S-1310-14-xx	14-15 dBm												52.5	51.5	50.5	49.5	48.5	
A8KFT3S-1310-15-xx	15-16 dBm													52.5	51.5	50.5	49.5	48.5

Note: CNR numbers based on 79CH NTSC analog and 75CH digital carriers, OMI 3.2%.

Ordering Matrix

A8KFT3S 1310nm Configuration Sheet

Customer: _____

Created By: _____

ORDERING MATRIX

2016/2/17

Position		1	2	3	4	5
PART NUMBER	A8KFT3S-1310	—		—		

1-2. Output Power

0	3	= 3 dBm (standard)
0	4	= 4 dBm
0	5	= 5 dBm
0	6	= 6 dBm (standard)
0	7	= 7 dBm
0	8	= 8 dBm
0	9	= 9 dBm
1	0	= 10 dBm (standard)
1	1	= 11 dBm
1	2	= 12 dBm
1	3	= 13 dBm (standard)
1	4	= 14 dBm
1	5	= 15 dBm

3-4. Connector

S	A	= SC/APC with shutter (standard)
F	A	= FC/APC
E	A	= E2000/APC

5. Special / Customer

Blank = None Special request
A = 5.4% OMI/CH

NOTES:



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