

Preliminary



ACION 8000

A8KFT3 1550nm
Forward Transmitter

ACI Communications, Inc. 

Overview

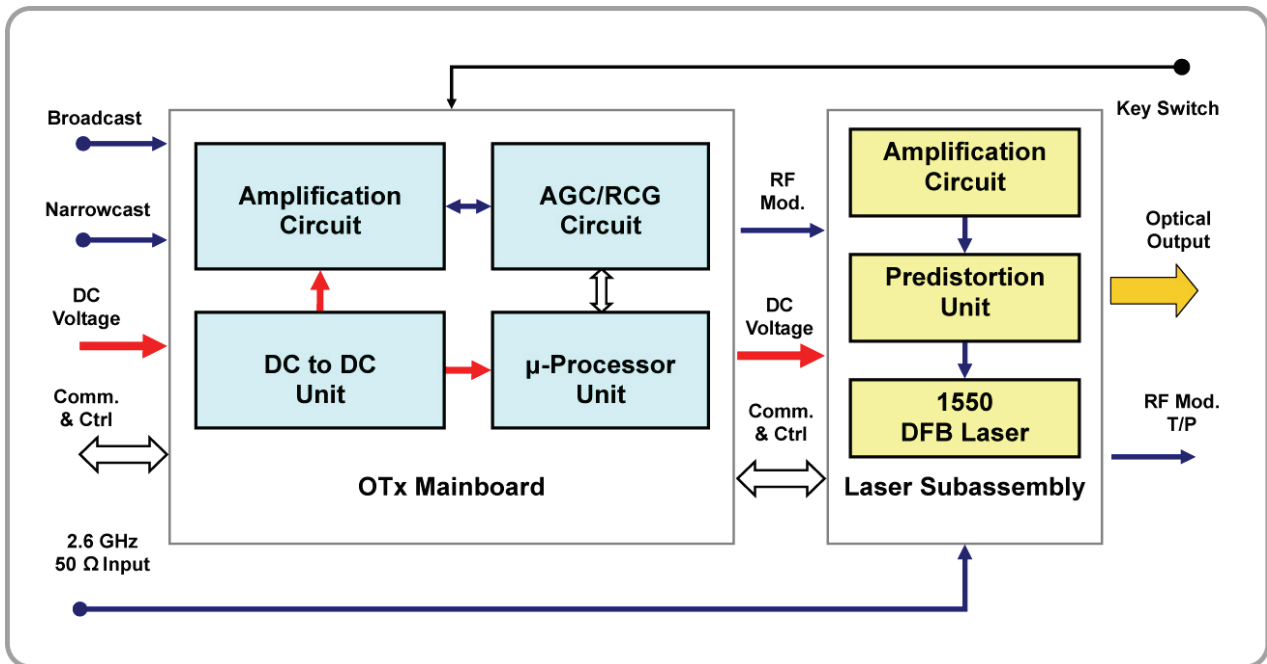
The A8KFT3-1550nm head-end forward transmitter is ideal for HFC or FTTH applications. This compact and cost effective module is 3RU in height. Up to 16 application modules can reside in the 19-inch, high-density chassis (A8KMF3). The RF transmission bandwidth is up to 2.6 GHz. Standard ITU grid wavelengths are available. The high performance AGC and RGC functions allow for a wide RF input range that will accommodate many different types of field applications.

Features

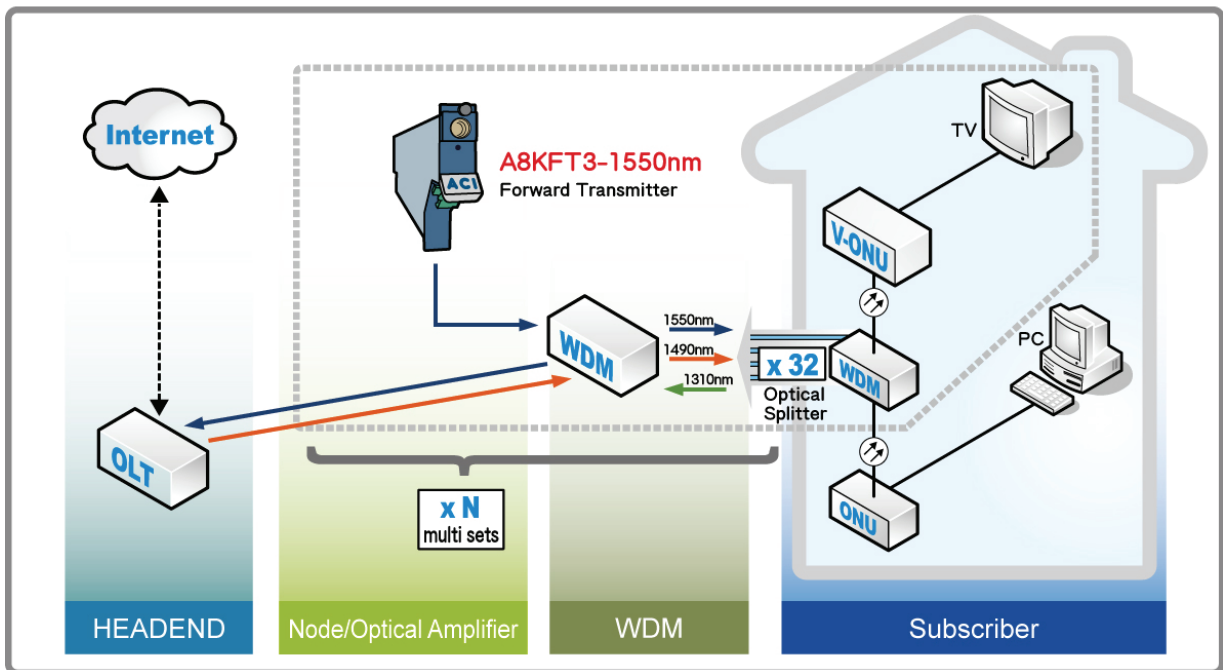
- Up to 2.6GHz transmission bandwidth.
- Cooled DFB laser diode with isolator.
- ITU Grid Channel Option.
- Plug-in JXP attenuator pads for RF gain control.
- Hot-swappable.
- Remote monitor and control function by HMS or SNMP.
- RF front-panel test point.
- SC/APC with shutter(standard), FC/APC, or E2000/APC (optional) connector types.
- Fiber distances up to 20 km.

Preliminary

Block Diagram



Application



Specifications

ACI Communications, Inc.		ACION8000 Series A8KFT3 1550nm Forward Transmitter		
PARAMETERS	CONDITIONS	UNITS	SPECIFICATION	NOTES
Optical Specification				
Laser Type			Cooled DFB LD with isolator	
Optical Wavelength		nm	Min	Max
			1528	1563
Connector Type			SC/APC (standard) FC/APC, E2000/APC (optional)	
Optical Power		dBm	10	
RF Parameters				
Operating Bandwidth (75 Ω) Operating Bandwidth (50 Ω)		MHz	50 to 1003 950 to 2600	
Channel Loading	NTSC		79 NTSC channels 75 Digital QAM channels	
RF 75Ω Input Return Loss RF 50Ω Input Return Loss	Worst Case	-dB	16 10	
Broadcast RF Input Level (Analog Channels)	AGC mode	dBmV/ch	11 to 19	
	RGC mode	dBmV/ch	15±4 (79 NTSC loading)	
Narrowcast RF Input Level (Digital QAM Channels)	AGC mode	dBmV/ch	26 to 34	
	RGC mode	dBmV/ch	30±4 (QAM carriers @ -6dBc)	
2.6 GHz Transmission RF Input Level		dBm	+0.5 ~ -0.5 (Total 50Ω RF Input Level 0±0.5)	
Flatness (Peak-to-Valley)	50 to 1003 MHz	dB	± 0.5	
Test Point	RGC mode only	dB	-20 ± 0.5, compared with RF input to laser	
			-7 ± 1, compared with RF input to module (NTSC channels)	
			-6 ± 1, compared with RF input to module (PAL channels)	
Port-to-Port Isolation (Narrowcast to Broadcast)		dB	50	
Distortion Performance (Optical link distance 20 km only)				
Composite Second Order (CSO)	Max	-dBc	58	
Composite Triple Beat (CTB)	Max	-dBc	65	
Cross-Modulation (XMOD)	Max	-dBc	65	
Carrier-to-noise ratio (CNR)	Min	-dBc	52	

Specifications

ACI Communications, Inc.		ACION8000 Series A8KFT3 1550nm Forward Transmitter		
PARAMETERS	CONDITIONS	UNITS	SPECIFICATION	NOTES
Electrical/Environmental/Mechanical				
RF Connector Type	Rear Panel		F type female	
Module Width		slot	1	
Dimensions	D×H×W	in. (mm)	16.1 x 5.0 x 1.0 (410.0 x 127.0 x 25.9)	
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	

Ordering Matrix

A8KFT3-1550nm Configuration Sheet

Customer: _____

Created By: _____

ORDERING MATRIX

2010/5/13

Position		1	2	3	4	5	6	7	8
PART NUMBER	A8KFT3-1550nm	—	1	0	—	—	—	—	—

1-2

OUTPUT POWER

10 = 10 dBm (standard)

3-4

CONNECTOR

SC = SC/APC with shutter (standard)

FC = FC/APC (option)

E2 = E2000/APC (option)

5-6

CHANNEL

Channel	Wavelength (nm)	Channel	Wavelength (nm)	Channel	Wavelength (nm)
62	1527.99	47	1539.77	32	1551.72
61	1528.77	46	1540.56	31	1552.52
60	1529.55	45	1541.35	30	1553.33
59	1530.33	44	1542.14	29	1554.13
58	1531.12	43	1542.94	28	1554.94
57	1531.90	42	1543.73	27	1555.75
56	1532.68	41	1544.53	26	1556.56
55	1533.47	40	1545.32	25	1557.36
54	1534.25	39	1546.12	24	1558.17
53	1535.04	38	1546.92	23	1558.98
52	1535.82	37	1547.72	22	1559.79
51	1536.61	36	1548.51	21	1560.61
50	1537.40	35	1549.32	20	1561.42
49	1538.19	34	1550.12	19	1562.23
48	1538.98	33	1550.92	18	1563.05

7-8

FIBER DISTANCE

10 = 10 km

20 = 20 km

NOTES:

ACI Communications, Inc. reserves the right to discontinue the manufacture or change the specifications without prior notice on any parts illustrated in the data sheet.

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