ACION GEH39

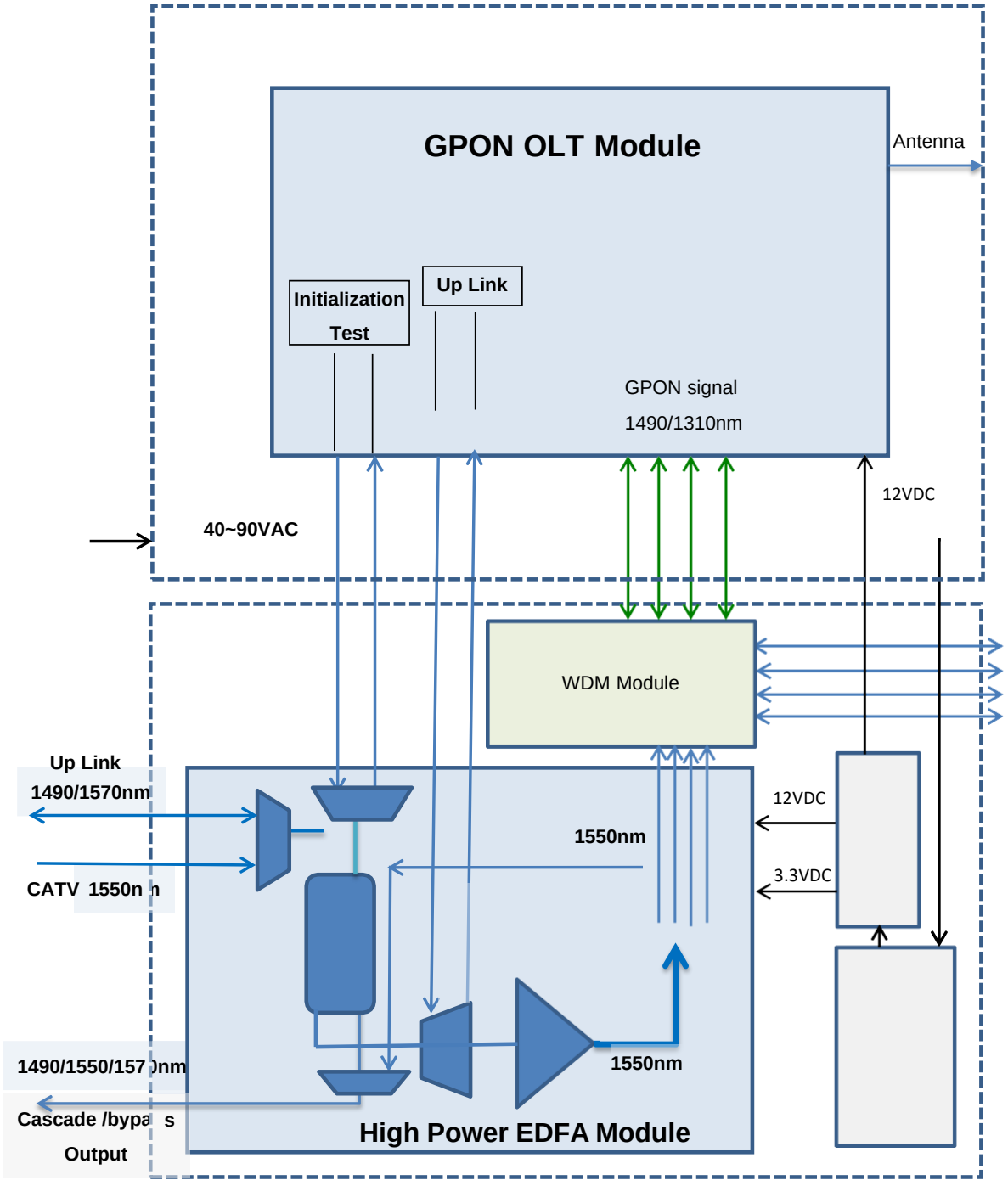
Outdoor OLT integrated with GPON WDM (4 ports)

The ACION GEH39 is an outdoor OLT with 4 output ports integrated with 4-port GPON OLT optical signal. It has an optional single channel EDFA designed to amplify optical signal in the wavelength range from 1543.5 to 1556.5 nm. The ACION GEH39, operating on constant output power mode, has a maximum total output power according to application (typical at 19 dBm). It has WDM devices integrated for combing optical IP signals of GPON OLT wavelengths 1310 (upstream) and 1490 (downstream) with 1550 broadcasting signal in the same fiber for FTTX with RF overlay network. It also allows uplink wavelengths 1570 nm (upstream) and 1270 nm (downstream) pass thru to OLT. The GEH39 has a GPON OLT module built inside its housing. A device management webpage is available for monitoring the station information and providing alarm functions in real time which can be accessed through a RJ45 interface. WiFi connection is available to access the local device management webpage by using a smart phone, Tablet or laptop computer. The RJ45 interfaces can also be used for remote SNMP network management through Ethernet connection.

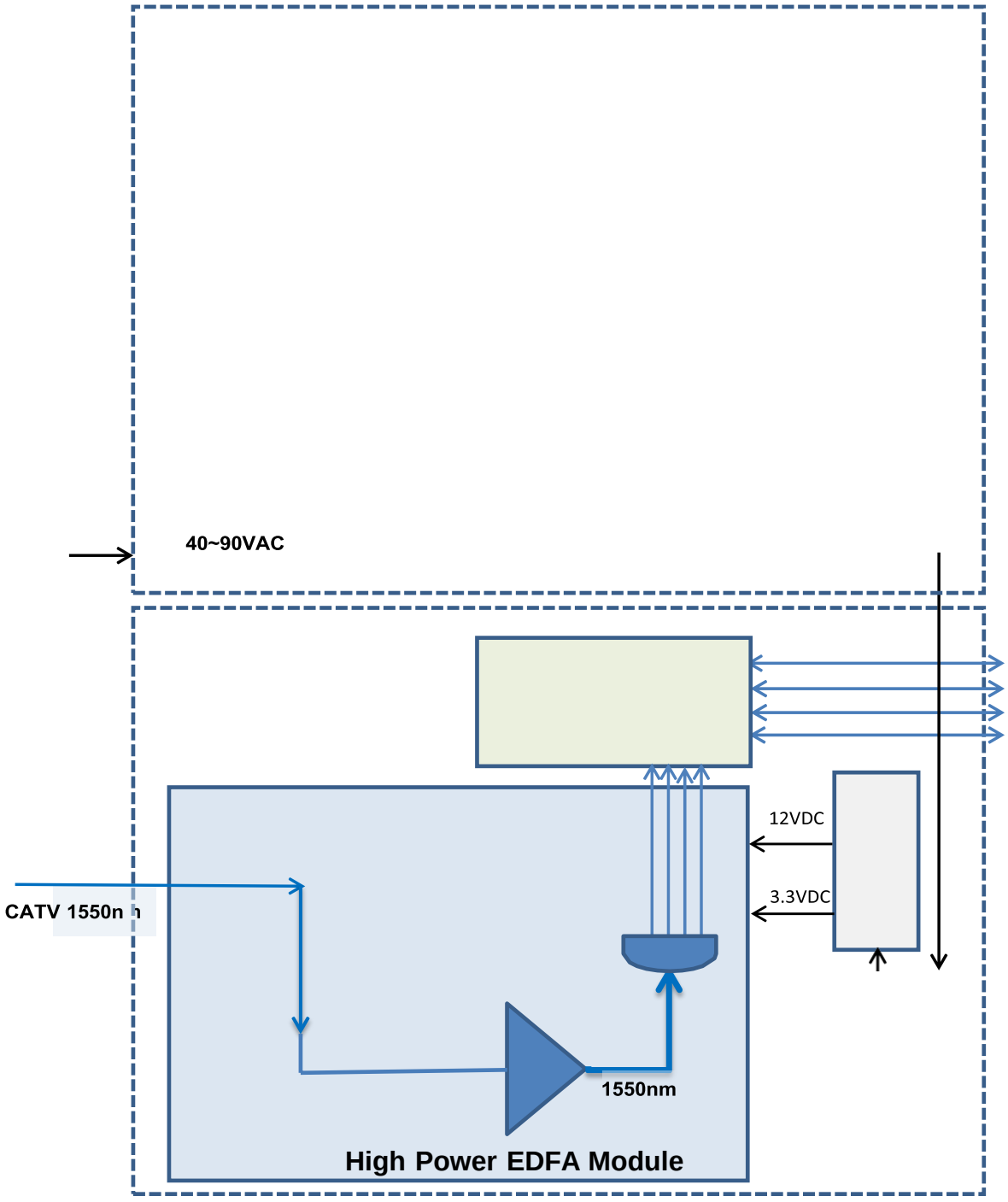
Features

- A high performance optical output driver circuit and laser TEC to provide a highly reliable EDFA.
- Built in GPON OLT module
- A built-in microprocessor allows the unit to monitor the system parameters.
- Built in WDMs for GPON or XGPON optical signal integration
- The pump laser auto shut down function at low input is available.
- Built-in device management webpage.
- Built-in RJ45 for remote SNMP network management
- Built-in WiFi connection for local device management
- Support remote firmware download and upgrade.
- Operating temperature: -20°C to +65°C (standard)
- Built-in data log and up to 30-day operation history analysis (optional)

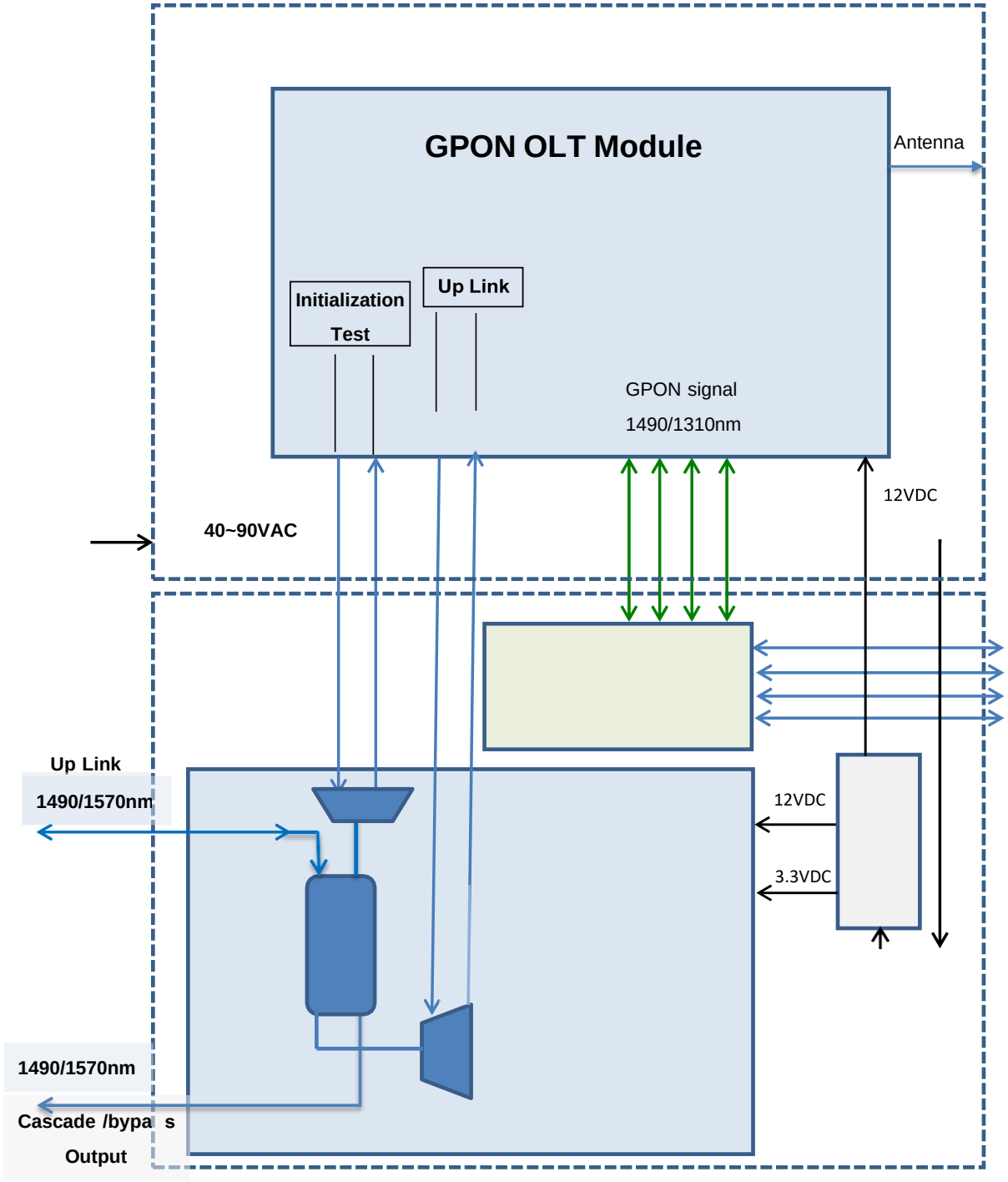
Block Diagrams



ACION GEH39: GPON OLT + EDFA



ACION GEH39E: EDFA only



ACION GEH39G: GPON OLT only

Specifications

ACI	ACION GEH39 Single Channel EDFA 4 output ports with GPON WDM					
PARAMETERS	**CONDITIONS**	**UNITS**	**SPECIFICATION**			**NOTES**
Environmental and Maximum Ratings			**Value Min.**		**Value Max.**	
Operating Housing Temp		°C	-20		+65	
Electrostatic Discharge (ESD)	C=100pf, R=1.5R Human body model	V	0		1000	
Relative Humidity	Non condensation	%	5		95	
Current Draw	Cable Power (40~90V)	A	-		1.1	
Power Consumption	Cable Power	Watt	-		35	
Storage Environment Temp.		°C	-40		+85	
Storage Humidity	Non condensation	%RH	5		95	
Optical Sepcifications			**Min.**	**Typ.**	**Max.**	
Optical Wavelength (1550nm)	In vacuum	nm	1543.5	1550	1556.5	
Optical Wavelength (GPON/IP)	In vacuum	nm	1290	1310	1330	Pass through
			1480	1490	1500	
Output Power After WDM		dBm	19.0			Each port
Total Input Power	@ λop = 1550 nm	dBm	-5	-	+8	
Saturated Output Power	@ Pin ≧ -5 dBm @ λop = 1550 nm	dBm	Pout	Pout +0.3	Pout +1	
Output Power Stability	Over λop	dB	-	-	1.0	
Environmental and Maximum Ratings			**Min.**	**Typ.**	**Max.**	
Noise Figure @ Pin = 0 dBm		dB	-	6	6.5	
ASE Side Lobe Suppression	1540~1560 nm with 1550 nm 0 dBm Input signal	dBm	-	-	-30	
PDG	Over λop	dB	-	-	0.5	
PMD	Over λop	ps	-	-	0.5	
Return Loss	All ports	dB	45	-	-	
Insertion Loss (IP wavelength)	@ 1310 nm & 1490 nm	dB	-	-	1.0	
Built-in WDM Specifications			**Min.**	**Typ.**	**Max.**	
Pass-Through Wavelength	For GPON Signal	nm		1490		Downstream
				1310		Upstream
	For OLT Uplink Signal	nm		1490		Downstream
				1570		Upstream
Insertion Loss:	1490, 1310 nm	dB			0.8	GPON
	1570, 1270 nm	dB			5.5	OLT uplink
PDL	≦	dB			0.3	
PMD		Ps			0.3	
PON Signal Pass-Through When EDFA is Turned Off	GPON OLT Uplink	nm		1490/1310 1270/1570		
Maximum power	Max.	dBm			26	

ACI			ACION GEH39 Single Channel EDFA 4 output ports with GPON WDM	
Mechanical and Interface Specifications				
Interface	Standard		Network Management (SNMP)	
Dimension	H x W x D	In.	6.75 x 14.25 x 9	
Weight		Kg	4	
Power Supply	Cable Power	V	40 to 90 VAC	
Output Ports			4	
Input Port			2	
Cascade Port			1	
Optical Switch	For uplink & Cascade		2x2	
Water Proof			IP67	
Surge Protection	Combo Wave		6 KV	
Pump Laser Switch			Rock Switch	
User Interface			RJ45/ WIFI	
Optical Connector			LC / APC	

Part Number Ordering Matrix

ACION GEH39 Configuration Sheet

Customer: _____

Created By: _____ Order Date: _____

ORDERING MATRIX 2018/11/28

Position		1	2	3	4	5	6	7	8	9	10	11
PART NUMBER	**GEH39**											

1 ☐ **Model Selection**
"-" = with EDFA & GPON OLT modules
"E" = with EDFA module only
"G" = with GPON OLT module only

2~3 ☐☐ **EDFA Output Power**
00 = No EDFA
18 = 18 dBm
19 = 19 dBm

4 ☐ Number of Output Ports
4 = 4 ports

5 ☐ **Optical Input/Output Connector**

	Input		Output	
	EDFA	PON	EDFA	PON
1 =	LC/APC	LC/APC	LC/APC	
2 =	LC/APC	LC/UPC	LC/APC	LC/UPC
3 =	LC/APC	-	LC/APC	-
4 =	-	LC/UPC	-	LC/UPC

6 ☐ **Network Management**
0 = None
1 = SNMP (Via OLT bridge)

7 ☐ **HOUSING TYPE**
1 = Standard (A3422 housing)

8 ☐ **Power Supply**
Cable Power
1 = 40~90VAC

Line Power (100~240VAC)
2 = North America
3 = International / Europe
4 = Japan
5 = Australia
6 = Argentina
X = Custom - (Determined by product management)

9 ☐ **Material Restrictions**
0 = None

10 ☐ **Operating Temperature**
1 = -20°C ~ +65°C

11 ☐ **PON WDM and 2x2 Cascade switch**
0 = None
1 = Standard

NOTES:

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Rev D 9-09-2021 Printed in U.S.A.