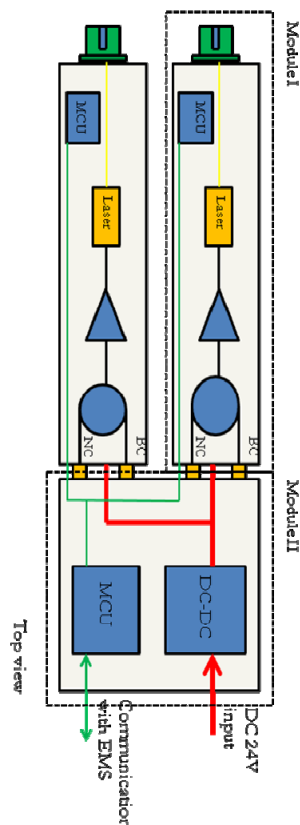# EL-FTX-DU E-link Module
1310nm Forward Transmitter

ELECTROLINE

Description

The EL-FTX-DU-1310 is a 1310nm forward transmitter module. With its ultra-slim design, 2 modules can fit into one EL-CH slot. This module is compatible with other modules of E-link Electroline series to integrate into the same E-link Chassis and provides a 50% reduction in the number of physical devices needed to greatly save room space. The module contains a high performance, advanced pre-distortion circuitry and achieves superior CSO and CTB, ideal for broadcast and narrowcast applications. It also provides a wide range of optical output power to deliver both analog and digital signals. All configuration parameters of modules can be monitored via EL-EMS3 equipment management module.

Features

- Compact configuration with dual 1310nm transmitter module
- Compliance with DOCSIS® 3.1 (1.2GHz)
- High performance with super pre-distortion circuit
- Wide range of optical output power
- Hot-swap capability
- Front panel LEDs indication
- Automatic/manual gain control (AGC/MGC)
- Broadband and narrowband input
- Two ways RF input test points
- Laser input test point
- Low power consumption
- MGC scope: ±5dB
- OMI adjustment
- Local and remote software for status monitoring
- Remote firmware upgrade

Technical Specifications:

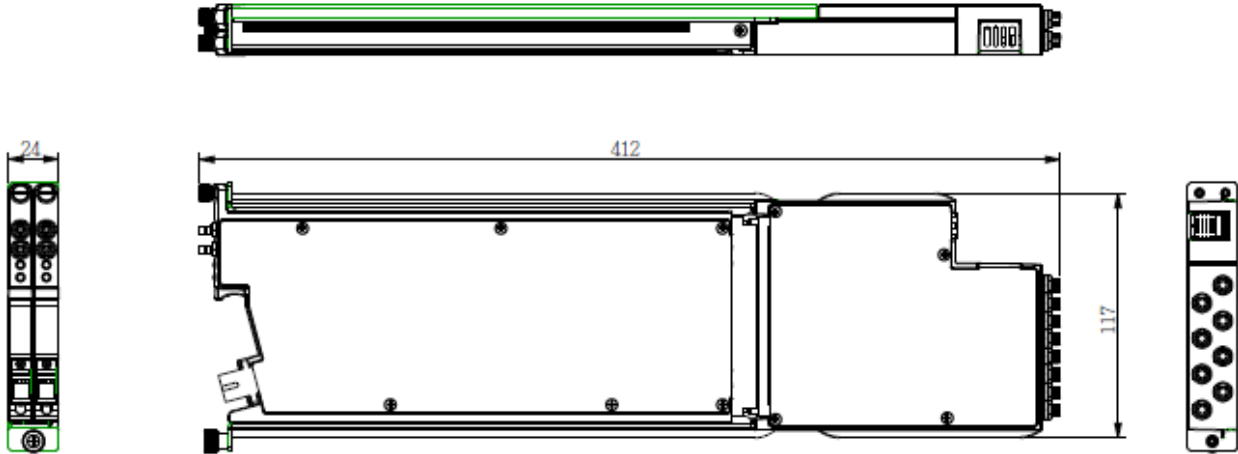| Parameter	Unit	Specification	Note
Optical Performance			
Wavelength	nm	1310+/-10	--
Output power	dBm	6~13	--
Connector	--	SC/APC	--
RF Performance			
Bandwidth	MHz	47-1218	--
Return loss	-dB	≥16	--
Input level	dBmV	15+/-4 @ Broadband 21+/-4 @ Narrowband	QAM @ -6dB
Impedance	ohm	75	--
Flatness	dB	+/-0.75	--
Connector		F-female	--
Isolation	dB	>50 >70	NC to BC with same module with different module
Test point	dB	-20+/-1 -26+/-1	Broadband Narrowband
Link Performance 15km fiber + attenuator, receive power 0dBm (77 NTSC channels+256QAM 109 channels)			
CNR	dBc	Refer to CNR table	Note 1 and 2
CSO	dBc	≤-64	Note 1 and 2
CTB	dBc	≤-68	Note 1 and 2
MER		38	Note 1, 2 and 3
BER		<1E-8 at Pre FEC <1E-12 at Post FEC	Note 1, 2 and 3
Electrical/Physical Performance			
Supply voltage	VDC	24	--
Power consumption	W	<15	Note 4
Dimensions	mm	412D x 24W x 128H	--
Weight	Kg	2.0	--
Operating temperature	˚C	0 to 50	
Storage temperature	˚C	-40 to 70	
Humidity	%	5 to 85	non-condensing

Notes;
1. All measurements are taken with 1.2GHz forward receiver
2. At specified RF input level
3. QAM channels start at 451MHz (Center frequency) up to 1218MHz (Center frequency)
4. Power consumption includes 2 EL-FTX-DU-1310 modules and 1 host module.

CNR

	5	6	7	8	9	10	11	12	13	14	15
6dBm	53	52	51	50							
7dBm		53	52	51	50						
8dBm			53	52	51	50					
9dBm				53	52	51	50				
10dBm					52.5	51.5	50.5	49.5			
11dBm						52.5	51.5	50.5	49.5		
12dBm							52.5	51.5	50.5	49.5	
13 dBm								52.5	51.5	50.5	49.5

Specifications are subject to change without notice.

Dimensions

Ordering Information			
Model Series	Wavelength	Optical Output Power	Optical Connector
EL-FTX-DU-	1310-	06- = 6dBm	SA=SC/APC
		08- = 8dBm	FA=FC/APC
		09- = 9dBm	
		10- = 10dBm	
		11- = 11dBm	
		12- = 12dBm	
		13- = 13dBm	

Important: EL-FTX-DU-1310 are sold separately, i.e. not in pair.
EL-DU HOST (also sold separately) is needed to insert one or two EL-FTX-DU-1310 into an EL-CH chassis.
You can mix 2 different modules in an EL-DU-HOST.
It is possible to only have 1 module installed in an EL-DU-HOST.

For more information on our products, please visit: www.electroline.com or call: 800-461-3344