

## Fiberkom Mininode

Refs. 238081, 238083

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with a dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

### Optical connection instructions

- An SC/APC single mode fiber cable must be used. Remove the protective cover from the optical connector on the unit and the cap on the cable connector.
- Carefully align the guides on both connectors when plugging a cable to the apparatus, then push the connector all the way in.
- Take special care to avoid damaging the unprotected ends of the connectors, as small scratches, impurities and/or particles of dirt, oil, grease, sweat, etc. may significantly affect the quality of the signal.
- To clean the ends of the connectors, gently rub with a lint-free lens cleaning cloth, dampened using additive-free isopropyl alcohol. Make sure the alcohol evaporates fully before connecting. Keep the connector covers and cable caps in a safe place in case they are needed in the future. Always fit the covers on the connectors of apparatus that are not connected to cables to prevent the laser beam from damaging the eyes.
- Do not turn the transmitter on without a fiber optic cable connected to it.

### Warning.-

This product emits an invisible laser beam.

Avoid contact with laser radiation. The use of equipment such as binoculars or magnifying glasses may increase damage caused to the eyes.



According to EN60825-1\_2007



-The use of controls or adjustments or any other procedures other than those specified in this manual may lead to exposure to harmful radiation.

-Carefully read and observe the instructions given in this manual, and keep it for future reference.

-Do not use the equipment in any way that does not comply with the operating instructions or in any conditions that exceed the stipulated atmospheric specifications.

-This equipment is not user-serviceable. Should you require assistance, contact our technical service department.

-Never point the laser beam intentionally at people or animals.



To avoid the risk of electric shock, do not open the equipment.



This symbol indicates that the product displays "dangerous voltage" with a risk of electric shock or personal harm.



This symbol indicates that this product possesses important instructions for use.



This symbol indicates full compliance with the FCC Standards.

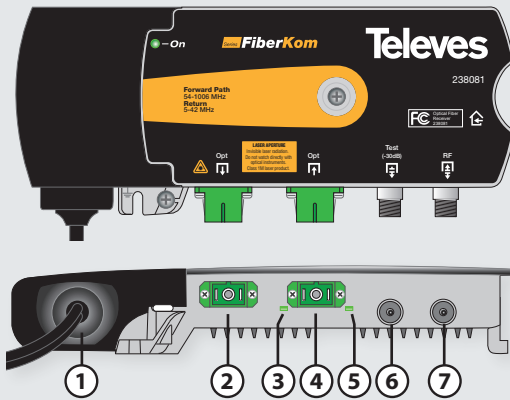


Indoor use only.



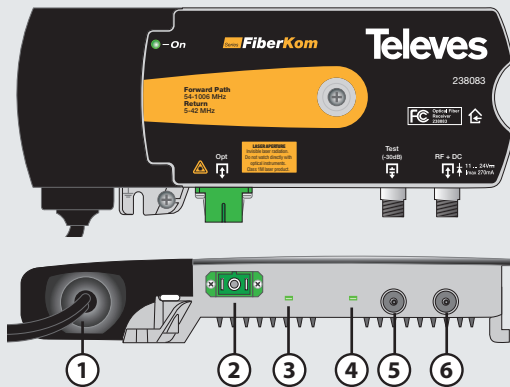
This symbol indicates that the equipment complies with the safety requirements for Class II equipment.

Input & Output description



Ref. 238081

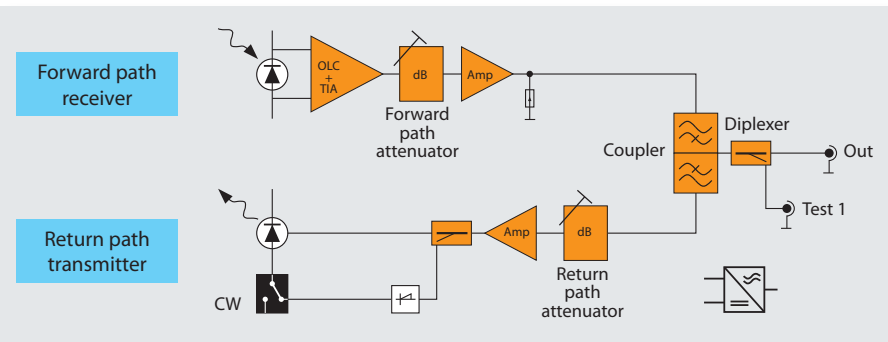
- 1 - Power
- 2 - Optical Output (3 dBm)
- 3 - Laser switch ON indicator
- 4 - Optical Input (2 dBm max.)
- 5 - Optical level indicator (OLC)
  - (red) > +1 dBm
  - (green) -8 ... +1 dBm
  - (orange) < -8 dBm
- 6 - Test RF (-30dB)
- 7 - RF IN/OUT



Ref. 238083

- 1 - Power
- 2 - Optical Output (3 dBm) / Optical Input (2 dBm max.)
- 3 - Laser switch ON indicator
- 4 - Optical level indicator (OLC)
  - (red) > +1 dBm
  - (green) -8 ... +1 dBm
  - (orange) < -8 dBm
- 5 - Test RF (-30dB)
- 6 - RF IN/OUT + Power IN (11 ... 24Vdc)

Block diagram



Technical specifications		238081	238083
<b>Forward path</b>			
Frequency range	MHz	54 ... 1006	
Output impedance	Ohm	75	
Optical input level for OLC	dBm	-8 ... +1dBm	
Flatness	dB	± 1	
Number of outputs	no.	1	
Typical output level in OLC range <sup>(2)</sup>	dBmV	33	
CNR <sup>(1)</sup>	dB	>52	
CSO <sup>(2)</sup>	dB	>60	
CTB <sup>(2)</sup>	dB	>60	
Equivalent noise current density at input	pA/√Hz	< 6	
Forward path attenuator	dB	6/12 selectable	
Pre-emphasis	dB	3	
Wavelength	nm	1200 ... 1600	1540 ... 1560
Optical return loss	dB	>40	
Optical connector	type	SC/APC	
Max optical input power before damage	dBm	2	
Optical device	type	InGaAs pin photodiode	
<b>Return path</b>			
Frequency range (selectable)	MHz	5 ... 42	
Input impedance	Ohm	75	
Optical output level	dBm	3	
Flatness	dB	± 1	
RF input level	dBmV	10 ... 35	
Return path attenuator	dB	0/10/20 selectable	
Wavelength	nm	1310 ±20	1610 ±10
Optical connector	type	SC/APC	
Laser type	type	DFB (Class1M)	
Transmitter turn-on/off time	µs	1	
<b>General</b>			
Local Mains voltage	V~/mA	99 / 75 ... 253 / 40	
Max. mains power	W	4	-
Power voltage through RF connector	Vdc/mA	-	11 / 270 .... 24 / 140
Test point	dB	-30 ±1	
RF connectors	type	F	
Housing material		Zamak/ABS	
Operating temperature	°F	+23 ... +113	
Dimensions	in	7.27" x 3.15" x 1.38"	
Weight	lb	0.88	
Index operation	IP	30	
EMC compatibility		EN 50083-2	
Safety		EN 60825-1_2007	

(1) Measure made with a transmitter 234311. The RF input level into the transmitter was 26dBmV. 42 ch CENELEC.

(2) Distortion products for CENELEC 42 Ch.

## Adjusting the amplifier

### Return path (Upstream):

Upstream level	RF input control level
30 - 40 dBmV	20 dB
20 - 30 dBmV	10 dB
10 - 20 dBmV	0 dB

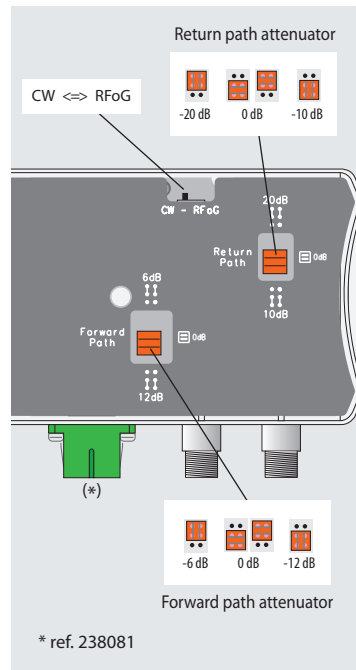
### Operating mode upstream:

There are two modes available for upstream operation:

- **RFoG mode:** The laser is switched ON only when an upstream signal is present.
- **CW mode:** The laser is permanently ON.

### Forward path:

The output level of the mini-node is kept constant by OLC. The RF output level can be adjusted using the inter stage attenuator.



**DECLARATION OF CONFORMITY N° 14102111330**

Per FCC Part 2 Section 2.1077(a)



Responsible Party Name: **Televés S.A.**  
Address: **Rua Benéfica de Conxo, 17**  
**15706 - Santiago de Compostela**  
Spain  
Phone / Fax N°: **981522200 / 981522262**

Hereby declares that the product

Product Name: **FIBERKOM MININODE MATV WRET 2 FIB**  
Model Number: **238081**

Conforms to the following specifications:

FCC Part 15, Subpart B, Section 15.107(e) and section 15.109(g)

Supplementary Information:

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Representative Person's Name: **José L. Fernández Carnero**

Signature:

Date: **21/10/2014**

**DECLARATION OF CONFORMITY N° 150910085225**

Per FCC Part 2 Section 2.1077(a)



Responsible Party Name: **Televés S.A.**  
Address: **Rua Benéfica de Conxo, 17**  
**15706 - Santiago de Compostela**  
Spain  
Phone / Fax N°: **981522200 / 981522262**

Hereby declares that the product

Product Name: **Node w/rp 1550/1610mm US**  
Model Number: **238083**

Conforms to the following specifications:

FCC Part 15, Subpart B, Section 15.107(e) and section 15.109(g)

Supplementary Information:

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Representative Person's Name: **José L. Fernández Carnero**

Signature:

Date: **10/9/2015**

## Televés Limited Warranty

- (A) Televés warrants, only to the original Purchaser, all Products be free from any defect in materials or workmanship for a period of two (2) years from the date of original purchase, unless otherwise specified.
- (B) Televés shall, free of charge and in its sole discretion, either repair, replace with a new or factory reconditioned equivalent, or refund the purchase price of the Product(s), that has been determined by Televés to be defective in material or workmanship, subject to the limits of this warranty.
- (C) This warranty excludes any damage or inoperability resulting from:
- (I) use or installation that is not in strict compliance with the written instructions and specifications;
  - (II) any modification or alteration performed by any third party not authorized in writing by Televés;
  - (III) service or repair performed by any third party not authorized in writing by Televés;
  - (IV) misuse, abuse, intentional harm, or lack of reasonable care;
  - (V) fire, ice, snow, rain, wind, water, volcano, excessive heat or cold, lightning, flood, power surge, earthquake, or any other acts of God;
  - (VI) war, crime, strike, riot, electro-magnetic pulse, or any other acts beyond the control of Televés;
  - (VII) shipping.
- (D) All claims under the terms of this warranty must be made in writing, by the original Purchaser, within fourteen (14) days of the defect being known to the Purchaser. Such claims shall be accompanied by a description of any material facts related to the claimed defect and the invoice or other proof of original purchase

date and price. If Televés so requests, the Purchaser shall, at Purchaser's expense, deliver the claimed Product(s) to Televés, within 14 days of the date of the return authorization. Under no circumstances shall the Product(s) be returned to Televés without a return authorization.

- (E) Any refund to the Purchaser, shall be limited to the purchase price of the Product(s), excluding any applicable taxes, duties, freight costs, removal costs, installation costs, or any other charges incident to the purchase of the product.
- (F) Any damage caused by shipper shall be claimed with the shipper in accordance with the shipper's policies and procedures.
- (G) Televés shall in no event and under no circumstances be liable or responsible for any consequential, indirect, incidental, punitive, direct or special damages based upon breach of warranty, breach of contract, negligence, strict tort liability or otherwise or any other legal theory, arising directly or indirectly from the sale, use, installation or failure of any product acquired by Purchaser from Televés.
- (H) This limited warranty extends to the original Purchaser and cannot be assigned or transferred to any other party without the prior express written permission of Televés, which permission Televés may withhold for any reason or for no reason at all.
- (I) Televés will not assume any liabilities for any other warranties, whether statutory, express or implied, made by any other person.
- (J) Televés reserves the right to modify or discontinue this warranty at Televés' sole discretion without notification. No other warranties are expressed or implied.



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