



**IKUSI**  
velatia

smartexperience

# DVB-S/S2 to DVB-C Digital Transmodulation equipment

Tunes a Sat-IF digital channel, demodulates the signal being received, processes the transport stream and remodulates it in DVB-C format.



DVB-S/S2 input signal



Encrypted TV programmes



DVB-C output signal

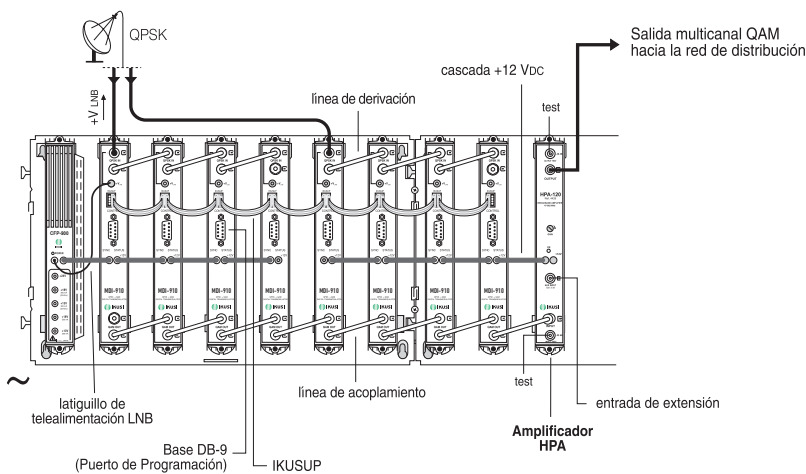
**MDI-910 Transmodulator**

## Mains features

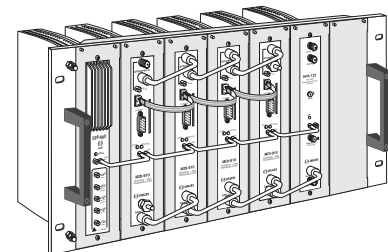
- Digital Transmutation (DVB-S/S2 to DVB-C).  
The DVB-S/S2 channels located in the Sat-IF frequency band (950-2150 MHz) are transformed to DVB-C channels (16 to 256 symbols) located in the 45-862 MHz band.
- A MDI headend includes:
  - As many MDI Transmodulators as QAM channels to be distributed.
  - One HPA Amplifier that amplifies the sum of the combined output QAM channels from the transmodulators.
  - One or more CFP Power Supplies.
  - One or more Rack-Frames or wall-fixing Base-Plates. The base-plates can be joined horizontally.
  - Usually, housing units for the base-plates.
  - If the headend is large, one or more AMX-400 combiners.
- The MDI headend provide a QAM multichannel signal whose level is appropriate to feed the distribution network. An extension input at the HPA amplifier allows easy coupling of the wideband 47-862 MHz signal provided by another existing headend. The user requires a DVB-C Receiver to convert the QAM signals into the appropriate signals that can be accepted by a conventional TV set, and to control access to encrypted TV programmes.

MODEL		MDI-910
REF.		4020
Reception		DVB-S2 DVB-S
Transport Stream processing		Yes
Common Interface (EN 50221)		Yes
Input section (DVB-S/S2)		
Standard		EN 302 307
Input frequency band	MHz	950 - 2150
Input level	dBµV	44 ... 84 (DVB-S2) 39 ... 84 (DVB-S)
Input loop-through gain	dB	0 (±1)
AFC pull-in range	MHz	±5
Input symbol rate	MS/s	10 ... 30 (DVB-S2) 2 ... 45 (DVB-S)
Re-modulation section (DVB-C)		
Data processing		EN 300 744
Selectable modulation scheme		16QAM ,, 32QAM ,, 64QAM ,, 128QAM ,, 256QAM
MER (Modulation Error Ratio)	dB	> 40 (typ.)
Output symbol ratio	MS/s	1 ... 8
Selectable Roll-Off factor	%	12 ,, 13 ,, 15

Output section (DVB-C)		
Selectable output channel located between:	MHz	47 - 862
Bandwidth	MHz	5 (DVB-H) ,, 6 ,, 7 ,, 8
Adjustable output level	dBµV	65 to 80
Output loop-through loss	dB	1.1
Spurious in band	dBc	< -55
Broadband noise (ΔB=5 MHz)	dBc	< -75
General		
Supply voltage	VDC	+12
Consumption	mA	710 (without CAM) 850 (with CAM)
Operating temperature	°C	0 ... +45
DC connector type		banana socket
CAM entrance		slot
Programming Interface		RS-232 / DB-9
IKUSUP bus connector		(2x) 4-pin socket
Dimensions	mm	230 x 195 x 32
Interfaz de programación		RS-232 / DB-9
Conector Bus IKUSUP		(2x) base 4 pines
Dimensiones	mm	230 x 195 x 32



Example of MDI-910 headend for 8 transponders. Contains 8 MDI transmodulators, 1 amplifier HPA and 1 power supply CFP-900, all fixed on 2 base-plates BAS-700



Example of MDI-910 headend in rack for 4 transponders. Contains 4 MDI transmodulators, 1 amplifier HPA and 1 power supply CFP-900, all fixed on rack SMR-601