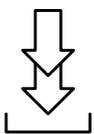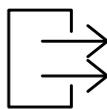# The HTL-TRX module can receive 2 DVB-T/T2 or DVB-S/S2 or DVB-C muxes and combine then on 2 DVB-T or DVB-C output channels.

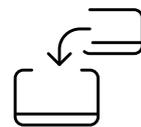It handles HD and SD services both on MPEG4 H.264 and on MPEG-2, allowing HD contents to be received on SD televisions.

Dual universal tuner   **Output 2 COFDM or QAM**   **Transcoding MPEG4 into MPEG2**

Model		HTL-TRX
Ref.		3861
Inputs		2 (or loop through)
Standards		EN 300 744 DVB-T EN 302 755 DVB-T2 EN 300 421 DVB-S EN 302 307 DVB-S2 EN 300 744 DVB-C
Reception		DVB-T /T2 ; DVB-S/S2 ; DVB-C
Frequency range	MHz	DVB-T: 47 - 862 DVB-S: 950 - 2150 DVB-C: 47 - 862
No. tuned programs		-If transcoder activated, treatment capacity is limited to 4 channels and up to 8 audio streams. -If transcoder deactivated, treatment capacity is limited only by output bitrate. Typically up to 31 Mbps for DVB-T and up to 55 Mbps for DVB-C. -Transcoder does not treat subtitles HD to subtitle SD.
Max nº of decrypted programmes		Variable (depending on CAM)
Input level	dBµV	40 - 92
Input loop gain	dB	0 (±1)
Symbol rate	DVB-S DVB-S2 DVB-C	MS/s	2 ... 45 2 ... 45 7 max
TS Processing		
PSI/SI adaptation		Generating and inserting tables PAT, PMT, CAT, SDT, NIT, TOT and BAT
NIT (Network Information Table) adaptation		Yes (generated automatically)
SDT (Service Description Table) adaptation		Yes (configurable name input)
Processing LCN, TDT, TOT		Yes
Transcoding		
Supported usecases		1080i mpeg4 > 576i mpeg2
		576i mpeg4 > 576i mpeg2
Audio		AC3 > mpeg I layer II
		AC3Plus > mpeg I layer II
Outputs		DVB-T in accordance with ETSI EN 300 744 DVB-C in accordance with ETSI EN 300 429
No. of outputs		2 DVB-T / DVB-C
Output frequency	MHz	DVB-T: 47-862 ; DVB-C: 47-862
MER	dB	> 40
Output level	dBµV	80
Adjustable output level	dB	-15
DVB-T modulation formats		QPSK ; 16QAM ; 64QAM
DVB-T code ratio		1/2 , 2/3 , 3/4 , 5/6 , 7/8
DVB-T guard interval		1/4 , 1/8 , 1/16 , 1/32
Bandwidth	MHz	6 / 7 / 8
Loop step attenuation	dB	1.1
DVB-C symbol rate	MS/s	7.2 max
Configuration		PC. Web, Ikusi Headend Discovery, Wizard assistant
Supply voltage	VDC	+12
Consumption	A	2
Firmware upgrade		Web interface
Operating temperature	ºC	0 ... +45
CAM		1 slot (EN 50221)
Bus IKUNET connector		2x RJ-45
Dimensions	mm	230 x 195 x 32

- Transcoding of MPEG4 to MPEG2 input services.

  Versatile transmodulation of DVB-T/T2, DVB-S/S2 and DVB-C channels to DVB-T/DVB-C channels.

- The HTL-TRX module can receive 2 DVB-T/T2 or DVB-S/S2 or DVB-C muxes and combine then on 2 DVB-T or DVB-C output channels. It handles HD and SD services both on MPEG4 H.264 and on MPEG-2, allowing HD contents to be received on SD televisions.

- One module acts as the "master" to ensure the configuration (remote or local through PC) is carried out at the complete headend level, through the IKUNET bus and not module by module.

- It has a Common Interface (EN 50221) for discretional decryption of programmes in accordance with the inserted CAM module.

- With Ikusi's Transcoding solution, the old TV SD equipment does not need to be changed and the latest content can still be enjoyed. The Ikusi headend offers the chance of deciding when and how to up-date the television sets.

- It allows a future increase in channels to be foreseen in order for the televisions to have them already on their lists, avoiding the need for retuning.

- It allows a video service to be sent with several different languages without taking up more space than that corresponding to an RF channel. The television shows "a programme" for each language, avoiding the need for users to have to choose their "language" on the television remote control.

- It is compatible with the PC application: "IKUSI HEADEND DISCOVERY" (this can be downloaded from http://areacliente.ikusi.tv).

- It allows grids of channels to be created and managed remotely, ensuring that the grid is completely customisable without having to intervene in-situ.

- It allows multiple headends to be managed from a single point for efficient maintenance.

- The two COFDM channels can be distributed onto any part of the band.

- The Wizard installation assistant allows us to carry out a step-by-step headend configuration that is quick and easy. It is executed by turning slave into Master or entering from the general menu.

- Total control of the multiswitch. Fitted with DiSEqC

HTL-TRX

IKUSI