High Definition Standalone Modulator

Can be used to introduce audio and video, HDMI or HD–SDI signals in DTTV distributions and get an output signal in DVB–T, DVB–C and IP.

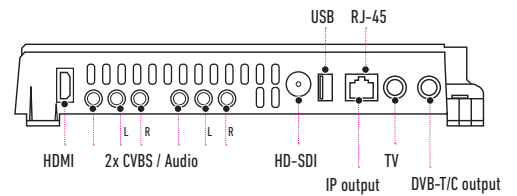| HDMI	CVBS	SDI	USB	WEB
↓	↓	↓	↓	↓
HDMI input HD multimedia interface	2 CVBS inputs and stereo audio	HD-SDI input Digital video interface	Video playback through USB port	Remote control via web

MAC-HD

Main Features

MODEL		MAC-HD
REF.		4493
Video input		4 (2x) CVBS, HDMI, HD-SDI (non-simultaneous)
Video standard		PAL/SECAM/NTSC/B&W
Input level CVBS	Vpp	0.7 - 1.4
Audio inputs		1 (mono and stereo)
Audio input level (analogue)		0.5 - 2.5
Video compression		MPEG2 MP@ML, H.264/MPEG4 AVC MP L4.1
Audio compression		MPEG1 layer II
Maximum resolution		1080p60
DVB-T / DVB-C output		DVB-T in accordance with ETSI EN 300 744 DVB-C in accordance with ETSI EN 300 429
Bandwidths	MHz	6 / 7 / 8
Number of carriers		2K / 8K
MER	dB	≥ 40
Frequency range	MHz	45 - 858
Output level	dBµV	≥ 80
Output attenuation	dB	0.5
Lever adjustment	dB	-25
Frequency stability	ppm	≤±30
Spurious in band	dBc	≤-60
Noise figure (ΔB = 8 MHz)	dBc	≤-65
Loopthrough frequency		45 MHz at 2.5 GHz
DVB-C symbol rate	Kbps	3000 - 8000
Constellation		DVB-T: 16QAM , 64QAM DVB-C: 16QAM , 32QAM , 64QAM , 128QAM , 256QAM
IP output		IEEE 802.3 10/100 Base T
IP encapsulated type		According to ETSI TS 102 034 v1.31(2007-10) and SMPTE ST 2022-2:2007
Outflow IP		CBR / VBR
IP address		Unicast / Multicast
Protocolos		UDP / RTP
IP encapsulated format		SPTS
DVB processing		PAT, PMT, SDT, TDT, TOT
NIT and SDT adaptation		Yes
PSI/SI adaptation		Generation and insertion of PAT, PMT, SDT, NIT tables
SID configuration		Yes
Channel name edition (EIT)		Yes (ex. "camera pool")
EIT edition		Yes (ex. "open 9h from 18h")
Firmware upgrade		Yes, web or USB interface
Mains voltage	VAC	230 - 240
Consumption	W	19
Firmware upgrade		Yes, web or USB interface
Playback from USB		Yes
Dimensions / poids	mm/kg	300 x 250 x 40 / 2.5

Possible combinations:

• SD CVBS/Audio + SD CVBS/Audio • SD HDMI + SD CVBS/Audio • SD SDI + SD CVBS/Audio • SD + USB	2 simultaneous SD channels 1 channel SD + USB
• HD HDMI • HD SDI • HD + USB	1 channel HD 1 channel HD + USB

The MAC HD model is a standalone modulator unit which can handle different audio and video formats to make up a high-definition DVB-T/C and IP channel which can be active simultaneously.

The unit has three output types:
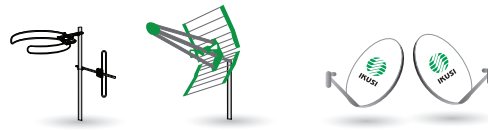
• DVB-T ; DVB-C and IP.

This product aims to meet video signal distribution requirements in residential facilities, hotels and landmark buildings, along with video surveillance installations with COFDM digital TV modulation. The MAC HD also has a USB interface to add new functions thanks to the evolving computer software, such as video playback from a USB memory stick for digital signage and other possible future additions.

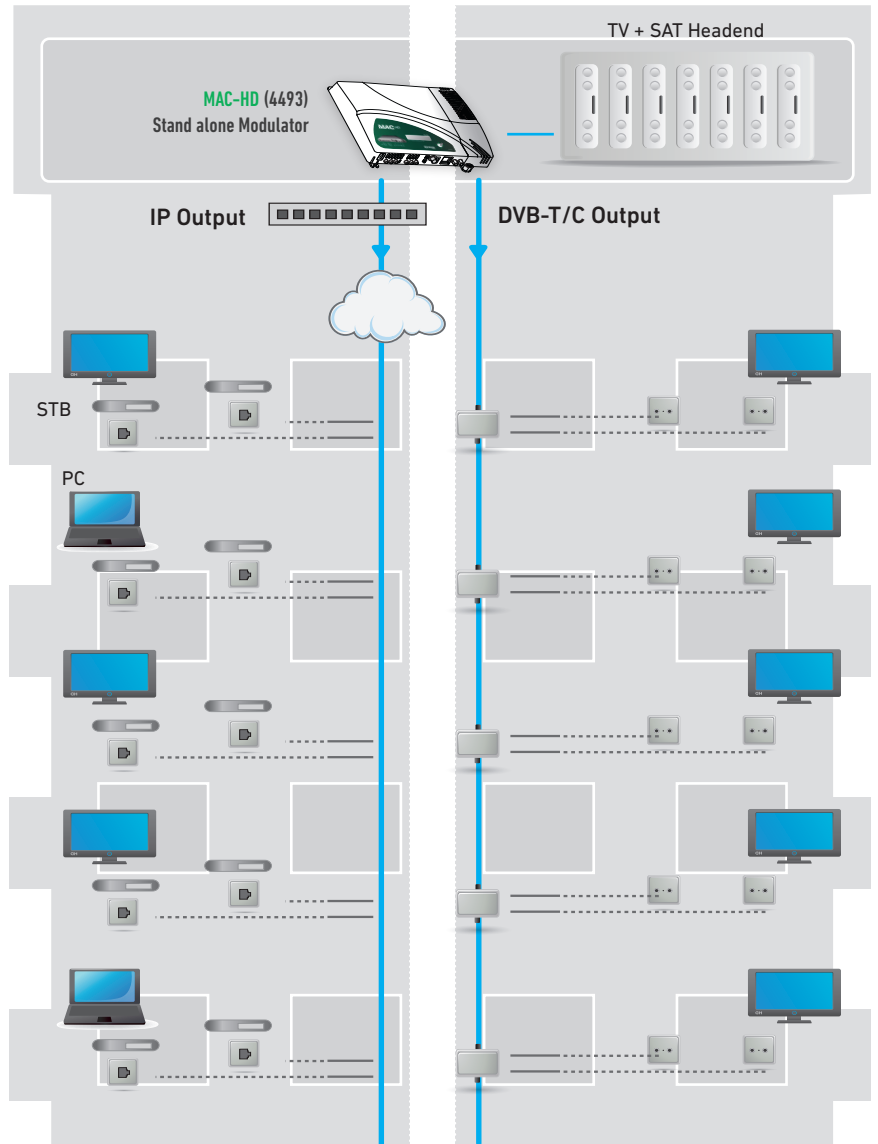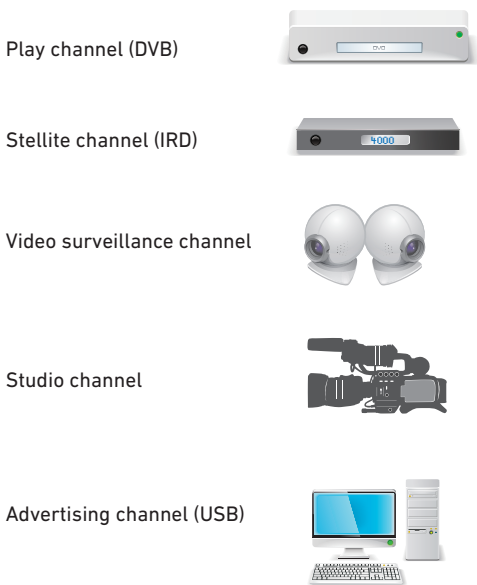The end user can program the modulator in different ways:

• LCD and joystick placed on the front of the unit.
• Web interface configuration by application IKUSI HEADEND DISCOVERY. (Programming with IP output is only possible with this mode).

MAC-HD

Application examples

Application in residential facilities, hotels, landmark buildings or video surveillance installations.
The output modes: DVB-T ; DVB-C and IP

TV + SAT Headend

MAC-HD (4493)
Stand alone Modulator

IP Output

DVB-T/C Output

SOME OF THE SUPPORTED VIDEO SOURCES

Play channel (DVB)

Stellite channel (IRD)

Video surveillance channel

Studio channel

Advertising channel (USB)

STB

PC

Digital signage application. Allows any business to economically and straight-forwardly generate its own advertising and information channel without any equipment other than the MAC HD modulator itself.

MAC-HD