







COMPACT HEAD-ENDS FOR THE CONVERSION OF ENCODED SATELLITE SIGNALS TO COFDM

The head-ends demodulates in digital terrestrial (DVB-T) or in DVB-C, SD or HD (DVB-S and DVB-S2) satellite services, also encoded (by using CAM and professional Cards for decoding the desired channels).

Selected services are distributed to users via the same network used for digital terrestrial and can be tuned using any device (TV or Decoder) equipped with tuner for digital terrestrial (or DVB-C). New ESTRO head-end is optimized to offer the best HD channels reception and conversion, in particular for Tivùsat platform HD services. Besides, the head-end is modular and can be updated by adding components to increase its potential. Ideal for hotels, hospitals, communities, camping, etc.

Available in 3 models suitable for free to air and encoded signals:

- 80422CI: 2 SAT inputs for 2TPs Output: 2 MUXES 2xCI
- 80428CI: 4 SAT inputs for 8TPs Output: 4 MUXES 2xCI
- 80430CI: 4 inputs SAT for 8TPs Output: 8 MUXES 4xCI

Common features for all the models:

- Setting from PC or remotely via Ethernet
- DTT output on vestigial channels in VHF or UHF band (90 dBµV)
- Ability to set the LCN position for any demodulated service
- "Easy Services" function to better optimize the number of channels for each mux.
- "Remapping" function to allow changing the list of demodulated services without retuning the TVs.
- "FLEX CAM" to decode services from different transponders with a single CAM module.

RANGE

80422CI	Compact 2xCl head-end with 3-place rack, suitable for receiving the main services of Tivùsat platform.	
	Type: 2xCl Inputs: 2 per 2 Tp Output muxes: 2 flexible (also not adjacent)	
80428CI	Compact FTA head-end with 3-place rack, suitable for receiving the main services of Tivùsat platform, including a bundle of thematic channels. Type: 2xCl Inputs: 4 for 8 Tp Output muxes: 4 adjacent	
80430CI	Compact FTA head-end with 5-place rack, suitable for receiving a number of services by Tivùsat platform. Type: 4xCl Inputs: 4 for 8 Tps Output muxes: 8 (4 adjacent + 4 adjacent)	



EASY SERVICE

no constraints

SAT services received from a TP can be converted to different output muxes with



LCN LIST Sorting of the channel list and LCN numbering are parameters that can be managed in the programming.



FAST SETTING Programmable from PC with the supplied SW and remote control via Ethernet (optional interface code 80402RC). 0100 1010 0011

REMAPPING Demodulated channel list can be changed without retuning linked TVs.



FLEX CAM An only professional CAM module to decode services from different SAT TPs with a remarkable cost saving.

COMPACT HEAD-ENDS FOR THE CONVERSION OF FREE TO AIR SATELLITE SIGNAL TO COFDM

The head-end demodulates also HD (DVB-S and DVB-S2) services received from Satellite to digital terrestrial (DVB-T) or DVB-C. Selected satellite signals are distributed to users via the same network used for digital terrestrial and can be tuned using any device (TV or Decoder) equipped with tuner for digital terrestrial (or DVB-C).

New ESTRO head-end is optimized to offer the best HD channel reception and conversion.

Besides, the head-end is modular and can be updated by adding components (e.g. 2 slots for CI CAM module) to increase its potential. Ideal for hotels, hospitals, communities, camping, etc.

Available in 3 models suitable for free to air signals:

- 80422: 2 inputs SAT for 2TPs Output: 2 FTA MUXES
- 80428: 4 inputs SAT for 8TPs Output: 4 FTA MUXES
- 80429: 4 inputs SAT for 8TPs Output: 8 FTA MUXES

Common features for all the models:

- Setting from PC or remotely via Ethernet
- DTT output on vestigial channels in VHF or UHF band (90 dBµV)
- Ability to set the LCN position for any demodulated service
- "Easy Services" function to better optimize the number of channels for each mux.
- "Remapping" function to allow to change the list of demodulated services without retuning the TVs.

RANGE		
80422	Compact FTA head-end with 3-place rack, suitable for receiving a limited number of free-to-air channels. Type: FTA Inputs: 2 for 2 Tps Output muxes: 2 flexible (also not adjacent)	
80428	Compact FTA head-end with 3-place rack, suitable for receiving a good number of free-to-air channels. Type: FTA Inputs: 4 for 8 Tps Output muxes: 4 adjacent	
80429	Compact FTA head-end with 3-place rack, suitable for receiving a high number of free-to-air channels. Type: FTA Inputs: 4 for 8 Tps Output muxes: 8 (4 adjacent + 4 adjacent)	0100 1010 0011



EASY SERVICE SAT services received from a TP can be converted to different output muxes with no constraints.



LCN LIST Sorting of the channel list and LCN numbering are parameters that can be managed in the programming.



FAST SETTING Programmable from PC with the supplied SW and remote control via Ethernet (optional interface code 80402RC).



REMAPPING Demodulated channel list can be changed without retuning linked TVs.

EXAMPLES OF CONFIGURATION

CONFIGURATION 1

ENCODED SERVICES - TIVUSAT PLATFORM

Main receivable services

Rai 1 HD	Rai 1 HD	1
Rai <mark>2</mark> нр	Rai 2 HD	2
Rai Знр	Rai 3 HD	3
	Rete 4 HD	4
*5	Canale 5 HD	5
() ID	Italia 1 HD	6

Description:

Installation for the distribution in COFDM of 6 Tivùsat platform HD services

Satellite - Hotbird Tp: 12 - 52

Service in Italian language

CONFIGURATION 2

ENCODED SERVICES – TIVUSAT PLATFORM

Main receivable services

Rai 1HD	Rai 1 HD	1
Rai 2HD	Rai 2 HD	2
Rai 3HD	Rai 3 HD	3
С. но	Rete 4 HD	4
*5™	Canale 5 HD	5
П	Italia 1 HD	6
LAT C	La 7 HD	7
	Mediaset 20 HD	20

Description:

Installation for the distribution in COFDM of 16 Tivùsat platform SD and HD services

Satellite - Hotbird Tp: 12 - 52 - 60 - 125

Service in Italian language

Head-end composition



N. 1 - **Code 80422CI** Compact ESTRO head-end 2TP/2Mux 2xCI



N. 1 - **Code 111Cl** (or 112Cl) Professional CAM

Rai Moviend	Rai Movie HD	14
Rai Gulp HD	Rai Gulp HD	42
Rai 5HD	Rai 5 HD	13
Rai Sport + HD	Rai Sport + HD	21
Topcrime	Top Crime	39
corteonito	Cartoonito	41
Bone	Boing	40
MEDIASET	TGCOM 24	25

Head-end composition



N. 1 - **Code 80428CI** Compact ESTRO head-end 4TP/8Mux 2xCI



N. 2 - **Code 111CI** (or 112CI) Tivùsat Professional CAM



CONFIGURATION 3

ENCODED SERVICES – TIVUSAT PLATFORM

Main receivable services

Rai 1HD	Rai 1 HD	1
Rai 2HD	Rai 2 HD	2
<mark>Rai</mark> Знр	Rai 3 HD	3
	Rete 4 HD	4
*5 📼	Canale 5 HD	5
() HD	Italia 1 HD	6
	La 7 HD	7
MEDIASET	Mediaset 20 HD	20
Rai Moviend	Rai Movie HD	14
Rai Gulp HD	Rai Gulp HD	42
Rai 5HD	Rai 5 HD	13
Rai Sport + HD	Rai Sport + HD	21
Rai 4HD	Rai 4 HD	10
NOVE [⊪]	Nove HD	9
MOTOR TREND HD	Motor Trend HD	57
Giallo HD	Giallo HD	38

Description:

Installation for the distribution in COFDM of 32 Tivùsat platform SD and HD services

Satellite - Hotbird Tp: 10 - 12 - 52 - 60 - 69 - 75 - 125 - 157

Services in Italian language

Other services admissible in addition or alternatively

<u>cartconito</u>	Boing	40
Boing	Cartoonito	41
MEDIASET	TGCOM 24	25
TOPcrime	TOP Crime	39
MEDIASET	Mediaset Italia 2	16
Rai News 24 HD	Rai News 24 HD	24
3	TV 8 HD	8
cielo	Cielo HD	19
	DMAX HD	28
Real Time HD	Real Time HD	31
RTL	RTL 102.5 HD	36
TV2000	TV 2000 HD	18
(К2	46
1315	IRIS	11
LA	LA5	12
Focus	Focus	60

Head-end composition



N. 1 - Code 80430CI Compact ESTRO head-end 8TP/8Mux 4xCI



N. 4 - **Code 111CI** (or 112Cl) Professional Tivùsat CAM



IMPORTANT NOTE: List of receivable services is purely indicative because it depends on the limit of decodable channels of the employed professional CAM module (111Cl or 112Cl) and on the transmission quality. The indicated coded services can be replaced with others present in the tuned transponders while it is possible to additionally receive any free-to-air channels. The shown logos are the property of their respective companies. The information and technical data indicated in this document are subject to change. Emme Esse S.p.A reserves the right to modify, without notice, the specifications according to the evolution of products and technologies.

CONFIGURATION 4

FREE TO AIR SERVICES

Main receivable services

Germany	German
Germany	German
	Germany Germany

Description:

Installation for the distribution in COFDM of 13 free to air services

Satellite - Astra Tp: 77 - 89

Services in language: German

Head-end composition



N. 1 - **Code 80422** Compact ESTRO head-end 2TP/2Mux FTA

CONFIGURATION 5

FREE TO AIR SERVICE

Main receivable services

Life TV	ик	English
TVE Int. HD	Spain	Spanish
24 Horas HD	Spain	Spanish
BBC World	UK	English
ORT Int.	Russia	Russian
Perviy kanal	Russia	Russian
Foix TV	Austria	German
TVP Polonia	Poland	Polish
CNN Int.	U.S.A.	American English
Euronews F	France	French
France 24	France	French
	· · · · · · · · · · · · · · · · · · ·	

RTL Tel.	Germany	German
RTL 2	Germany	German
TOGGO	Germany	German
Super RTL	Germany	German
VOX Austria	Austria	German
Super RTL Aus.	Austria	German
TRT World HD	Turkey C*	Turkish
RTL Austria	Austria	German
RTL2 Austria	Austria	German
EURONEWS D	Germany	German
TV5 Monde	France	French

Description:

Installation for the distribution in COFDM of 22 free to air services

Satellite - Astra Tp: 22 - 28 - 77 - 89 - 91

Satellite - Hotbird Tp: 80 - 94 - 128

Services in language: German, Spanish, French, English, Russian, Polish and Turkish

Head-end composition



N. 1 - **Code 80428** Compact ESTRO head-end 8TP/4Mux FTA

CONFIGURATION 6

FREE TO AIR SERVICES

Main receivable services

Life TV			English
TVE Int. HD	Spain	<u>iš</u> .	Spanish
24 Horas HD	Spain	<u></u>	Spanish
BBC World			English
ORT Int.	Russia		Russian
Perviy kanal	Russia		Russian
France 24	France		French
TV5 Monde	France		French
TRT World HD	Turkey	C*	Turkish
RTL Austria	Austria	橃	German
RTL2 Austria	Austria	橃	German
VOX up	Switzerland		Mixed language
HSE 24	Germany		German
EURONEWS D	Germany		German
TBN Europa	U.S.A.		American English
Pro7	Germany		German
Pro7 Austria	Austria	懋	German
Kabel 1	Germany		German
Kabel 1 Austria	Austria	懋	German
Sat1	Germany		German

-		1.4.4	
Des	cru	nti	on'
Des		μu	UII .

Installation for distribution in COFDM of about 40 free to air services

Satellite - Astra Tp: 22 - 28 - 77 - 82 - 89 - 91

Satellite - Hotbird Tp: 80 - 94

Services in language: German, Spanish, French, English, Russian, Polish, Portuguese e Turkish

Other services admissible in addition or alternatively

CNN Int.	U.S.A.	American English
RTL Tel.	Germany	German
RTL 2	Germany	German
TOGGO	Germany	German
Super RTL	Germany	German
VOX	Germany	German
RTL Nitro	Germany	German
RTL + Ger.	Germany	German
n-tv	Germany	German
ZDF	Germany	German
3SAT	Germany	German
KIKA	Germany	German
ZDF Info	Germany	German
VOX Austria	Austria	German
Super RTL Aus.	Austria	German
Eurosport	France	French
Euronews F	France	French
TV Recodrd	Brazil	Portuguese
TBN Polonia	Poland	Polish
Sat 1 Austria	Austria	German

Head-end composition



N. 1 - **Code 80429** Compact ESTRO head-end 8TP/8Mux FTA



IMPORTANT NOTE: Lists of receivable services are purely indicative because they depend on the various channels transmission quality and the actual presence of the service at the time of the request. Therefore, before confirming a quotation, it is recommended to check that the various services are still in transmission and that the various configurations are actually receivable with the indicated products. The shown logos are the property of their respective companies. The information and technical data indicated in this document are subject to change. Emme Esse S.p.A reserves the right to modify, without notice, the specifications according to the evolution of products and technologies.









Emme Esse S.p.A. via Moretto, 46 - 25025 Manerbio (BS) info@emmeesse.it

