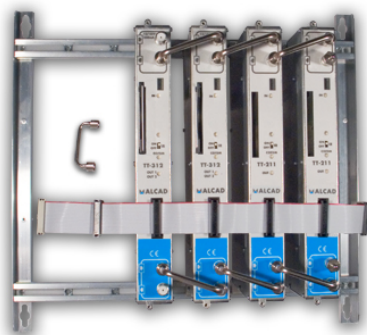


# 912 TV-SAT AND MODULATOR EQUIPMENT

## FRANSAT PRO SYSTEM 6XHD 2XCAM 1XCARDS



Code : **9120236**

Model : **TT-911**

### Description

Transmodulator of encrypted satellite digital television services to terrestrial digital television. Each module selects the services of a DVB-S/S2 satellite transponder and includes them in a DVB-T channel. Equipped with a Common Interface slot for insertion of the CAM and the subscriber's card. Programmable using PC software and a wireless programmer. Applications Collective terrestrial digital television installations where the aim is to distribute encrypted satellite television services while avoiding the installation of satellite receivers. Compatible with all collective TV installations since the channels can be distributed throughout the terrestrial band. Characteristics Automatic error-detection system which greatly reduces maintenance work on the installation. Generated output channel of outstanding quality. Does not include the CAM or the decoder card. Zamak chassis with metal side panels. F-type connectors. The equipment can be assembled quickly and easily.

CODE	9120147		
MODEL	IT2211		
TV system	DVB-S / DVB-S2 → DVB-T / DVB-H in standard in standard in standard		
<b>DVB-S2 receiver</b>			
Frequency range	MHz	950 - 2150	
Frequency step	KHz	1	
UHF power supply	V <sub>cc</sub>	+12	
UHF power supply	mA	350 max	
Symbol rate	Mbaud	1...45	
Dispensing through loss	(dB)TX	1.0 ±0.2	
<b>DVB-S2 receiver</b>			
Input level	dBV	45...95	
Input level	dBm	-40...-13	
F.E.C. QPSK		Auto: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 DVB EN 302021	
F.E.C. BPSK		Auto: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 DVB EN 302021	
Roll-Off	dB	0.35/0.25/0.20	
<b>DVB-S receiver</b>			
Input level	dBV	45...95	
Input level	dBm	-40...-13	
F.E.C. QPSK		Auto: 1/2, 2/3, 3/4, 5/6, 7/8 DVB EN 302021	
<b>Conditional access</b>			
Standard	DVB-CI EN 50221		
Compatibility	MU	Viacom, Mediaset, Videogrand, Seco, Intercept, Negronius, Idetec, Cryptowork, Conax	
CODE	9120147		
MODEL	IT2211		
<b>COSMOS modulator</b>			
TV system	DVB-T / DVB-H in standard in standard		
Output	MHz	-1/6...1/8...5/6...11...1/6	
Modulation		2K, 8K, 4K, 8K min DVB EN 300 400	
Modulation		QPSK, 16QAM, 64QAM	
F.E.C.		1/2, 3/5, 2/3, 3/4, 5/6, 7/8	
Guard interval		1/4, 1/8, 1/16, 1/32	
MER	dB	39...43	
<b>RF output</b>			
Frequency range	MHz	47...63	
Frequency step	MHz	0.25	
Output level	dBV	80...83	
Output level	dBm	20	
Bandwidth	MHz	8...7.5, 5, 4, 3, 2	
Through loss in the return	dB	50...41	
<b>General features</b>			
Power supply	V <sub>cc</sub>	+3...3	+5 ±2
Power supply	mA	1200	700±50
Opening T close to equipment		-30...45	
Room T with/without box		-10...-55/±45	
Protection class		FSD	
Units per packing		1	
Packing weight	kg	1.4	
Box dimensions (mm)		277x171x171.5	

CODE		9120201	
MODEL		IT2411	
TV system		DVB-S / DVB-S2 → DVB-T / DVB-H in standard in standard	
Connection		F female	
Number of inputs		1 with displacement or 2 independent	
<b>DVB-S2 receiver</b>			
Frequency range	MHz	950 - 2150	
Frequency step	KHz	DISEC 2.0	
UHF power supply	V <sub>cc</sub>	+12 / +18 (D/220Hz)	
UHF power supply	mA	350 max	
Symbol rate	Mbaud	1...45	
Dispensing through loss	(dB)TX	1.0±0.2	
<b>DVB-S2 receiver</b>			
Input level	dBV	45...95	
Input level	dBm	-40...-13	
F.E.C. QPSK		Auto: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 DVB EN 302021	
F.E.C. BPSK		Auto: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 DVB EN 302021	
Roll-Off	dB	0.35/0.25/0.20	
<b>DVB-S receiver</b>			
Input level	dBV	45...95	
Input level	dBm	-40...-13	
F.E.C. QPSK		Auto: 1/2, 2/3, 3/4, 5/6, 7/8 DVB EN 302021	
<b>Conditional access</b>			
Standard		DVB-CI EN 50221	
Compatibility		Viacom, Mediaset, Videogrand, Seco, Intercept, Negronius, Idetec, Cryptowork, Conax	
CODE		9120201	
MODEL		IT2411	
<b>CONAX modular</b>			
TV system		DVB-T / DVB-H DVB EN 302021	
Output offset	MHz	-1/6...1/6, 0...1/6, +1/6	
Mode		8K, 16K, 40K (DVB-H) DVB EN 302021	
Modulation		QPSK, 16QAM, 64QAM DVB EN 302021	
F.E.C.		1/2, 2/3, 3/4, 5/6, 7/8 DVB EN 302021	
Guard interval		1/4, 1/8, 1/16, 1/32 DVB EN 302021	
MER	dB	29±0.1	
<b>RF output</b>			
Frequency range	MHz	47-862	
Frequency step	MHz	0.25	
Output level	dBV	80±0.1	
Output level adjust	dB	20	
Bandwidth	MHz	8, 7, 6, 5 MHz	
Through loss in the mixture	dB	0.9±0.1	
<b>General features</b>			
Power supply	V <sub>cc</sub>	+3.3      +5.2      +12	
Power supply	mA	1200      250±CAM      750±NB	
Operating T close to equipment	°C	-10...+45	
Room T with/without fan	°C	-10...+55/+45	
Protection index		IP30	
Units per packing		1	
Packing weight	Kg	1.4	
Packing dimensions	mm	270 x 170 x 38	

CODE	9120210	
MODEL	IT3112	
TV system	DVB-S / DVB-S2 → DVB-T / DVB-H DVB EN 302021 → in standard	
Connection	F Female	
Number of inputs	1	
Number of output channels	1 or 2 (dependent)	
DVB-S2 receiver		
Frequency range	MHz	950 - 2150
Frequency step	KHz	1
UHF power supply	V <sub>cc</sub>	DISEC 2.0
UHF power supply	mA	+13/+18 (D/220Hz)
UHF power supply	mA	350 max.
Symbol rate	Mbaud	1...45
Dispensing through loss	(dB)TX	1.0±0.2
<b>DVB-S2 receiver</b>		
Input level	dBV	45...95
Input level	dBm	-40...-13
F.E.C. QPSK		Auto: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 DVB EN 302021
F.E.C. BPSK		Auto: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 DVB EN 302021
Roll-Off	dB	0.35/0.25/0.20
<b>DVB-S receiver</b>		
Input level	dBV	45...95
Input level	dBm	-40...-13
F.E.C. QPSK		Auto: 1/2, 2/3, 3/4, 5/6, 7/8 DVB EN 302021
Roll-Off	dB	0.35
<b>Conditional access</b>		
Standard	DVB-CI EN 50221	
Compatibility	Viacom, Mediaset, Videogrand, Seco, Intercept, Negronius, Idetec, Cryptowork, Conax	

CODE	9120210	
MODEL	IT3112	
TV system	DVB-T / DVB-H DVB EN 302021	
Output offset	MHz	-1/6...1/6, 0...1/6, +1/6
Mode		8K, 16K, 40K (DVB-H) DVB EN 302021
Modulation		QPSK, 16QAM, 64QAM DVB EN 302021
F.E.C.		1/2, 2/3, 3/4, 5/6, 7/8 DVB EN 302021
Guard interval		1/4, 1/8, 1/16, 1/32 DVB EN 302021
MER	dB	29±0.1
<b>RF output</b>		
Frequency range	MHz	47-862
Frequency step	MHz	0.25
Output level	dBV	80±0.1
Output level adjust	dB	20
Bandwidth per channel	MHz	8, 7, 6, 5 DVB-H
Through loss in the mixture	dB	0.9±0.1
<b>General features</b>		
Power supply	V <sub>cc</sub>	+3.3      +5.2      +12
Power supply	mA	1300      250±CAM      550±NB
Operating T close to equipment	°C	-10...+45
Room T with/without fan	°C	-10...+55/+45
Protection index		IP 30
Units per packing		1
Packing weight	Kg	1.4
Packing dimensions	mm	265 x 165 x 40



CODE		9120093
MODEL		PA-720
TV System		AM-TV / DVB-T / DVB-C
Number of inputs		1
Frequency range	MHz	40 - 894
Gain	dB±TOL	44 ±1,0
Gain adjustment	dB	15
Output level	dBµV	119 DIN 45004B 116 (IMD3 - 60 dB) 110 (IMD2 - 60 dB) 103 (CTB - 60 dB) 103 (CSO - 60 dB) 104 (XMOD - 60 dB)
Output test point	dB±TOL	-30 ±1,0
Extension input loss	dB±TOL	0 ±2,0
Noise figure	dB	35 ±0,5
Return loss	dB	>14 - 1.5 / eighth >10
Chroma-luminance delay	ns	<10
Connectors		F female
Power supply	V $\overline{\text{---}}$	+24
	mA	320
Operating temperature	°C	-10..+45
Room temperature with/ without fan	°C	-10..+55/+45
Protection index		IP 20C
Units per packaging		1
Packing weight	Kg	1.16
Packing dimensions	mm	265 x 165 x 40

CODE		9120046				9120168			
MODEL		FA-310				FA-312			
Output voltage	V $\overline{\text{---}}$	+3.3	+5.2	+12.0	+24	+3.3	+5.2	+12.0	+24
	mA	5500	2500	1500	500	10000	5000	1500	500
Peak to peak ripple voltage	mV	>50				100			
Mains voltage	V $\sim$	230 $\pm$ 20% 50/60 Hz		240 $\begin{smallmatrix} +15\% \text{ 50/60 Hz} \\ -20\% \text{ 50/60 Hz} \end{smallmatrix}$		90..264 $\begin{smallmatrix} 50/60 \text{ Hz} \end{smallmatrix}$			
	W	72				85			
Operating temp. close to equipment	°C	-10..+65							
Room tmperature with/without fan	°C	-10..+55/+45							
Protection index		IP 20C							
Units per packaging		1							
Packing weight	Kg	1.43				1.65			