

# 912 TV-SAT AND MODULATOR EQUIPMENT

## 912-TT FRANSAT SYSTEM 6XHD+FR3



Code: 9120230

Model: TT-907

### 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 scard. 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



MODEL		TF211					
TV system		DV8-5 / DV8-52 → DV8-T/DV8-H 81-300421 81-302307 81-300744					
DV8-5/S2 receiver							
Frequency range	MHz	950 - 2.150					
Frequency step	KI-liz	1					
UNB power supply	V=	+12					
rue bower sobbié	nA.	350 máx					
Symbol rate	Mood	1,45					
Diplosing through loss	d8±TOL	1.0 (0.2					
DV8-52 receiver							
Incut level	dByV	45.95					
Input sever	dBrs	6313					
F.E.C. GPSK		Auto, 1/2, 3/5, 2/3, 3/4, 4/5 5/6, 8/9, 9/10 0/8 04102387					
F.E.C. 8PSK		A40, 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 0/6 04102007					
Roll-Off	dB	0,35/0,25/0,20					
DVB-S receiver							
Input level	dbyV	40.95					
Input sever	din	6013					
F.E.C. GPSK		Auto, 1/2, 2/3, 3/4, 5/6, 7/8 0/8 0110021					
Conditional access							
Stondard		DVB-CI: EN 50221 Commo Intefaco					
Compatibility	MHz	Viacces, Mediaguard, Videoguard, Seca, Betucryp, Nagravision, Irdeto, Cryptoworks, Coeax					

Compatibility	MHz	Irdeto, Cryptoworks, Coeax							
MODEL		TF-211							
COFDM modulator									
TV system			DVBT / DVBH 098: 04.000744						
Output offset	MHz	-1/6, -1/8, 0, +1/8, +1/6							
Mode			2K, 8K, 4K pvanq 0va 0v.00744						
Modulation			QPSK, 16QAM, 64QAM DNI ID 100744						
F.E.C.			1/2, 2/3, 3/4, 5/6, 7/8 0/8 84 00/24						
Guard interval			1/6, 1/6, 1/16, 1/32						
MER	dB		39 +2,0						
RF output									
Frequency range	MHz		47862						
Frequency step	MHz	0,25							
Output level	dByV	80 +2,0							
Ouput level adjust	dB		20						
Bondwidth	MHz	8, 7, 6, 5 over							
Through loss in the mixture	dB	0,9 40,1							
Deneral features									
Power supply	Vec	+3,3	+5,2	+12					
rower suppry	mA .	1200	390+CAM	70+INB					
Operating T clase to equipme	nt I		-10_+65						
Room T with/without fan		-10.+55/+45							
Protection Index		P30							
Units per pocking		1							
Packing weight	Kg	14							
Packing dimensions	no	270 x 170 x 38							

CODE		9120201					
MODEL .	V120201						
	DVB5 / DVB5 / DVB1 / DVBH						
TV system		BY 300421 BY 302947 BY 300744					
Connection		F femole					
Number of inputs		1 with duplexing or 2 independents					
DVB-5/52 receiver							
Frequency ronge	MHz	950 - 2.150					
Frequency step	KHz	l .					
INB power supply	V::	DISE <sub>0</sub> C 2.0 +13 / +18 [0/22KHz]					
	mA.	350 mbx					
	Mboud	1.45					
	iB±TOL	1.0 402					
DVB-S2 receiver							
Input level	dBy/Y	45.95					
inpat sees	dia	6313					
F.E.C. GPSK		Auto, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 DNB (N 30300*					
F.E.C. BPSK		Auto, 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 DWB IN 903307					
Roll-Off	dB	0,35/0,25/0,20					
DVB-S receiver							
Input level	dByV	40.95					
inpar sever	dBm	4813					
F.E.C. GFSK		Auto, 1/2, 2/3, 3/4, 5/6, 7/8 DNs to 30021					
Conditional access							
Standard		DVB-C1: EN 50221 Common laterface					
Compatibility	_	Viaccess, Medioguard, Videoguard, Seco, Betacryp, Nagravision, Irdeto, Cryptoworks, Cosc					
CODE		9120201					
MODEL		T411					
		11411					
COFDM modulator	_						
TV system		DVBT / DVB.H DVB: DV 300764					
Output offset	Mtz	-1/6, -1/8, O, +1/8, +1/6 0/81					
		2K, BK, 4K (pvise) DN: Dn 302744					
Mode							
	+	GPSK, 16GAM, 64GAM bits to 3007ss					
Modulation							
Modulation F.E.C.		GPSK, 16GAM, 64GAM bits to 3007ss					
Modulation F.E. C. Guard interval	dB	GPSK, 16GANA, 64GAM Dels to solonia 1/2, 2/3, 3/4, 5/6, 7/8 Dels to solonia					
Modulation F.E.C. Guard interval MER	dis	GPSK, 16-CARA, C-4CARA DIDE IS 93/07/44 1/2, 2/2, 3/4, 5/6, 7/8 1/2, 2/3, 3/4, 5/6, 7/8 1/4, 1/8, 1/16, 1/12 1/4, 1/8, 1/16, 1/12					
Modulation F.E.C. Guard interval MER RF output	dB MHz	GPSK, 16-CARA, C-4CARA DIDE IS 93/07/44 1/2, 2/2, 3/4, 5/6, 7/8 1/2, 2/3, 3/4, 5/6, 7/8 1/4, 1/8, 1/16, 1/12 1/4, 1/8, 1/16, 1/12					
Madulation REC. Guard interval MER RF output Frequency range		GPSK_16/DAM, 64/DAM, bits bits/dria 1/2, 2/2, 3/4, 5/6, 7/8 th bits/dria 1/4, 1/8, 1/16, 1/92 1/4, 1/8, 1/16, 1/92 99 vzp					
Modulation EE.C. Guard interval MEE RF output Frequency range	MHz	GFSL, 1620AA, 4640AM DESCRIPTION OF THE STATE OF T					
Madulation E.E.C. Guard Interval MER RF output Frequency range Frequency step Output layer	MHz MHz	OPEN, ISOMAN 4-GAMA INC. 2020, 344, 545, 546, 747 IV. 1020, 344, 546, 747 IV. 1021, 147, 147, 1472 IV. 1021, 147, 147, 147, 147, 147, 147, 147, 14					
Madulation E.E.C.  Guard Interval MEE  EF output  Frequency sarge  Frequency sarge  Output level  Output level	MHz MHz dBpV dB	OFM, 1,000,00,000,000,000,000,000,000,000,0					
Modulation  E.E.C.  Guard interval  MEE  RF output  Frequency ongs  Frequency step  Output level  Output level  Sorchwidth	MHz MHz dBpV dB MHz	OTHS (1,000M, 4,010MM) WHI SHIP (1,000M, 4,010MM) (1,000M, 4,010MM					
Modulation  E.E.C.  Goard interval  MEE  RF output  Frequency steps  Crepancy step  Output level  Output level  Output level  Trough Social	MHz MHz dBpV dB	OFM, 1,000,00,000,000,000,000,000,000,000,0					
Modulation E.E.C. Guard interval MEE EF output Frequency range Frequency step Output level odjust Bornhards Bornhards Frequency Bornhards General Sectures General Sectures	MHz MHz dBpV dB MHz dB	OTIS_UNIM_MODALS  IF 2					
Mackission E.E.C.  Goord interval  MER Exceptur  Frequency sarge  Frequency sarge  Frequency sarge  Gregate and sarge  Output freed  Borndwidth  Through loss in the mixture  Gowner sarpply  Power sapply	MHz MHz dBpV dB MHz dB	OPIS_1000M_490AM  OPIS_1000M_490AM  1(2-2)_2 3/14, 3/2 /7  1(2-2)_2 3/14, 3/2 /7  1(2-2)_2 3/14, 3/2 /7  1(2-2)_2 3/14, 3/2 /7  Proposition  Proposition  Opis 3  Opis 4  Opis 3  Opis 4  Opis					
Modulation EE.C. Govard interval MEE BY enginee Frequency songs Frequency songs Frequency songs Govard India Frequency songs Frequency songs Frequency songs Frequency songs Frequency songs Frequency songs Frequency F	MHz MHz dBpV dB MHz dB	OPIS_100004_450004  17.2.72_374.56.577  17.2.72_374.56.577  17.4.16.718.772  27.2.2  2					
Modulosos  EE.C.  Goord interval  MEI  BF output  Frequency reage  Frequency reage  Coupst level Oignat  Bendunids  Bendunids  Bendunids  Prover aspaly  Operation of the michan  Countries of the m	MHz MHz dBpV dB MHz dB	O'RE_(DOM_MCDAM_C)  (12.2) 3.14 5.25 7.8  (14.2) 3.14 5.27 7.8  (14.2) 3.14 5.27 7.8  (14.2) 3.14 5.27 7.8  (14.2) 3.14 5.27 7.8  (14.2) 3.27 7.8  (14.2) 3.27 7.8  (14.2) 3.27 7.8  (14.2) 3.27 7.8  (14.2) 3.27 7.8  (14.2) 3.27 7.8  (14.2) 3.27 7.8  (14.2) 3.27 7.8  (14.2) 3.27 7.8  (15.2) 3.27 7.8  (16.2) 3.27					
Modulation EE.C. Good interval MEE.B. RF output Frequency longs Frequency assign Couper level Couper level Good data Benducks Benducks Benducks Benducks Good to the interval Good to the interval Good to the interval Good to experience Good To which will be to experience Good To which will be to experience Frequency Good to experience Good To which will be to experience Frequency Good to experience Frequency Good To which the to the couper Frequency Fre	MHz MHz dBpV dB MHz dB	OPIS_100004_490004  [12.22]_216.35.27.78  [12.22]_216.35.27.78  [12.22]_216.35.27.78  [12.22]_216.35.27.78  [12.22]_216.35.27.78  [12.22]_216.35.27  [12.22]_216.35.27  [12.22]_216.35.27  [12.22]_216.35.27  [12.22]_216.35.27  [12.22]_216.35.27  [12.22]_216.35.27  [12.22]_216.35.27  [12.22]_216.35.27  [12.22]_216.35.27  [12.23]_216.35.27  [12.24]_216.35.27  [12.25]_216.35.27  [12.26]_216.35.27  [12.26]_216.35.27  [12.26]_216.35.27  [12.26]_216.35.27  [12.26]_216.35.27  [12.26]_216.35.27  [12.26]_216.35.27  [12.26]_216.35.27  [12.26]_216.35.27  [12.26]_216.35.27  [12.26]_216.35.27  [12.26]_216.35.27  [12.26]_216.35.27  [12.26]_216.35.27  [12.26]_216.35.27  [12.26]_216.35.27  [12.26]_216.35.27  [12.26]_216.37  [1					
Mode Mode Mode Mode Mode Mode Mode Mode	MHz MHz dBpV dB MHz dB	O'RE_(DOM_MCDAM_C)  (12.2) 3.14 5.25 7.8  (14.2) 3.14 5.27 7.8  (14.2) 3.14 5.27 7.8  (14.2) 3.14 5.27 7.8  (14.2) 3.14 5.27 7.8  (14.2) 3.27 7.8  (14.2) 3.27 7.8  (14.2) 3.27 7.8  (14.2) 3.27 7.8  (14.2) 3.27 7.8  (14.2) 3.27 7.8  (14.2) 3.27 7.8  (14.2) 3.27 7.8  (14.2) 3.27 7.8  (15.2) 3.27 7.8  (16.2) 3.27					

CODE	_		9120213				
MODEL			π-312				
TV system		DV	B-S / DVB-S2 → DVB-T/DV th 300421 th 302307 th 300744	rs-H			
Connection		F Female					
Number of inputs			1				
Number of output channels			1 à 2 (adjacent)				
DVB-S/S2 receiver							
Frequency range	ANHy		950 - 2150				
Frequency step	KHz		1				
requestly step			DiSEoC 2.0				
LNB power supply	V		+13/+18 (0/22KHz)				
	mA		3.50 max.				
Symbol rate	Mhaud		1 45				
Diploxing through loss	mouse		1.0(0.2				
DVB-S2 receiver			1,000,0				
	dBuV		45 95				
Input level	dBm						
F.E.C. QPSK	- Out-	Auto 1/	2, 3/5, 2/3, 3/4, 4/5, 5/6,	8/0 0/10			
T.E.C. OF OR		AUIO, 1/2, 3/3, 2/3, 3/4, 4/3, 3/6, 8/9, 9/10 DVI: EN 302307					
F.E.C. 8PSK		Auto, 3/5, 2/3, 3/4, 5/6, 8/9, 9/10					
			DV8: EN 302307				
Roll-Off	dB	0,35/0,25/0,20					
DVB-S receiver							
Input level	dβμV		4095				
	dBm		-6813				
F.E.C. QPSK		Auto, 1/2, 2/3, 3/4, 5/6, 7/8					
		DV9: EN 302307					
Roll-Off	dB		0,35				
Conditional access							
Standard			DVB-CI EN 50021				
			Common Interface				
Compatibility			Aediaguard, Videoguard, Sec				
		Nogr	avision, Irdeto, Cryptoworks,	Conox			
COFDM modulator							
TV system			DV8-T/DV8-H				
	+		EN 300744				
Output offset	MHz	-1/6, -1/8, 0, +1/8, +1/6					
Mode	+		2K, 8K, 4K IDV6-HI				
Mode			ZN, ON, 4K (DV6-H) DV8: EN 300744				
Modulation			QPSK, 16QAM, 64QAM				
			DVB: EN 300744				
F.E.C.			1/2, 2/3, 3/4, 5/6, 7/8				
			DVB: EN 300744				
Guard interval			1/2, 1/8, 1/16, 1/32				
.urn	- In		DVB EN 300744				
MER	dB		39±2,0				
RF output	I can I						
Frequency range	MHz		47-862				
Frequency step	MHz		0,25				
Output level	dΒμV		80s2,0				
Output level adjust	dB		20				
Bandwidth per channel	MHz		8, 7, 6, 5 олын				
Through loss in the mixture	dB		0,9±1				
General features							
	V	+3.3	+5.2	+12			
	mA	1300	550+CAM	55+LNE			
Operating T clase to equipment	°C		-10+65				
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	dBhA	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	O ±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	+24
rower supply	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	+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			1	00	
Mains voltage	V~	230 ±20% 50/60 Hz 240 +15% 50/60 Hz -20% 50/60 Hz			90264 50/60 Hz				
	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			
B 1. 1		070 115 10							