

# 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'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		IT211
TV system		DVB-S / DVB-S2 → DVB-T / DVB-H ITU-T Recommendation → ITU-T Recommendation
<b>DVB-S2 receiver</b>		
Frequency range	MHz	950 - 2150
Frequency step	MHz	1
UNB power supply	V <sub>DC</sub>	+12
UNB power supply	mA	350 max
Symbol rate	Mbaud	1.45
Dispensing through loss	(dB)TOL	1.0 ±0.2
<b>DVB-S2 receiver</b>		
Input level	dBV	45 - 95
Input level	dBm	-63 - 13
F.E.C. QPSK		Auto: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 ITU-T Recommendation
F.E.C. BPSK		Auto: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 ITU-T Recommendation
Roll-Off	dB	0.35/0.25/0.20
<b>DVB-S receiver</b>		
Input level	dBV	40 - 95
Input level	dBm	-68 - 13
F.E.C. QPSK		Auto: 1/2, 2/3, 3/4, 5/6, 7/8 ITU-T Recommendation
<b>Conditional access</b>		
Standard		DVB-CI (EN 50221) Common Interface
Compatibility		Vuocom, Medagrand, Videogrand, Seco, Netcopy, Negronion, Idetia, Cryptowork, Conax

CODE		9120147
MODEL		IT211
<b>COFDM modulator</b>		
TV system		DVB-T / DVB-H ITU-T Recommendation
Output offset	MHz	-1/6, -1/8, 0, 1/8, 1/6
Mode		8K, 16K, 48K, 96K, 192K ITU-T Recommendation
Modulation		QPSK, 16QAM, 64QAM ITU-T Recommendation
F.E.C.		1/2, 2/3, 3/4, 5/6, 7/8 ITU-T Recommendation
Guard interval		1/4, 1/8, 1/16, 1/32 ITU-T Recommendation
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 offset	dB	20
Bandwidth	MHz	8, 7, 6, 5 MHz
Through loss in the system	dB	0.9 ±0.1
<b>General features</b>		
Power supply	V <sub>DC</sub>	+3.3      +5.2      +12
Operating T close to equipment	mA	1200      350±50mA      55±10mA
Room T with/without fan	°C	-10...+55      -10...+55/±45
Protection index		IP30
Units per packing		1
Packing weight	kg	1.4
Packing dimensions	mm	270 x 170 x 38

CODE		9120201
MODEL		IT211
TV system		DVB-S / DVB-S2 → DVB-T / DVB-H ITU-T Recommendation → ITU-T Recommendation
Connection		F Female
Number of inputs		1 with dispersive or 2 independent
<b>DVB-S2 receiver</b>		
Frequency range	MHz	950 - 2150
Frequency step	MHz	1
UNB power supply	V <sub>DC</sub>	DVB-C 2.0 +13 / +18 (D/220Hz)
UNB power supply	mA	350 max
Symbol rate	Mbaud	1.45
Dispensing through loss	(dB)TOL	1.0 ±0.2
<b>DVB-S2 receiver</b>		
Input level	dBV	45 - 95
Input level	dBm	-63 - 13
F.E.C. QPSK		Auto: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 ITU-T Recommendation
F.E.C. BPSK		Auto: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 ITU-T Recommendation
Roll-Off	dB	0.35/0.25/0.20
<b>DVB-S receiver</b>		
Input level	dBV	40 - 95
Input level	dBm	-68 - 13
F.E.C. QPSK		Auto: 1/2, 2/3, 3/4, 5/6, 7/8 ITU-T Recommendation
<b>Conditional access</b>		
Standard		DVB-CI (EN 50221) Common Interface
Compatibility		Vuocom, Medagrand, Videogrand, Seco, Netcopy, Negronion, Idetia, Cryptowork, Conax

CODE		9120201
MODEL		IT211
<b>COFDM modulator</b>		
TV system		DVB-T / DVB-H ITU-T Recommendation
Output offset	MHz	-1/6, -1/8, 0, 1/8, 1/6
Mode		8K, 16K, 48K, 96K, 192K ITU-T Recommendation
Modulation		QPSK, 16QAM, 64QAM ITU-T Recommendation
F.E.C.		1/2, 2/3, 3/4, 5/6, 7/8 ITU-T Recommendation
Guard interval		1/4, 1/8, 1/16, 1/32 ITU-T Recommendation
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 offset	dB	20
Bandwidth	MHz	8, 7, 6, 5 MHz
Through loss in the system	dB	0.9 ±0.1
<b>General features</b>		
Power supply	V <sub>DC</sub>	+3.3      +5.2      +12
Operating T close to equipment	mA	1600      350±50mA      40±10mA
Room T with/without fan	°C	-10...+55      -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		IT212
TV system		DVB-S / DVB-S2 → DVB-T / DVB-H ITU-T Recommendation → ITU-T Recommendation
Connection		F Female
Number of inputs		1 & 2 (dependent)
<b>DVB-S2 receiver</b>		
Frequency range	MHz	950 - 2150
Frequency step	MHz	1
UNB power supply	V <sub>DC</sub>	DVB-C 2.0 +13 / +18 (D/220Hz)
UNB power supply	mA	350 max
Symbol rate	Mbaud	1.45
Dispensing through loss	(dB)TOL	1.0 ±0.2
<b>DVB-S2 receiver</b>		
Input level	dBV	45 - 95
Input level	dBm	-63 - 13
F.E.C. QPSK		Auto: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 ITU-T Recommendation
F.E.C. BPSK		Auto: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 ITU-T Recommendation
Roll-Off	dB	0.35/0.25/0.20
<b>DVB-S receiver</b>		
Input level	dBV	40 - 95
Input level	dBm	-68 - 13
F.E.C. QPSK		Auto: 1/2, 2/3, 3/4, 5/6, 7/8 ITU-T Recommendation
Roll-Off	dB	0.35
<b>Conditional access</b>		
Standard		DVB-CI (EN 50221) Common Interface
Compatibility		Vuocom, Medagrand, Videogrand, Seco, Netcopy, Negronion, Idetia, Cryptowork, Conax

CODE		9120210
MODEL		IT212
<b>COFDM modulator</b>		
TV system		DVB-T / DVB-H ITU-T Recommendation
Output offset	MHz	-1/6, -1/8, 0, 1/8, 1/6
Mode		8K, 16K, 48K, 96K, 192K ITU-T Recommendation
Modulation		QPSK, 16QAM, 64QAM ITU-T Recommendation
F.E.C.		1/2, 2/3, 3/4, 5/6, 7/8 ITU-T Recommendation
Guard interval		1/4, 1/8, 1/16, 1/32 ITU-T Recommendation
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 offset	dB	20
Bandwidth per channel	MHz	8, 7, 6, 5, 4 MHz
Through loss in the system	dB	0.9 ±0.1
<b>General features</b>		
Power supply	V <sub>DC</sub>	+3.3      +5.2      +12
Operating T close to equipment	mA	1300      350±50mA      55±10mA
Room T with/without fan	°C	-10...+55      -10...+55/±45
Protection index		IP30
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 $\overline{=}$	+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 $\overline{=}$	+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 ±20% 50/60 Hz		240 +15% 50/60 Hz -20% 50/60 Hz		90..264 50/60 Hz			
	W	72				85			
Operating temp. close to equipment	°C	-10..+65							
Room temperature with/ without fan	°C	-10..+55/+45							
Protection index		IP 20C							
Units per packaging		1							
Packing weight	Kg	1.43				1.65			