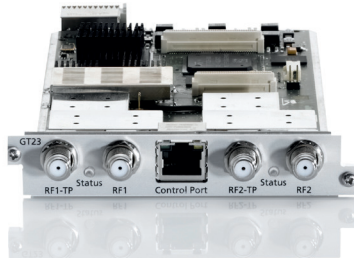


WISI GT 23 W 12 QAM, Annex B

Tangram module IP to 12x QAM



Description

The GT 23 W module is part of the Tangram product portfolio and provides the conversion from IP signals to QAM channels (digital TV programmes). GT 23 W supports a numerous of IP inputs with SPTS VBR/CBR and MPTS CBR, multiplexing and demultiplexing, PSI/SI regeneration, content encryption and can modulate up to 12 QAM channels with DVB-C/J.83 Annex B. Tangram is a very high density and highly flexible solution for all kinds of networks. The WISI Tangram chassis uses a fully redundant concept (n+1, 1+1).

Scope of delivery

- 1x GT 23 module
- 1x Quick Guide

At a glance:

- High quality IP to QAM modulation
- Up to 12 QAM channels on 2 RF outputs
- High density 72 QAM channels in 1 RU
- For measurement / monitoring test ports of the output signal
- DVB CSA Simulcrypt scrambling
- RTP/ IP input streaming with FEC error correction
- DVB/ARIB transport stream processing
- QAM channels individually switchable on/off

Technical data

Streaming-Input	
IP-Inputs	128 pcs.
IP-Standard	ISO/IEC 13818
IP-Input bitrate	Max. 425 Mbit/s per IPTS, Max. 850 Mbit/s total
IP-Input protocol	UDP/RTP/RTP+FEC Unicast and Multicast, IGMP v2 and v3
IP-TS-Input format	SPTS CBR/VBR, MPTS CBR
IP-FEC inputs	Yes, with GTFEC License
IP-FEC compliance	SMPTE 2022-1, SMPTE 2022-2
IP-Packet format	MPEG over UDP/IP and RTP/IP
IP-Packet size	188 Byte
IP-PCR restamping	Yes
IP-Dejittering	Yes, per default 100ms, individual adjustable

QAM Modulation

Compliance	DVB-C (EN 300 429), ITU-T J.83 Annex B
Modulation type	64-, 256- QAM
Symbol rate	5,05...5,36 MS/s
Roll-Off	12%, 18%
MER	>45 dB (typ. 46 dB)
BER	≤ 1*10 ⁻¹⁰
Spectrum flatness	±0,3 dB
Shoulder attenuation	≥52 dB

RF parameters

Output ports	2 pcs.
Channels per port	up to 6
Output impedance	75 Ω
Output frequency range	45...862 (1006) MHz
Output frequency window	34,4 MHz
Output frequency steps	1 kHz
Output frequency stability	±10 kHz
Channel bandwidth	6 MHz
Output level (each RF port)	45...862 MHz ->108 dBμV (6 ch), 862...1006 MHz->107...104 dBμV
Test port at each output	-20 dB (± 1 dB)
Output level stability	±1 dB
Output return loss	14 dB (45 MHz) -1,5 dB/Octave
Output level steps	0...30 dB (0,5 dB steps)
Level detection	for alarm and redundancy switching
Spurious Inside QAM-Channels	>60 dB
Spurious Outside QAM-Channels	45...450 MHz -> typ. 66 dB (min. 62 dB), 450...862 MHz -> typ. 64 dB (min. 60 dB), 862...1006 MHz -> typ. 64 dB (min. 60 dB)

Processing

Service remultiplexing	Yes, with GTMUX Software option
PID filtering and remapping	Yes
PCR correction and de-jitter	Yes
Advanced PSI/SI regeneration	Yes
NIT generation	Yes, with GTPSISI or GTSYMUX

Technical data

Encryption	Yes, DVB-CSA
Encryption throughput	Max. 600 Mbps total (DVB-C 12 outputs, J.83 Annex B)
Compliance	ETSI EN 300 468
Processing bitrate	Max. 1200 Mbps total
Number of PIDs	Max. 2000 PIDs total

Connectors

RJ45	1 pcs.
F-socket RF- output	4 pcs. (2x RF-Output, 2x Test-Output -20dB ± 1dB)

General data

Power consumption	Max. ≤19 W
Operating temperature range	-5°C...+45°C, 23°F...113°F, (ETSI EN 300 019-1-3 Class 3.1)
Max. humidity (non condensing)	95 %
Electro Magnetic Compatibility (EMC)	EN 50083-2
Safety compliance	UL/CSA/CAN 60950-1
Signalling	Multicolor LEDs (Power on - green, Error - red)
Operation Mode	DVB-C 12 outputs (J.83 Annex B)
Hardware revision	1000
Software version	3.2

Packaging data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	100 x 20 x 250 mm
Packaging volume sales unit	0,5 dm ³
Gross weight sales unit	0,180 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	170 x 75 x 340 mm
Packaging volume shipping package	4,3 dm ³
Gross weight shipping unit	0,340 kg
EAN	4010056711771
Article number	71177
Customs tariff number	85437090