

# WISI GT 22 C

Tangram module IP to 8x FM



## Description

The GT 22 C module is part of the Tangram product portfolio. The GT 22 C module allows you up to 8 services in FM format to your network. 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 GT22 module
- 1x Quick Guide

## At a glance:

- High quality IP to analogue FM modulation
- Up to 8 FM channels on 1 RF output
- Advanced MPEG decoding
- Outstanding signal parameters by direct digital modulation
- High density 48 FM channels in 1 RU
- RTP/ IP input streaming with FEC error correction
- RDS extraction and insertion
- For measurement / monitoring test ports of the output signal

## Technical data

<b>Streaming-Input</b>	
IP-Inputs	8 pcs.
IP-Compliance	ISO/IEC 13818
IP-Input bitrate	Max. 100 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 100 ms

## Audio and RDS processing

Audio decoder	ISO 13818-3 MPEG-1 (L1/L2); MPEG-2 (L1/L2)
Audio language	ISO 639
Audio format	Mono/Stereo/Joint-Stereo
Audio level range	±6 dB
Audio level step size	1 dB
Pilot tone frequency	19 kHz (±2 kHz)
Pilot tone phase stability	< ±3 °
Pilot tone level	6,75 kHz (±0,75 kHz)
RDS insertion	Yes, UECP SPB490 (dynamic and static)
RDS carrier frequency	57 kHz (±6 Hz)
RDS carrier level	2,5 kHz (±0,25 kHz)
RDS carrier phase stability	< ±10 °

## Audio parameters

38 kHz supression	≥42 dB
Amplitude response	≤ ±0,5 dB (40 Hz...15 kHz)
15 kHz low pass filter	>40 dB (>19 kHz)
Total harmonic distortion	<0,2 % (75 kHz dev.)
S/N ratio (unweighted)	>60 dB (75 kHz dev.), (weighted ITU-R BS 468,4) >60 dB (75 kHz dev.)
L/R channel level difference	<1 dB (40 Hz...15 kHz)
L/R phase difference	<10 dB (40 Hz...15 kHz)
L/R separation	>43 dB (300 Hz...4 kHz)
Preemphasis characteristics	50 µs (±2 µs)

## RF parameters

Output ports	1 pcs. (the second RF port is not in operation)
Channels per port	up to 8
Output impedance	75 Ω
Output frequency	87,5...108 MHz
Output frequency steps	1 kHz
Output level stability	±1 dB
Output level	102 dBµV
Output level setting	0...30 dB (0,5 dB steps)
Output return loss	≥14 dB (45 MHz -1,5 dB/Okt.)
Output spectral purity	>66 dB

## Technical data

Output broadband noise	< -120 dBm/Hz
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## Processing

PCR correction and de-jitter	Yes
Processing bitrate	Max. 750 Mbps total
Number of PIDs	Max. 1440 PIDs total

## Connectors

RJ45	1 pcs. (for local management)
F-socket RF- output	4 pcs. (1x RF-Output, 1x Test-Output -20dB ± 1dB, 2x not in operation)

## 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	-
Signalling	Multicolor LEDs (Power on - green, Error - red)
Operation mode	-
Hardware revision	1000
Software version	2.4.1

## Packaging data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	100 x 20 x 250 mm
Packaging volume sales unit	0,5 dm <sup>3</sup>
Gross weight sales unit	0,33 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	170 x 75 x 340 mm
Packaging volume shipping package	4,3 dm <sup>3</sup>
Gross weight shipping unit	0,42 kg
EAN	4010056729783
Article number	72978
Customs tariff number	85437090