

# Module IP to 8x COFDM

## GT 24 W

Product information



*The GT 24 W module is part of the Tangram product portfolio. The GT 24 W module allows you to add up to 8 channels in COFDM (DVB-T) format per module 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).*

#### Features:

- Gigabit Ethernet MPEG-TS to COFDM
- Up to 8 COFDM channels on 2 RF outputs
- Total of max. 48 COFDM channels in 1RU
- Outstanding signal parameters by direct digital modulation & adapted output filter
- User friendly configuration via standard web browser
- Low power consumption



# Tangram Module IP to 8x COFDM GT 24 W

- Multi channel processor for up to 2x4 (2k-Mode) COFDM channels
- Test ports for the output signal
- COFDM channels individually switchable on/off
- PCR correction

- UDP/RTP over IP protocol, auto-detected
- Temperature and Output level monitoring

**Following options can be activated via license key:**

- IP input redundancy, with up to three alternative inputs
- FEC supported, 2D FEC modes automatically detected

**Module Input**

Interface	Gigabit Ethernet
Data protocol	MPEG over UDP/IP and RTP/IP
Communication protocol	Unicast and multicast IGMP V2 (optional V3)
Syntax	SPTS and MPTS (ISO/IEC 13818)
Maximum data input bitrate using multiple MPTS signals	> 800 MBit/s
Maximum MPTS input bitrate per specific MPTS	> 100 MBit/s
Services per MPTS	1024 per module
Number of filter (multicast/unicast filter)	up to 32
Jitter tolerance	± 100 ms

**TS-Processing**

SPTS / MPTS Multiplexing inc.	supported
PID-Remapping	
MPTS Pass-Through	supported
SI-Table handling	supported
Individual Cycle Times for Outgoing PSI-/SI-Tables	supported
Max. number of simultaneous ECMG/EMMG connections	16

**COFDM-Processing**

MER	> 40 dB, typ. 42 dB
SNR	≥ 45 dB
Roll-Off	35%
BER	≤ 1*10 <sup>-10</sup>
- I/Q Ampl. Imbalance	≤ 0,10 %
- I/Q Quadratur Error	≤ 0,10 °
- Modulation	QPSK, 16-, 64-QAM
- FEC	1/2, 2/3, 3/4, 5/6, 7/8
- Guard interval	1/4, 1/8, 1/16, 1/32
- FFT Mode	2k, 8k switchable
- Spectrum flatness	± 0,3 dB
- Shoulder attenuation	≥ 54 dB

**RF Parameter**

Output ports	2
Channels per port	up to 4 (2k-Mode), or 2 (2k/8k-Mode)
Output impedance	75 Ohm
Output frequency	45...862 MHz
Output frequency window	34,2 MHz/port
Output frequency steps	1 kHz
Modulation	COFDM
Channel bandwidth	5 / 6 / 7 / 8 MHz
Output level (each RF port)	115 dBμV (1 ch) 111 dBμV (2 ch) 109 dBμV (3 ch) 107 dBμV (4 ch)
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 setting	0...30 dB (0,5 dB steps)
Spurious (Inside TV-Channels)	> 60 dB
Spurious (Outside TV-Channels)	45...450 MHz, typ. 66 dB 450...862 MHz, typ. 64 dB

**Module General data**

Size	100 x 220 mm
Signaling	2 x operating led green/yellow/red
Connectors	GigE/Control/Power 1 x CompactPCI Typ C 1 x RJ-45, 100BaseTX
Management	1 x F-connector
RF-Output	2 x F-connector
Test-Output	2 x F-connector
Power consumption	< 20,4 W
Operating temperature range	5°C...45 °C
Nominal temperature range	15°C...35 °C
Max. humidity non condensing	95 %
EMV	EN 50083-2

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