

WISI GT 23 W

TANGRAM MODULE IP TO 8X 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 programs). 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 8 QAM channels with different standards (DVB-C/J.83 Annex A, B, C). 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 8 QAM channels on 2 RF outputs
- High density 48 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



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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

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|----------------------|--|
| Compliance | DVB-C (EN 300 429), ITU-T J.83 Annex A, B and C |
| Modulation type | 16-, 32-, 64-, 128-, 256-QAM |
| Symbol rate | 4,45..7,00 MS/s |
| Roll-Off | 12%, 13%, 15%, 18% |
| MER | > 45 dB (typ. 46 dB) |
| BER | ≤ 1*10 ⁻¹⁰ |
| Spectrum flatness | ± 0,3 dB |
| Shoulder attenuation | ≥ 55 dB |

RF parameters

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|--------------------------------|---|
| Output ports | 2 pcs. |
| Channels per port | up to 4 (DVB-C, J.83 Annex A and C), up to 3 (J.83 Annex B) |
| Output impedance | 75 Ω |
| Output frequency range | 45..1002 MHz |
| Output frequency window | 34,2 MHz/port |
| Output frequency steps | 1 kHz |
| Output frequency stability | ± 10 kHz |
| Output channel bandwidth | 6/7/8 MHz |
| Output level (each RF port) | 119 dBμV (1 ch), 115 dBμV (2 ch), 113 dBμV (3 ch), 111 dBμV (4 ch) |
| 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) |
| Spurious (Inside TV-Channels) | > 60 dB |
| Spurious (outside TV-Channels) | 45...450 MHz, typ. 66 dB, 450..1002 MHz, typ. 64 dB |

Processing

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|------------------------------|------------------------------|
| Service remultiplexing | Yes, with GTMUX License |
| PID filtering and remapping | Yes |
| PCR correction and de-jitter | Yes |
| Advanced PSI/SI regeneration | Yes |
| NIT generation | Yes, with GTPSISI or GTSYMUX |
| Encryption | Yes, DVB-CSA |

Technical data

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|-----------------------|--|
| Encryption throughput | Max. 450 Mbps total (DVB-C 8 outputs, J.83 Annex A,C), Max. 300 Mbps total (J.83 Annex B) |
| Compliance | ETSI EN 300 468 |
| Processing Bitrate | Max. 1200 Mbps total |
| Number of PIDs | Max. 2000 PIDs total |

Connectors

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

General data

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|--------------------------------------|--|
| 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 8 outputs J.83 Annex B, J.83 Annex C |
| Hardware revision | 1000 |
| Software version | 3.0 |

Packaging data

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|-----------------------------------|---------------------|
| 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 |