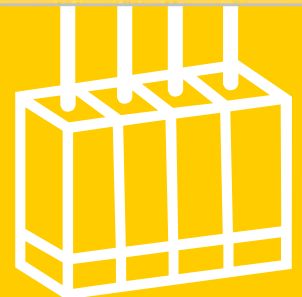# TANGRAM

High Density
IP Headend GT 01 O

WISI

excellence in digital …

WISI TANGRAM GT 01 O

The WISI TANGRAM Video Platform is a high density digital TV Headend for contribution of digital TV via IP Networks and end to end IPTV solutions such as On Demand TV, Connected TV and OTT (Over The Top) Web TV.

The platform is highly customizable and offers advanced DVB stream processing in a small footprint 1 RU chassis concept.

The TANGRAM chassis can be equipped with 6 modules.

The six rear loaded modules have different functionalities, and can perform all necessary signal processing functions.

The TANGRAM platform can be used in a central or distributed Headend architecture and provides the following processing functions in a central location:

DVB-IP Gateway for DVB-S/S2, -C, -T, -T2, Descrambling, Remultiplexing, Scrambling, PSI/SI-Processing and Modulation.

In a decentralized architecture with regional Hubs, the modulation is done in the hub site and the aggregated digital TV streams are transported via an IP network and are terminated in Edge-QAMs, -COFDMs*, -PALs and -FMs for re-modulation and transmission in HFC networks.

The TANGRAM chassis can optionally be equipped with two load sharing redundant power supplies (DC or AC) and contains high performance monitored fans for cooling. Modules, fans and power supplies are hot swappable.

The TANGRAM product portfolio is composed of the modules mentioned in the table on the right.
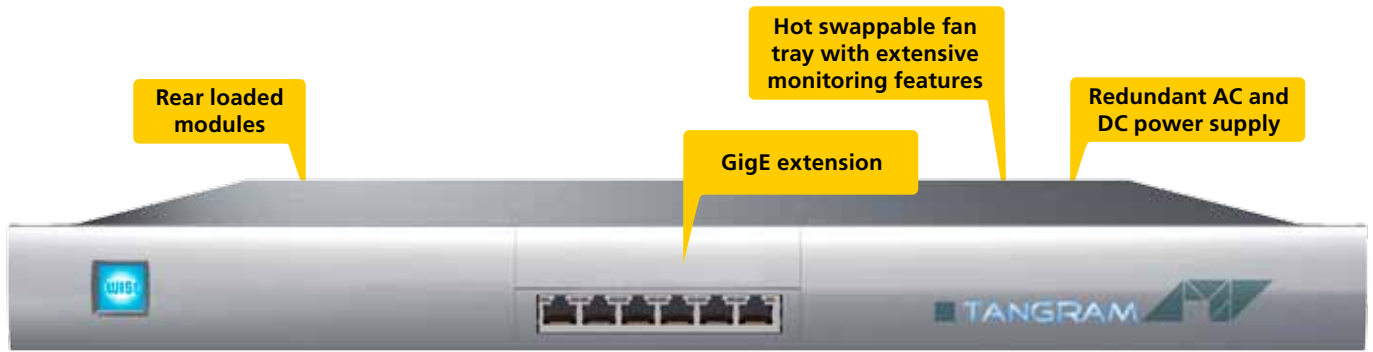
General features:

- Customizable headend architecture for CATV & IPTV
- Advanced DVB stream processing
- Small footprint in 1RU chassis
- 6 modules
- Hot swappable fan tray
- Fully redundant concept (1+1, n+1)
- Passive backplane
- Optionally Scrambling + MUX function
- High density, high quality, high performance, high flexibility
- Edge modulation QAM, COFDM, PAL, FM
- DVB-Gateway, acquisition, aggregation
- DVB-CI interfaces for service descrambling

Tangram Video Platform Components:

GT 01 O	19" 1 RU chassis with backplane, 1 power supply (48 VDC or 230 VAC), fan tray and 6 GigE front ports
GT 13 W	GigE extension board
GT 21 W	IP to PAL, 6 PAL channels out on 2 RF ports
GT 22 C	IP to FM, 8 FM channels out on 1 RF port
GT 23 W	IP to QAM, 8 QAM channels out on 2 RF ports, with remux and scrambling
GT 24 W	IP to COFDM, 8 COFDM channels out on 2 RF ports
GT 31 W	Input DVB-S/S2/T/T2/C frontend with 4 independent tuners
GT 32 W	Input ASI frontend with 4 independent ports
GT 42 W	CI module with 4 CAM slots
GT 55 W 0048	Additional power supply 48 VDC
GT 55 W 0230	Additional power supply 230 VAC

System Overview

Rear loaded modules

Hot swappable fan tray with extensive monitoring features

GigE extension

Redundant AC and DC power supply

Redundant AC and DC power supply

Rear loaded modules

Any module in any slot

Platform modules

GT 42 W   Descrambling module

· Module with 4 CI-slots

· Support of Multi Channel Decryption (MCD)

· Decryption of MPEG-2 & MPEG-4 streams

GT 42 W

GT 55 W 0048   Additional power supply 48 VDC for redundancy
GT 55 W 0230   Additional power supply 230 VAC for redundancy

GT 01 O System applications

DVB-IP Gateway

GT 31 W / GT 32 W – Streamer module

· Multi Transport Stream reception for DVB signals
· GT 31 W: up to 6 × 4 DVB-S/-S2/-T/-T2/-C inputs
· GT 32 W: up to 6 × 4 ASI inputs
· Gigabit Ethernet output for MPTS and SPTS
· Teletext and EPG data handling

· Web browser user interface
· Supports GT 42 W (4x CI) for service descrambling
· Support for Multi Channel Decryption (MCD) of the 4 CIs
· 1 + 1, n + 1 redundancy option

Edge processing

GT 21 W – Edge PAL module

· Full PAL-B/G, PAL-D/K, SECAM support
· Analogue Stereo and NICAM
· Supports GT 42 W (4x CI) for service descrambling
· 36 PAL channels per 1 RU

GT 22 C – Edge FM module

· Full MPEG-1/2 audio decoding
· Digital FM modulation
· RDS insertion
· 48 FM channels per 1 RU

GT 23 W – Edge QAM module

· Multiplexing & scrambling
· DVB-C
· Supports GT 42 W (4x CI) for service descrambling
· 48 QAM channels per 1 RU

excellence in digital …