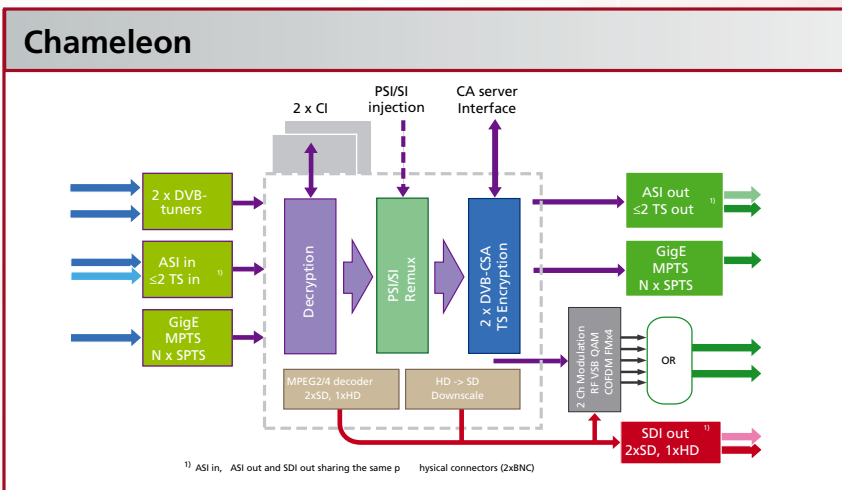


# Chameleon & Tangram - the IPTV head end solution for broadband network convergence



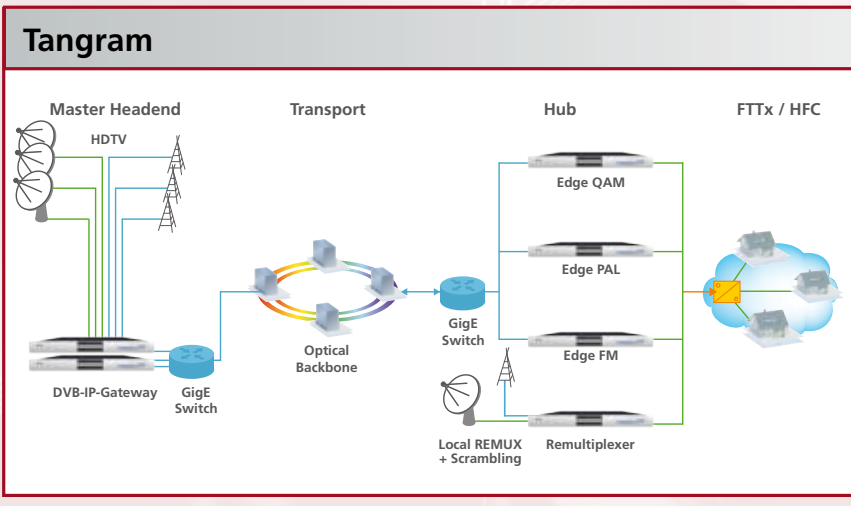
## Application Description

The Chameleon is what can truly be called a revolutionary head end concept. It can thereby migrate to any current and future application and make the vital transition between the analogue and digital world as well as between HFC and IP distribution platforms. Modules can operate as Receiver-decoder-analogue-modulator today and be programmed to add IP streaming later or even change modulation to DVB-C or DVB-T. DVB-S to QAM transmodulators can become EDGE QAMs by activating the IP input, and it contains SPTS to MPTS multiplexing and scrambling if required. Modules can operate as EDGE QAM or EDGE PAL, and you can activate



the internal tuners later as a local backup in case the IP source fails. Modules can work as an IP-Gateway (streamer) for DVB-S/S2/T/C signals to feed a backbone and at the same time produce 2 QAM outputs for the local network. Analogue Audio Video or digital baseband SDI signals can be encoded to MPEG2/4 and multiplexed into any DVB-C, DVB-T, IP or ASI stream. When analogue input becomes obsolete you can activate the module as transcoder for MPEG4 to MPEG2.

The Tangram product portfolio provides with its DVB-IP Gateway and Edge Products ( Edge-FM, Edge-PAL , Edge-QAM ) a high density cost optimized acquisition/aggregation as well as modulator solution to receive, aggregate, transport ( via IP ) and re-modulate broadcast TV into HFC- and Fttx Fibre Overlay networks.



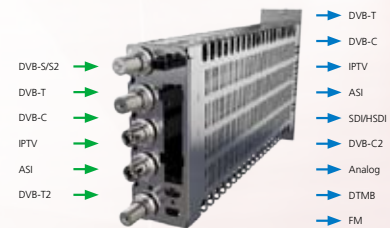
For IPTV contribution and end to end IPTV based video for residential customers in IP only networks like xPON, P2P, xDSL and DOCSIS based IPTV in HFC TANGRAM supports various encoding standards ( MPEG2, MPEG4 received from satellite and terrestrial sources) and container formats ( MPEG2-TS, MP4 ) as well as high density re-multiplexing, transrating and transcoding besides CBR and VBR processing.

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## WISI Chameleon GN 40 & GN 50

- |                           |                           |
|---------------------------|---------------------------|
| Receiver DVB-S/S2         | MPEG-2/MPEG-4 SD decoder  |
| Receiver DVB-T/C          | MPEG-4 HD decoder         |
| Receiver DVB-T2           | CI decryption             |
| Transmodulator to COFDM   | Remultiplexer multiple TS |
| Transmodulator to QAM     | DVB-CSA scrambler         |
| DVB-C, DVB-T modulators   | IP streamer               |
| Analogue VSB RF modulator | ASI interface             |
| Edge QAM                  | SDI output, 2 SD/1 HD     |
| Edge COFDM                |                           |



## WISI Tangram Edge QAM

- QAM, COFDM, DTMB
- SPTS, MPTS processing
- Multiplexing
- Scrambling
- PSI / SI Processing
- Prepared for future modulation e.g. DVB-C2



## WISI Tangram Edge PAL

- Full PAL/NTSC-M/SECAM support
- Analogue Stereo and NICAM
- DVB-CI Interfaces for Simulcast

## WISI Tangram Edge FM

- Full MPEG-1/2 Audio decoding & digital FM Modulation
- RDS Insertion according to UECP SPB490 MPTS and SPTS Audio Streams

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