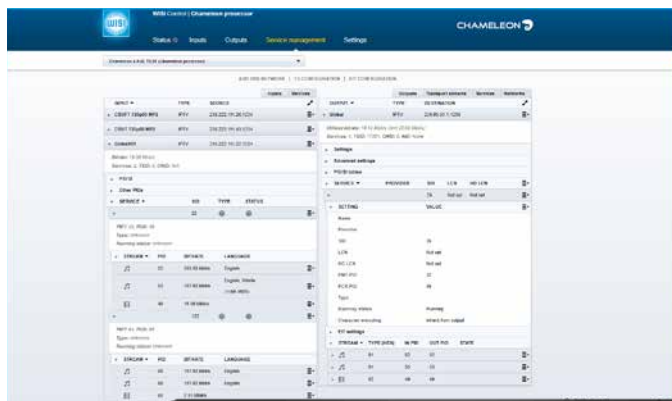




Chameleon Headend Platform

Versatile Video Processing & Encoding

- ✓ Receive 8VSB, QAM, SRT, ASI, SRT and/or IP
- ✓ Output as Analog, SDI, QAM, ASI, SRT and/or IP
- ✓ Encode HDMI, HD/SD-SDI and AV inputs to IP outputs
- ✓ Optional IP RTP + FEC transmit and receive
- ✓ Full SNMP monitoring and remote control via web interface
- ✓ Low power consumption with redundant PSU options



Encode baseband content and stream in beautiful HD

Versatile and flexible video processor that handles multiple formats simultaneously

Rest easy with reliable 24/7 operation thanks to quality WISI engineering and strong North American technical support



Applications

- ✓ Receive streams from broadcaster sites via SRT, GigE or ASI, with optional RTP + FEC
- ✓ Engage with the community by streaming local content like high school sports, town council meetings, local advertisements and religious programming using HDMI, HD-SDI or AVV video sources
- ✓ Experience an ideal solution for smaller networks & low-density applications to connect between analog to digital or RF to IP environments
- ✓ Enjoy headend visibility and monitor streams from Chameleon with a visual mosaic using All Seeing Eye
- ✓ Configure and manage easily with user-friendly web-based interface
- ✓ Enjoy peace-of-mind with source, module and power redundancy options

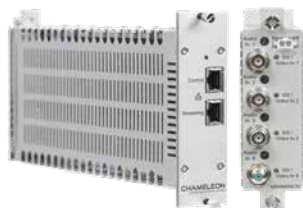


Chameleon Headend Platform

Versatile Video Processing & Encoding

Chameleon Encoder Modules

Stream Local Community Content or Connect Directly with Broadcaster Sites



Up to 4x HD/SD-SDI or A/V analog inputs - encode to HD/SD MPEG-4 or MPEG-2 IP outputs.



Up to 4x HDMI inputs per module - encode to HD/SD MPEG-4 or MPEG-2 IP outputs.

GNHWENC2S Encoder	
HD/SDI	4x inputs, audio embedded
HD-SDI Input Format	1080i@25/30, 720p@50/60
SD-SDI Input Format	480i@30, 576i@25
Encoded Outputs	4x HD/SD MPEG-2/MPEG-4 IP outputs
IP-FEC Inputs/Outputs	32x input/output with GNSTREC software option
SRT Send	Up to 4x SRT streams

GNHWENC2H Encoder	
HDMI Ports	4x ports
HDMI Input Format	1080i@25/30, 720p@50/60, 480p@60, 480i@30, 576i@25
Encoded Outputs	4x HD/SD MPEG-2/MPEG-4 IP outputs
IP-FEC Inputs/Outputs	32x input/output with GNSTREC software option
SRT Send	Up to 4x SRT streams

Chameleon Processor Module

Receive and Transmit Multiple Formats Simultaneously

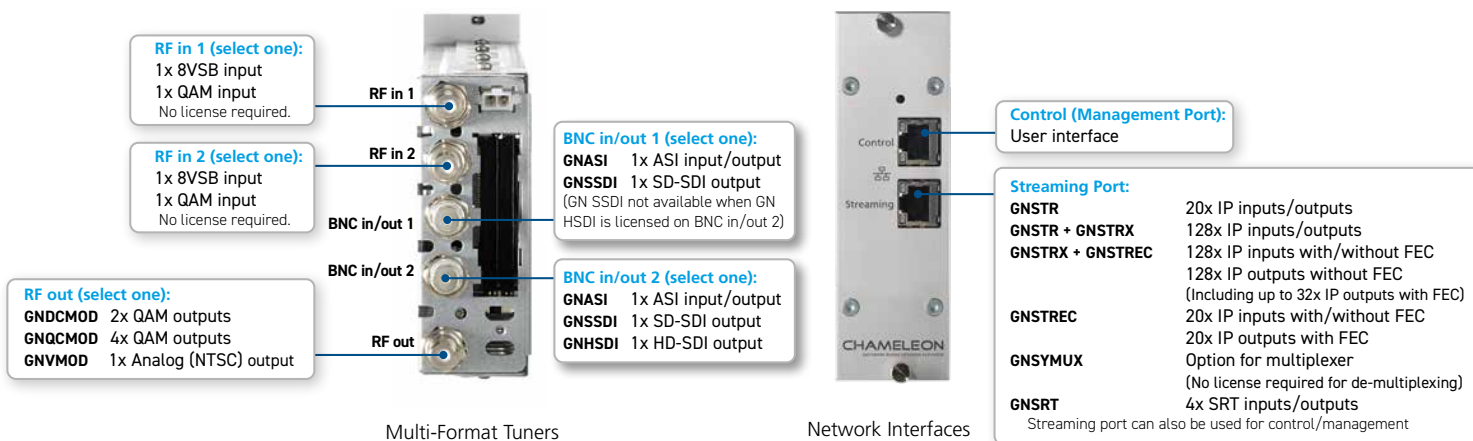


The GNHWA module features multiple input sources including 8VSB, QAM, SRT, ASI and/or IP reception. Video streams can be output as QAM, Analog (NTSC), HD/SD-SDI ASI, SRT and/or IP.

GNHWA Processor	
Codecs	MPEG-2, MPEG-4, HEVC
HD Video Formats	1080i@30/50/60, 720p@60
SD Video Formats	480i@30, 576i@25
Encryption	BISS, AES, Samsung LYNK, Pro:Idiom
SRT Send or Receive	Up to 4x SRT streams

Processor License Configuration Options

The management network interface is available to access WISI's intuitive user interface for configuration and monitoring controls. The streaming video network interface allows IP inputs and outputs, with options for FEC, multiplexing, encryption and decryption.





Chameleon Headend Platform

Versatile Video Processing & Encoding

Chameleon Chassis Options



Chameleon GN20 chassis



Chameleon GN50 chassis

Chassis Options	GN20R	GN20B	GN50W0110
Physical	1RU chassis Up to 2x Chameleon modules	1RU chassis Up to 2x Chameleon modules	3RU professional chassis Up to 10x Chameleon modules
Dimensions	482.6 x 44.45 x 235 mm (19" x 1.75" x 9.25")	482.6 x 44.45 x 235 mm (19" x 1.75" x 9.25")	443 x 132 x 475 mm (3RU, 19"- Rack) (17.44" x 5.2" x 18.7")
Power Supply	Dual redundant power, integrated fan	Single power, integrated fan	Single PSU with option for redundant power, Integrated Ethernet switch and fan
Operating Power	<60 W	<60 W	<245 W
EMC	EN 50083-2, FCC CFR 47 Part 15 (Class A)	EN 50083-2, FCC CFR 47 Part 15 (Class A)	EN 50083-2, FCC CFR 47 Part 15 (Class A)
Safety Compliance	CE, UL/CSA/CAN 60950-1	CE, UL/CSA/CAN 60950-1	CE, UL/CSA/CAN 60950-1

Chameleon Platform Specifications (applies to all modules)

Management	
Configuration	Web-based user interface
Monitoring	Stream monitoring and logging with GNMON All Seeing Eye integration with GNASE
SNMP	SNMP Trap Forwarding

IP Streaming	
Remultiplexing	Included with GNSYMUX
Stream Optimization	PID filtering and remapping, PCR correction and de-jitter, Advanced PSI/SI regeneration
Network Interfaces	1x GigE port (1x management, 1x streaming), 10/100 Base-T management, 1000 Base-T streaming
IP-Input/Output Bitrate	Max. 850 Mbit/s total
IP-Input/Output Protocols	UDP/RTP/RTP+FEC Unicast and Multicast, IGMP v2 and v3
IP-TS-Input/Output	SPTS CBR/VBR, MPTS CBR

Low power consumption

Hot-swappable modules



Back of Chameleon GN20R chassis loaded with two GNHWA processors



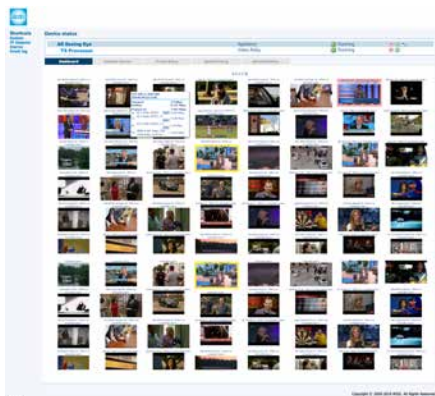
Chameleon Headend Platform

Versatile Video Processing & Encoding

Chameleon Ordering Part Numbers	
Chassis	
GN20R	1RU subrack for up to 2 Chameleon modules Dual redundant power
GN20B	1RU subrack for up to 2 Chameleon modules Single power
GN50	3RU professional subrack for up to 10 Chameleon modules Single or dual redundant power
GN50W0110	Redundant 110 VAC PSU for GN50W0110
Modules	
GNHWA	Chameleon processor
GNHWENC2S	Chameleon encoder for HD/SDI or AVV inputs
GNHWENC2H	Chameleon encoder for HDMI inputs
Encryption/Decryption (Processor Module)	
GNSCR	32x services with simulcrypt or BISS scrambling
GNSCR + GNSCRX	128x services with simulcrypt scrambling
GNAES	32x services with AES128 scrambling
GNAES + GNAESX	128x services with AES128 scrambling
GNLYNK	32x services with Samsung LYNK scrambling
GNLYNK + GNLYNKX	128x services with Samsung LYNK scrambling
GNPISCR8	8x services with PRO:Idiom scrambling
GNBISS	8x services for BISS descrambling
Audio Licences (Processor Module - Analog/SDI Output Only)	
GNBTS	MTS/MTS+SAP (BTSC) audio output for 1x Analog output or up to 2x SDI outputs
GNDOL	Dolby Digital (AC-3) audio decode for 4x Analog outputs per module (Required for baseband audio output in SDI. Not required if passing through encoded AC-3)
Input/Output Licences (Processor Module)	
GNDCMOD	Option for dual QAM outputs 2x (Annex A/B/C) - One RF output port per module, up to 2x dual licenses can be applied per module
GNQCMOD	Option for quad QAM outputs 4x (Annex A/B/C) - One RF output port per module, up to 1x quad license can be applied per module
GNVMOD	Option for 1x analog output (NTSC)
GNSSDMOD	Option for 1x SD/SDI to analog (NTSC) modulator
GNDSMOD	Option for 2x SD/SDI to analog (NTSC) modulators
GNASI	Option for 1x ASI in/out on BNC
GNDAISI	Option for 2x ASI interfaces on BNC
GNSSDI	Option for SD SDI decoder on BNC
GNDSDI	Option for 2x SD SDI outputs on BNC
GNHSDI	Option for HD SDI decoder on BNC
Redundancy & Monitoring Licences (All Modules)	
GNMON	License for transport stream monitoring & logging
GNASE	Option for rendering TS analysis and thumbnails to Inca All Seeing Eye
GNRED	Option for IP input signal redundancy (1x per module)
GNNRED	Option for N+1, 1+1 module redundancy (1x per GN50 chassis for up to 5x redundancy groups)
IP Streaming Licences (All Modules)	
GNSTR	Option for IP streaming of up to 32x SPTS/MPTS
GNSTR + GNSTRX	Option extension for IP streaming up to 128x SPTS/MPTS (processor only)
GNSTREC	Option for IP streaming of up to 32x SPTS/MPTS with FEC
GNSYMUX	Option for multiplexer including system SI/PSI tables computation for interconnected multiplexers of this network (additional option for processor, included with encoder)
GNSTR	Option to send or receive an SRT stream (MPTS/SPTS) with AES encryption/decryption. Up to 4x SRT licenses per module (encoder module enables SRT send only)

Visual Video Monitoring with the All Seeing Eye

Compatible with WISI's Chameleon, Tangram and Inca Video platforms



- Real-time color-coding to highlight stream impairments and outages
- Monitor all IP video services in a headend, including streams from 3rd party vendors
- Monitor locally and remotely using any web browser