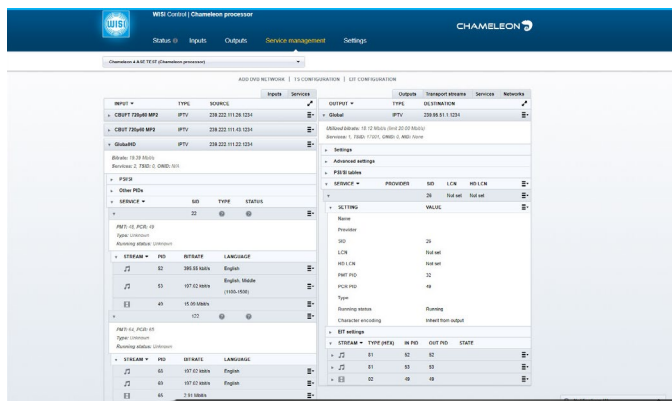


## VERSATILE VIDEO PROCESSING & ENCODING



- ✓ Receive 8VSB, QAM, SRT, ASI and/or IP
- ✓ Output as Analog, SDI, QAM, ASI and/or IP
- ✓ Encode HDMI, HD/SD-SDI and A/V 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
- ✓ Experience an ideal solution for smaller networks & low-density applications to connect between analog to digital or RF to IP environments
- ✓ Configure and manage easily with user-friendly web-based interface
- ✓ Enjoy peace-of-mind with source, module and power redundancy options

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 A/V video sources

Enjoy headend visibility and monitor streams from Chameleon with a visual mosaic using All Seeing Eye



### 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

<b>HD/SDI</b>	4x inputs, audio embedded
<b>HD-SDI Input Format</b>	1080i@25/30, 720p@50/60
<b>SD-SDI Input Format</b>	480i@30, 576i@25
<b>Encoded Outputs</b>	4x HD/SD MPEG-2/MPEG-4 IP outputs
<b>IP-FEC Inputs/Outputs</b>	32x input/output with GNSTREC software option

#### GNHWENC2H Encoder

<b>HDMI Ports</b>	4x ports
<b>HDMI Input Format</b>	1080i@25/30, 720p@50/60, 480p@60, 480i@30, 576i@25
<b>Encoded Outputs</b>	4x HD/SD MPEG-2/MPEG-4 IP outputs
<b>IP-FEC Inputs/Outputs</b>	32x input/output with GNSTREC software option

Closed Captioning pass-through not supported by encoders.

### Chameleon Processor Module

Receive and Transmit Multiple Formats Simultaneously



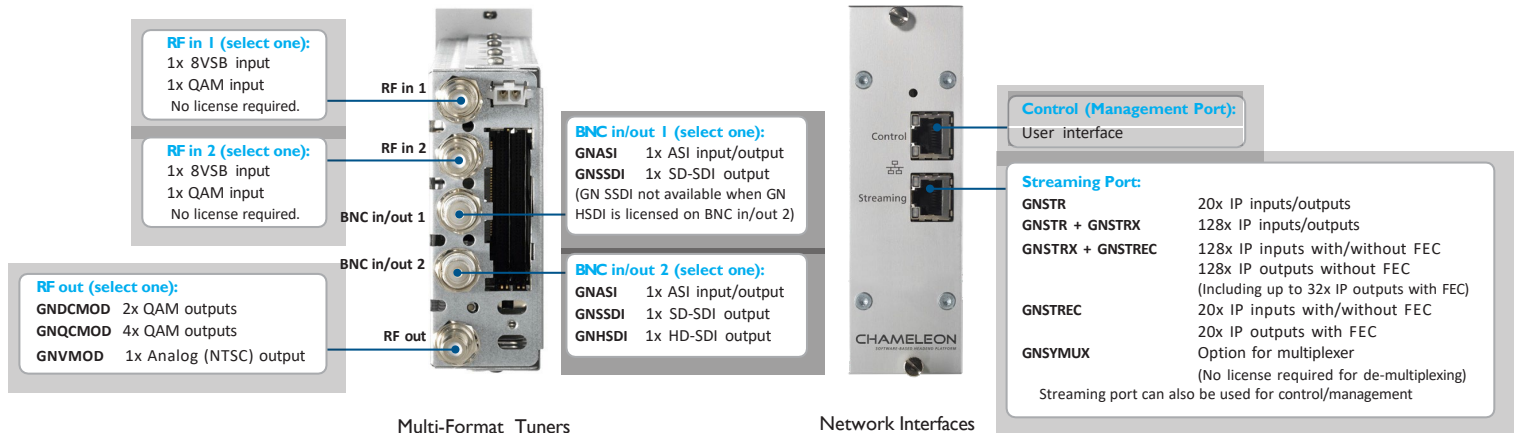
The GNHWA module features multiple input sources including 8VSB, QAM, SRT, ASI and/or IP reception. Video streams can be output as QAM, Analog (NTSC), HD/SD-SDI ASI and/or IP.

#### GNHWA Processor

<b>Codecs</b>	MPEG-2, MPEG-4, HEVC
<b>HD Video Formats</b>	1080i@30/50/60, 720p@60
<b>SD Video Formats</b>	480i@30, 576i@25
<b>Encryption</b>	BISS, AES, Samsung LYNK, Pro:Idiom
<b>SRT Receive</b>	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
<b>Physical</b>	1RU chassis Up to 2x Chameleon modules	1RU chassis Up to 2x Chameleon modules	3RU professional chassis Up to 10x Chameleon modules
<b>Dimensions</b>	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")
<b>Power Supply</b>	Dual redundant power, integrated fan	Single power, integrated fan	Single PSU with option for redundant power, Integrated Ethernet switch and fan
<b>Operating Power</b>	<60 W	<60 W	<245 W
<b>EMC</b>	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)
<b>Safety Compliance</b>	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	
<b>Configuration</b>	Web-based user interface
<b>Monitoring</b>	Stream monitoring and logging with GNMON All Seeing Eye integration with GNASE
<b>SNMP</b>	SNMP Trap Forwarding

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



Back of Chameleon GN20R chassis loaded with two GNHWA processors





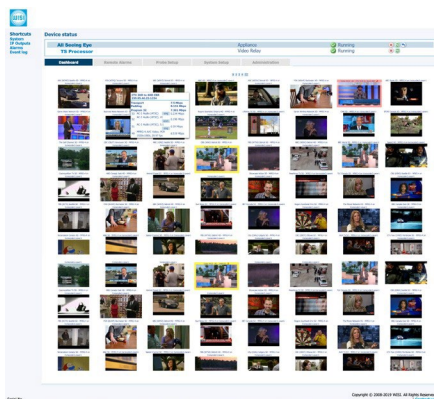
# Chameleon Headend Platform

## Versatile Video Processing & Encoding

Chameleon Ordering Part Numbers		Input/Output Licences (Processor Module)	
<b>Chassis</b>		<b>Input/Output Licences (Processor Module)</b>	
<b>GN20R</b>	IRU subrack for up to 2 Chameleon modules Dual redundant power	<b>GNDCMOD</b>	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
<b>GN20B</b>	IRU subrack for up to 2 Chameleon modules Single power	<b>GNQCMOD</b>	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
<b>GN50</b>	3RU professional subrack for up to 10 Chameleon modules Single or dual redundant power	<b>GNVMOD</b>	Option for 1x analog output (NTSC)
<b>GN50W0110</b>	Redundant 110 VAC PSU for GN50W0110	<b>GNSSDMOD</b>	Option for 1x SD/SDI to analog (NTSC) modulator
<b>Modules</b>		<b>GNDSMOD</b>	Option for 2x SD/SDI to analog (NTSC) modulators
<b>GNHWA</b>	Chameleon processor	<b>GNASI</b>	Option for 1x ASI in/out on BNC
<b>GNHWENC2S</b>	Chameleon encoder for HD/SDI or A/V inputs	<b>GNDAISI</b>	Option for 2x ASI interfaces on BNC
<b>GNHWENC2H</b>	Chameleon encoder for HDMI inputs	<b>GNSSDI</b>	Option for SD SDI decoder on BNC
<b>Encryption/Decryption (Processor Module)</b>		<b>GNDSDI</b>	Option for 2x SD SDI outputs on BNC
<b>GNSCR</b>	32x services with simulcrypt or BISS scrambling	<b>GNHSDI</b>	Option for HD SDI decoder on BNC
<b>GNSCR + GNSCRX</b>	128x services with simulcrypt scrambling	<b>GNSRT</b>	License option for SRT receive with AES decryption. One SRT connection per license. Up to 4x SRT connections per module.
<b>GNAES</b>	32x services with AES128 scrambling	<b>Redundancy &amp; Monitoring Licenses (All Modules)</b>	
<b>GNAES + GNAESX</b>	128x services with AES128 scrambling	<b>GNMON</b>	License for transport stream monitoring & logging
<b>GNLYNK</b>	32x services with Samsung LYNK scrambling	<b>GNASE</b>	Option for rendering TS analysis and thumbnails to Inca All Seeing Eye
<b>GNLYNK + GNLYNKX</b>	128x services with Samsung LYNK scrambling	<b>GNRED</b>	Option for IP input signal redundancy (1x per module)
<b>GNPISCR8</b>	8x services with PRO:Idiom scrambling	<b>GNNRED</b>	Option for N+1, 1+1 module redundancy (1x per GN50 chassis for up to 5x redundancy groups)
<b>GNBISS</b>	8x services for BISS descrambling	<b>IP Streaming Licenses (All Modules)</b>	
<b>Audio Licences (Processor Module - Analog/SDI Output Only)</b>		<b>GNSTR</b>	Option for IP streaming of up to 32x SPTS/MPTS
<b>GNBTS</b>	MTS/MTS+SAP (BTSC) audio output for 1x Analog output or up to 2x SDI outputs	<b>GNSTR + GNSTRX</b>	Option extension for IP streaming up to 128x SPTS/MPTS (processor only)
<b>GNDOL</b>	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)	<b>GNSTREC</b>	Option for IP streaming of up to 32x SPTS/MPTS with FEC
		<b>GNSYMUX</b>	Option for multiplexer including system SI/PSI tables computation for interconnected multiplexers of this network (additional option for processor, included with encoder)

### 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

