

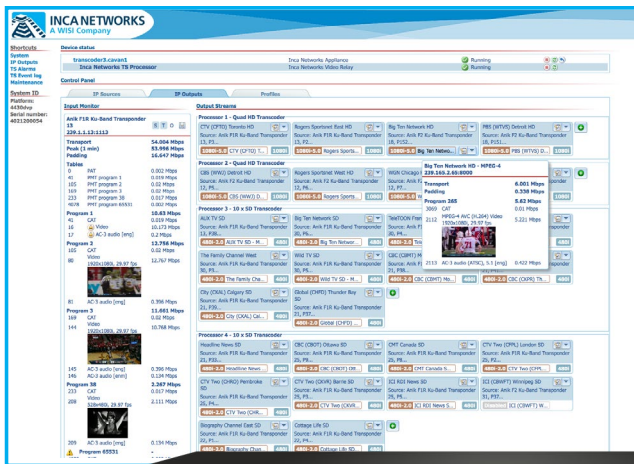


ELPAS



Inca Modular Series 4400 Linear & ABR High-Density Transcoder

- ✓ MPEG-4, MPEG-2, and HEVC sources/outputs
- ✓ Multiple chassis options with low power consumption
- ✓ Input modules available for GigE, 8VSB/QAM, or ASI
- ✓ Transcode, transrate, downscale up to 48x HD or 120x SD
- ✓ Award-winning VidiOS™ stream monitoring and analysis
- ✓ Automatic service failover, chassis and power redundancy



Experience beautiful video delivery with a carrier-grade solution

Profit from using a modular platform - add additional audio or video transcoders at any time

Increase visibility with VidiOS™ - includes video thumbnails & stream downloads



Applications

- ✓ Optimize the format, resolution and bitrate of large numbers of live satellite, IP and off-air digital sources for delivery to set-top boxes or multiscreen devices.
- ✓ Enable efficient HD and SD IP video distribution over DSL and cable networks by transcoding high bitrate MPEG-2 or MPEG-4 AVC sources to optimized MPEG-4 AVC.
- ✓ Transcode MPEG-4 or HEVC sources to MPEG-2 CBR or VBR outputs to feed legacy cable systems.
- ✓ Receive all your local broadcast channels, including all primary HD and secondary SD sub-channels, and transcode them for delivery over DSL, cable and over-the-top networks.
- ✓ Demultiplex sub-channels and deliver local content from off-air signals - with or without transcode.
- ✓ Enable full headend visibility with included probe capability and integration with the Inca All Seeing Eye monitoring system.



Inca Modular Series 4400

Linear & ABR High-Density Transcoder

Modular Series 4400 Chassis Options

4410 Chassis



1 expansion module bay

4420 Chassis



2 expansion module bays

4440 Chassis



4 expansion module bays

Density	4410	4420	4440
Linear Transcoding	Up to 12x HD or 30x SD sources	Up to 24x HD or 60x SD sources	Up to 48x HD or 120x SD sources
ABR Transcoding	Multi-bitrate profiles Up to 6x HD sources to 4x ABR profiles Up to 12x SD sources to 2x ABR profiles	Multi-bitrate profiles Up to 12x HD sources to 4x ABR profiles Up to 24x SD sources to 2x ABR profiles	Multi-bitrate profiles Up to 24x HD sources to 4x ABR profiles Up to 48x SD sources to 2x ABR profiles
Video Network Interfaces	7x 1000 Base-T	7x 1000 Base-T	Front Network Options: 8x 1000 Base-T 4x 10 Gig SFP+ Capacity for up to 3x transcoder/receiver modules Rear Network Options: 4x 1000 Base-T Capacity for up to 4x transcoder/receiver modules
8VSB/QAM Receivers (optional)	Up to 4 tuners	Up to 8 tuners	Up to 16 tuners
ASI Input Ports (optional)	Up to 6 ports	Up to 12 ports	Up to 24 ports

Power	4410	4420	4440
Type	Dual redundant hot swap	Dual redundant hot swap	Dual redundant hot swap
Input	100 ~ 240 VAC @ 50 - 60 Hz	100 ~ 240 VAC @ 50 - 60 Hz	100 ~ 240 VAC @ 50 - 60 Hz
Power	< 120 W Typical	<120 W Typical	<200 W Typical Redundant DC power option available

Physical	4410	4420	4440
Mounting	19", 2 or 4 Post Rack, 1RU	19", 4 Post Rack, 1RU Slide rails included	19", 4 Post Rack, 1RU Slide rails included
Dimensions	438 x 44 x 415 mm 19" x 1.75" x 16.4"	431 x 44 x 468 mm 19" x 1.75" x 18.4"	438 x 44 x 525 mm 19" x 1.75" x 20.7"
Rack Rail Depth	N/A	558 - 927 mm 22" - 36.5"	620 - 805 mm 24.4" - 31.8"
Weight	4 kg / 8.8 lb	7 kg / 15.4 lb	15 kg / 33.1 lb
Operating Temp.	0 ~ 40 °C	0 ~ 40 °C	0 ~ 40 °C

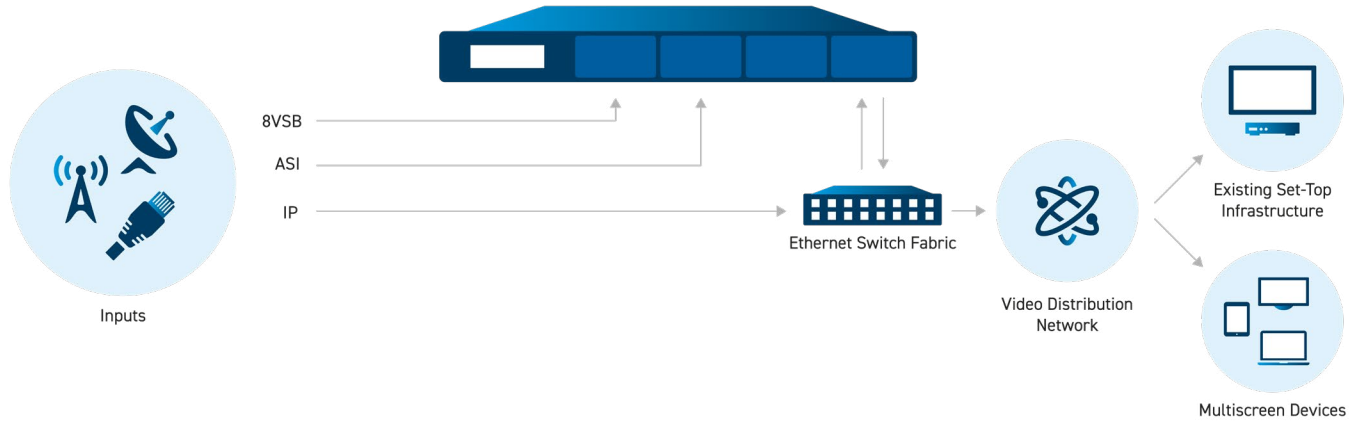




Inca Modular Series 4400

Linear & ABR High-Density Transcoder

Transcode, Transrate or Downscale for Linear or ABR Applications
Inca Modular Series 4400



Technical Specifications For All Chassis

Transport Stream Processing	
Inputs	MPEG-2 SPTS/MPTS Transport Stream Multicast / Unicast UDP IP Optional 8VSB/QAM, ASI
Outputs	MPEG-2 SPTS Transport Stream Multicast / Unicast UDP IP Transcode to SPTS Demux or pass through to SPTS/MPTS
IP Outputs	4410 - Up to 48x outputs 4420 - Up to 96x outputs 4440 - Up to 160x outputs
Input and Output Codecs	MPEG-2 and MPEG-4 AVC, HEVC 4:2:0
Source Resolutions and Frame Rates	1920x1080i @ 30/25 704x480i @ 30 1280x720p @ 60/50 544x480i @ 30 720x576i @ 25 528x480i @ 30 720x480i @ 30 <i>Other formats supported, please inquire</i>
Output Resolutions and Frame Rates	1920x1080i @ 30 720x576i @ 25 1440x1080i @ 30 720x480i @ 30 1280x720p @ 60/50 704x480i @ 30 1280x720p @ 30/25 544x480i @ 30 854x480p @ 30 528x480i @ 30 852x480p @ 30 192x192p @ 15 (PIP) <i>Other formats supported, please inquire</i>
Transport Stream Optimizations	PID and Program Filter and Remap, Jitter Correction, Strip Null Padding, Transport Rate VBR <--> CBR Conversion
Transport Modes	Constant, Variable, Peak
Closed Captions	EIA 608/708 passed through if present in source
DVB Subtitle Burn In	Select by language
DVB Subtitle PID	Passed through if present in source (can be filtered out)
SCTE 35 Ad Markers	Passed through if present in source
Regulatory Compliance	
EMC Standards	FCC Part 15 Class A
Safety Standards	CSA/UL 60950-1

Management	
Configuration	Powerful VidiOS™ web-based user interface
Visual Mosaic Monitoring	Compatible with Inca All Seeing Eye monitoring product - All Seeing Eye probe capability included
Management Network Interface	1000 Base-T
NIC Redundancy	LACP, Active Failover, Round Robin
SNMP	SNMP Trap Forwarding

Demux to IP and TS Probes	
From IP Sources	10x included Optional 48 or 96 (*96 option available for 4420 and 4440 only)
From 8VSB/QAM, ASI Sources	Included

Audio Transcoding (optional - licensed per stream)	
Source Audio Codecs	AC-3, EC-3, AAC (ADTS & LATM), MPEG 1/2 Audio Layer I/II
Source Audio Channels	7.1, 5.1, 2.0, 1.0
Output Audio Codec	AC-3, EC-3, AAC (ADTS & LATM), MPEG-1/2 Audio Layer I/II
Output Channels	2.0, 1.0
Audio Processing	Nielsen watermark extraction and ID3 tags insertion

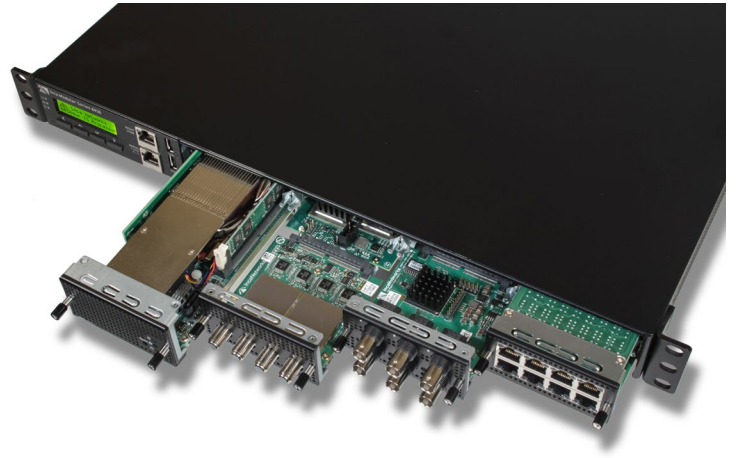
Redundancy Options	
Service Failover (licensed per output)	Automatic failover to backup source Automatic recovery to primary source
N+1 Chassis Redundancy (optional)	Automatic failover to spare chassis Automatic recovery to primary chassis



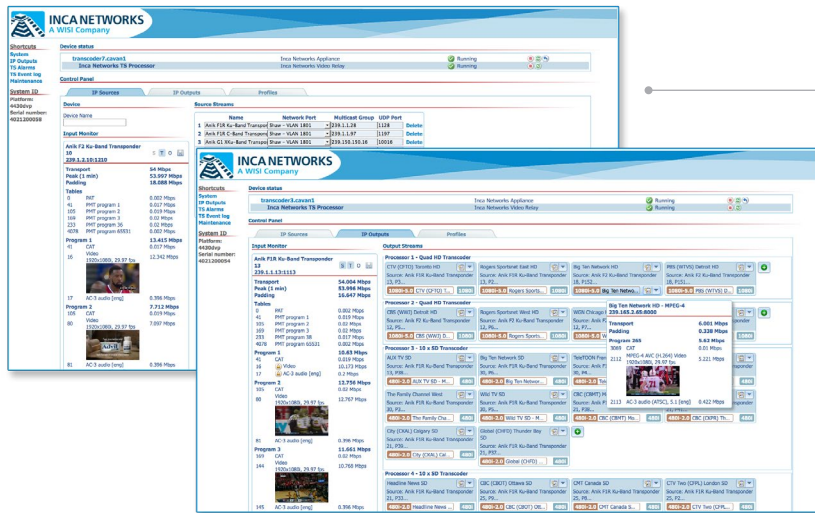
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Available Modules

Hardware Processing & Receiver Modules (Optional)	
MPEG-2/MPEG-4 Transcode Modules	
VMA-XC3	High-density transcode module
VMA-XC2	Medium-density transcode module
VMA-XC	Low-density transcode module
HEVC Transcode Modules	
VMA-HXC1	HEVC transcode module
Receiver Modules with Optional Transcode	
VMA-8VSB-XC2	4x 8VSB tuner plus medium-density transcode
VMA-8VSB-XC	4x 8VSB tuner plus optional low-density transcode
VMA-ASI-XC2	6-port ASI interface plus medium-density transcode
VMA-ASI-XC	6-port ASI interface plus optional low-density transcode



VidiOS™ Stream Analysis



Troubleshooting tools with extensive statistical analysis and transport stream event logging

Inbound and outbound video thumbnails and click-of-a-button stream sample downloads

User-friendly interface with hover-hints