

High-definition broadcast-quality encoding over DVB or broadband IP networks

IP-9500

Real-time HDTV Content Transmission

High-definition television (HDTV) transmission utilizes advanced MPEG-4 AVC technology

- ▶ Best-of-class broadcast-quality H.264 HP@L4 HD encoder/decoder
- ▶ Real-time HDTV transmission over DVB and broadband IP networks
- ▶ Standard and low latency modes
- ▶ Includes H.264 MP@L3 standard definition encoding



FUJITSU

THE POSSIBILITIES ARE INFINITE

IP-9500

Real-time HDTV Content Transmission

The Fujitsu IP-9500 is an audio/video codec that utilizes advanced MPEG-4 AVC encoding to perform real-time transmission of HDTV at low bit rates over DVB and broadband IP networks. Powerful error correction functions ensure high quality of service over IP networks by preventing the distortion of decoded images, even when network packet losses occur. With its compact size and rugged construction, the IP-9500 reduces the cost of transmission from remote locations that demand HDTV image quality.

Applying the latest H.264 High Profile at Level 4 image processing algorithms, the IP-9500 provides best-of-class video quality for use in Electronic News Gathering (ENG) as well as broadcast contribution and distribution networks. By utilizing sophisticated H.264 compression algorithms, the streaming bit rate is reduced by more than half compared to MPEG-2 encoding, while still achieving the same video quality. As a result, HDTV content can now be

transmitted at lower bandwidths over existing DVB satellite or low-cost broadband IP networks.

The IP-9500 utilizes auto-sensing 10T/100T/1G Ethernet for IP connectivity as well as ASI I/O ports for connecting to DVB networks. The unit also provides industry standard HD-SDI and HDMI I/Os for connecting to HDTV camcorders and displays. Encoder latency is selectable between standard and low-latency modes allowing the IP-9500 to be used in delay-sensitive ENG applications. A bi-directional voice intercom capability is provided across broadband networks for interactive communications between remote and studio locations.

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Fujitsu Computer Products of America, Inc.

<http://us.fujitsu.com/fcpa>

1255 East Arques Avenue, Sunnyvale, CA 94085-4701. (800) 626-4686 (408) 746-7000 info@fcpa.fujitsu.com

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IP-9500 Specifications

Model			IP-9500
Video	Input		1 x HD-SDI or SD-SDI 1 x HDMI
	Genlock Input		1 x NTSC/PAL Black Burst or HD Tri-level Sync
	Output		1 x HD-SDI or SD-SDI 1 x HDMI 1 x NTSC/PAL
Audio Input/Output			4 x AES Pairs embedded in SDI (48KHz) 1 x HDMI 1 x Analog Stereo Pair (Balanced)
Network Interface			10BASE-T / 100BASE-TX / 1000BASE-T DVB-ASI
Video	Format	HD 1080i	1920/1440/960 (59.94 / 50Hz)
		720p	1280/960/640 (59.94 / 50Hz)
	Coding	SD	720 x 480i (59.94Hz), 720 x 576i (50Hz)
		HD	H.264 HP@L4, 4Mbps – 27Mbps
Latency (nominal)	IP	Low	500ms
		Standard	1.6s
	DVB	Low	300ms
		Standard	1.4s
Audio Coding	Program		MPEG-1 L2, MPEG2 AAC SMPTE 302M uncompressed audio (Dolby® pass-thru)
	Voice Intercom		G.711
Error Correction			Pro-MPEG, Fujitsu FEC and ARQ
Size			425 x 350 x 42 mm (1RU)
Power Supply			100 – 240VAC
Operating Temperature			-10 ~55 deg. C
Certifications			UL, CE, FCC, RoHS

Selectable Operational Mode

1. Encoder Mode
2. Decoder Mode