

ADPCM Server Card

Features

- **Provides up to 64 channels of voice compression to reduce long haul bandwidth requirements, compressing up to 2 E1s or T1s of voice traffic.**
- **Supports transition signaling as defined by ANSI T1.302-1989.**
- **Supports fax and modem operation.**
- **Compliant to G.761 for alarm indication and fault handling.**
- **Software selectable 24, 32 or 40 Kbps compression rates.**
- **Compatible with standard IMACS digital or analog voice cards.**

The 887170 ADPCM card is a plug-in resource card for the IMACS system. The card has 32 pair of voice compression engines which accept input directly from voice cards or voice traffic on WAN links. The ADPCM card requires a matching card at the other end to decompress the voice channels to normal 64K operation. The ADPCM card is compatible only with the IMACS cross-connect CPU, 880370.

Each pair of compression engines utilize one 64 Kbps DS0 for two compressed channels. Each engine can compress 64 Kbps voice traffic to 24 Kbps, 32 Kbps or 40 Kbps, depending on the compression quality required.

The rate of any DS0 is 64 Kbps, so the sum of the compression rates for each engine pair must equal 64 Kbps. A 32 Kbps circuit can only be paired with a 32 Kbps circuit. A 40 Kbps circuit can only be paired with a 24 Kbps circuit and vice-versa.

The compression engines work in pairs. Each member of a pair must have the same WAN and time slot. Additionally, both members of the compression engine pair must be active before either port will operate.

Each IMACS unit can have up to three ADPCM cards installed (two active ADPCM cards and one redundant card).

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Card	Input voice channels	The input can originate from any 2-wire or 4-wire voice card or from a DS0 on a WAN (E1/T1 or HDSL) interface.
	Input substrate data	Mu-law & A-law 64Kbps PCM compatible on a per channel basis.
	Modem data support	SRU data traffic at 19.2Kbps or less can be carried on a 24Kbps sub-channel.
		Transcoder rate Modem data
		24Kbps none
		32Kbps up to 4.8Kbps
		V.32 to 9.6Kbps
		40Kbps up to 12Kbps
		V.32 bis to 14.4Kbps
	FAX support	Transcoder rate FAX
		24Kbps none
		32Kbps Group II
		40Kbps Group III
	Voice quality	As measured by mean opinion score (MOS) analysis, a subjective evaluation with a range of 0 (poor quality) to 5 (good quality). Toll quality voice is accorded a MOS of 4.
		Transcoder rate MOS
		24Kbps 3.6-3.8
		32Kbps 4.0-4.3
		40Kbps 4.0-4.3
	Echo cancellation	None provided; typically not required.
	Signaling	Transmitted in-band utilizing CAS transitional signaling, as per ANSI T1.302 - 1986 for 32Kbps and modified for use with 24Kbps and 40Kbps. Note: robbed bit signaling alarm transmission, as specified in ANSI T1 .302a - 1989 is not supported.
	Maximum card count	3 (2 active, 1 redundant)
	Transcoder operation	Compliant to G.761 Alarm Indication and Fault Handling.
Standards Compliance		ITU G.721, ITU G.723, ITU G726-12/90, ANSI T1.302-1989, ANSI T1.302a-1992, ANSI T1.303-1989
Product Numbers		PRM-887170 - ADPCM server - stainless steel faceplate, CE marked
Physical Specification	Card height	8 inches (20cm)
	Card width	15/18 inches (2.35 cm)
	Card depth	7 1/2 inches (18.75cm)
	Power consumption	2.88 Watts
	BTU/hr	9.83
	Operating temperature	0 to 50 C, 32 to 122 F
	Storage temperature	-20 to 80 C, -4 to 176 F
	Humidity	0 to 95% humidity, non-condensing
IMACS Platform	IMACS chassis	891630 IMACS 600, 891830 MACS 800, or 891930 IMACS 900
	Control CPU card	880460 bus-connect or 880370 cross-connect CPU
	System Host Code	3.6 & 6.0 or later