

# Voice Recording System VC-MDX

## Digital Interface Board UPO

Version 2202

## 1 General

The Digital UP0 Interface Board is a full sized PCI card. It is designed for the use of recording applications in the field of Public Transportation, Air Traffic Control, Public Safety, Command Control Centers Call Centers and more of. In principle the Digital UP0 interface board will be adapted to various PABX, which are using proprietary protocols for voice communication.

Typical applications are the recording from various digital sources, such as PABX and telephone devices.

The Digital UP0 interface will be loaded with the appropriate PABX information and protocol during installation / production phase.

The Digital UP0 Interface Board contains on-board DSPs. Each DSP provides enough power to process 8 isochronous channels, has a full set of detectors, encoders, and decoders along with numerous voice processing functions such as automatic gain control (AGC), automatic volume control (AVC), and adaptive echo cancellation. The board provides a wide range of voice encoders and decoders. Digitization methods are programmable on a per channel basis. For example, it is possible to select a GSM 6.10 decoder and a 32 kbp/s G.726 encoder to be used at the same time on a given channel.

The Digital UP0 Interface Board detects the Caller ID when it is passed over voice channels (supports Bell 202 and V.23 standards). However, Caller ID is not passed over voice channels on digital networks. This feature is also PBX and phone model dependant.

## 2 Technical data

The Digital UP0 Interface Boards are designed for the purpose of recording from various Digital PBX sources and its telephone

This interface board is available in 8, 16 and 24 channel configurations. Channel capacity is controlled by license key.

The UP0 boards provide:

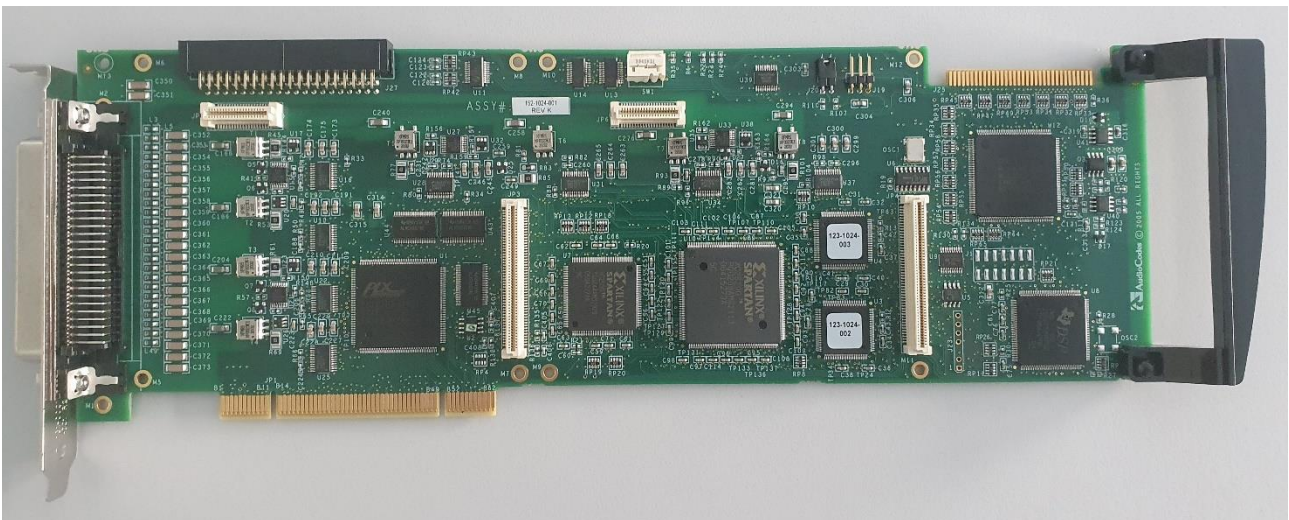
- Line supervision
- Audio capture
- Warning tone generation
- Called and Calling party detection
- Real time DTMF signal processing
- Audio data compression

<b>Physical Characteristics</b>	Form Factor	PCI full size PCI
<b>Tap Interface</b>	Insertion Loss	>1dB
	Isolation:	Galvanic 500VDC +/-10%, 100VRMS 1 sec
	Impedance	Soft-Switchable 1KOhms/100Ohms
<b>PBX interface</b>	PBX Support	Software Configurable Alcatel, Avaya, Bosch, Cisco, eON, Ericsson, Fujitsu, Harris, LG, Mitel, Nakayo, NEC, Nortel, Panasonic, Philips, Rockwell, Samsung, Siemens, Tadiran, Telrad, Toshiba, etc
<b>Audio Signal</b>	Receive Range	-68 dBm to + 3 dBm
	Input Gain Control	+24 to -50 dB
	Silence Detection	Programmable from API
	Transmit volume control	+24 to -50 dB to MVIP/H.100
	Automatic Gain Control (AGC)	Programmable from API
	Automatic Volume Control (AVC)	Programmable from API
	Activity Detection	Programmable from API
	Frequency Response	300 - 3400 Hz (+/- 3dB)
<b>DTMF tone Detection</b>	DTMF digits	0 - 9, *, #, A, B, C, D
	Dynamic range	-38 dBm to 0 dBm
	Minimum tone detection	40 ms /programmable
	Interdigit timing	40 ms min.
	Acceptable twist	Per LSSGR sec. 6, 8 dB forward,4 dB reverse
	Frequency variation	Accept all +/- 1.5%, reject all +/-2.5%
	Noise tolerance	Per LSSGR sec. 6
	Talk off	Bellcore TR-TSY-000762

### 3 The board

The Digital UP0 Interface Board is built as full size PCI card.. Most of the ICs, resistors and capacitors are SMD parts.

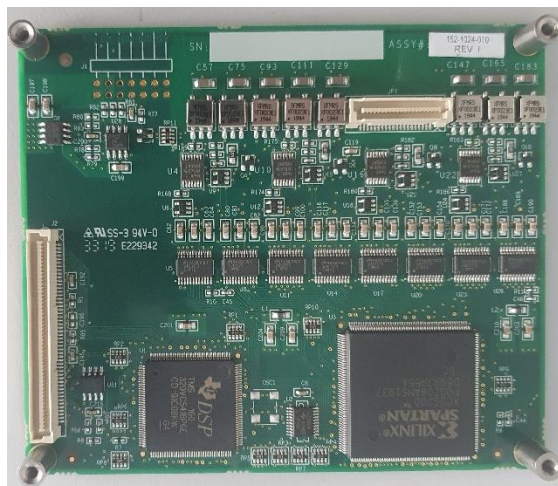
On the board front panel a 50-pin connector provides the connection to 8 + 8 + 8 Digital UP0 telephone lines. The basic board is equipped with 2 individual connectors for adapting the extension boards



Picture 1: Basic UP0 Interface board with 8 recording channels

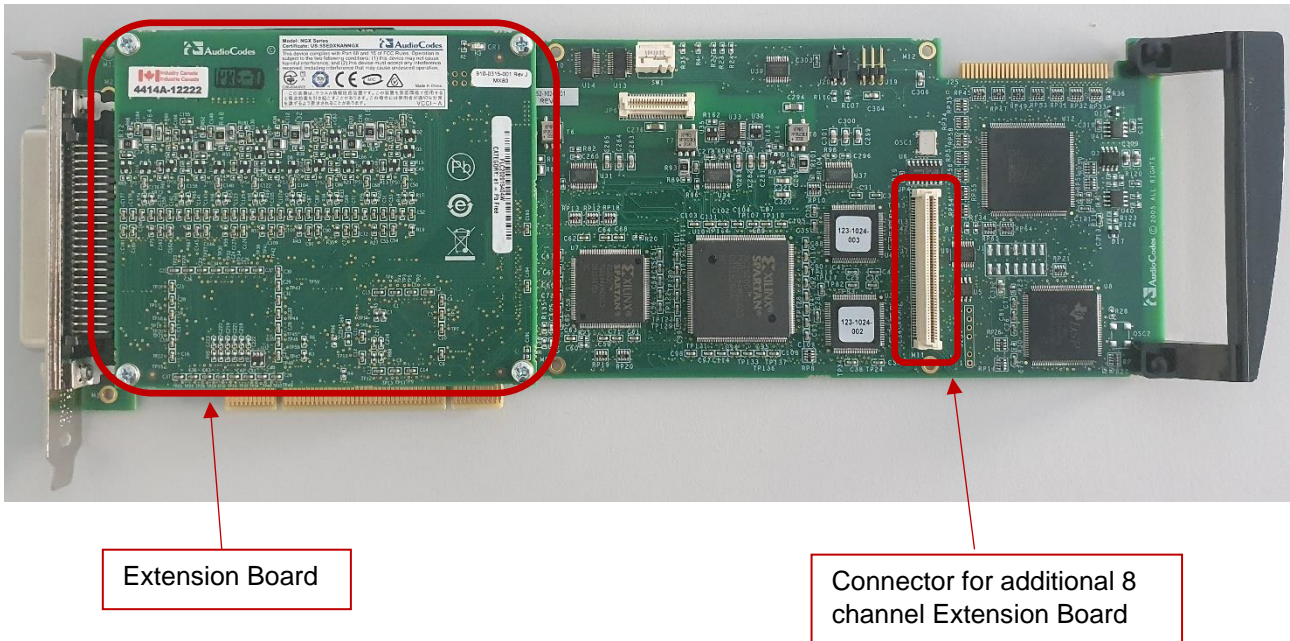
### 4 Extension

Extension boards for additional 8 recording channels are available. The basic board provides 8 recording channels. It total 2 extension boards can be added, so maximum number of recording channels of 1 UP0 Interface Board is 24 recording channels.

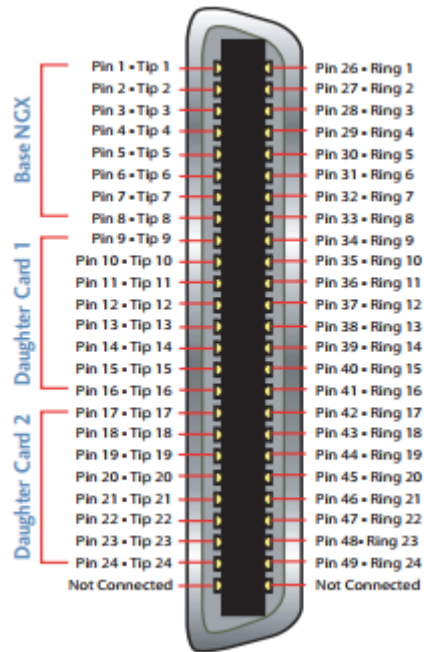


Picture 2: Extension board for 8 recording channels

Picture 3: Basic UP0 Interface board with 16 recording channels



## 5 Interface Connector



Centronix 50p female

## 6 Connection cable

**Centronics 50P male connector**

**Cable Product Details:**  
 Indoor telephone cable, J-Y(ST)Y, 24\*2\*0.6  
 Pair-twisted wires/Single wire cable (solid wire made from blank copper wire, 0.6 mm or 0.8 mm)  
 Cross Sectional Area: 0.28 mm<sup>2</sup>  
 Temperature range: -5 °C → +70 °C  
 Number of Pairs: 24  
 Outer Diameter: 11.5mm

				<b>VoiceCollect</b>	VoiceCollect GmbH Justus-von-Liebig-Str.5 61352 Bad Hornburg
				Customer	<b>Cable 10m UP0</b>
				Project	Article-No <b>7147110</b>
00001	04.03.2022	PE			Replace
Rev.No	Date	Name			Replace by
Release of production / Modification					

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