1   GENERAL INFORMATION

1.1   Product description

The PCXpocket is a Type II PC Card designed for professional audio applications on a laptop. When used with editing software, and equipped with a communications board (ISDN or modem), this card, transforms a laptop into a complete mobile audio workstation. The PCXpocket v3 provides full PCX power in a compact package. It has 24-bit converters, two balanced analog mono inputs at microphone or line level, and two balanced analog outputs. SPDIF input and output allow direct digital transfer.

Key features:
- The PCXpocket v3 is full duplex, offering simultaneous and independent record and playback capabilities.
- Sampling rates supported are from 8 kHz to 48 kHz programmable in 0.2% steps. PCM encoding/decoding rates are 8, 16, or 24 bits.
- The PCXpocket v3 can run applications that comply with Microsoft's WAVE protocol.
- When using applications based on the Digigram np SDK with the PCXpocket v3:
- Real-time mixing of multiple sound files, level adjustment, panning, cross fade, punch-in/punch-out, scrubbing, time-stretching, pitch-shifting, and format and frequency conversions are performed on the DSP of the cards.
- Cards perform real-time, simultaneous MPEG Layer I and Layer II compression and decompression during record and playback. Support provided for Layers I and II of the MPEG Audio standard (ISO 11172-3) and the low sampling frequencies of the MPEG-2 Audio standard (ISO 13818-3).
- LTC input can be used for synchronization.
- Multiple applications may share the resources of a single PCXpocket v3.
- Analog inputs and outputs may be configured as one stereo or two mono channels.

Depending of applications, different options are available:
- VXpocket v2
- VXpocket

Mains differences between PCXpocket v3, VXpocket v2 and VXpocket, are summarized in the following:

	PCXpocket v3	VXpocket v2	VXpocket
Analog inputs	2 mono	2 mono	2 mono
Digital inputs	1 stereo	1 stereo	1 stereo
Analog output	2 mono	2 mono	2 mono
Digital output	1 stereo	1 stereo	1 stereo
DSP	Yes	Yes, but not software available	Yes, but not software available
LTC time code	Yes	Yes	No

All options of PCXpocket v3 use the same printed circuit and the same components; Software is different, depending of the option.
PCXpocket v3 allows compression/decompression of audio files (DSP functions available), but neither VXpocket v2 nor VXpocket.
The VXpocket v2 has an LTC time code input, that the VXpocket doesn't have.

For more information, see product's data sheet at section 1.6.

1.2   Related Submittal(s) / Grant(s)

All host equipment used in the test configuration are FCC granted, when relevant.

1.3 Tested System Details

The FCC IDs for all equipment, plus description of all cables used in the tested system (including inserted cards, which have grants) are :

Trade Mark – Model Number (Serial number)	FCC ID	Description	Cable description
PCXPocketV3* (sn: V2PROTO#2)	IGTPCXPKV3	Audio type II PC card	All I/O cables are shielded
TOSHIBA 440 CDX PA1241E (sn: 97026877) with AC adaptor block PA2450U	D.O.C.	Laptop computer	All data cables are shielded Power cable unshielded
HEWLETT PACKARD D2846A [1] (sn JP81545325)	D.O.C.	21" color monitor	Shielded video cable
HEWLETT PACKARD C4732-60101 (sn: M97040007)	CIGE03614	Keyboard	Shielded cable
HEWLETT PACKARD C3751B (sn: LZA65351347)	DZL210582	Mouse	Shielded cable
HEWLETT PACKARD 48GX [1] (sn: 3552S02671)	None	Serial calculator	Shielded cable
TELEX [1] (sn: none)	None	Microphone	Shielded cable
INTEL YC76 [1] (sn: 0047075)	EDUY76	USB WebCam	Shielded cable
LABTEC 60804FI [1] (sn: none)	None	External speaker	Shielded cable
HEWLETT PACKARD C5876A [1] Deskjet 890C (sn: SG7921J0T3)	B94C4602X	Parallel printer	Shielded cable
HEWLETT PACKARD C2164A [2] Deskjet 660C (sn: ES5891300Y)	B94C2164X	Parallel printer	Shielded cable
HEWLETT PACKARD C4734 [2] (sn: M97060579)	CIGE03614	Keyboard	Shielded cable
LABTEC LT100-R [2] (sn: none)	None	Headphone	Shielded cable
HEWLETT PACKARD C3751B [2] (sn: LZA65353972)	DZL210582	Mouse	Shielded cable
HEWLETT PACKARD 48GX [2] (sn: 3621508954)	None	Serial calculator	Shielded cable
HEWLETT PACKARD D2846A [2] (sn JP74001005)	D.O.C.	21" color monitor	Shielded video cable
INTEL YC76 [2] (sn: 0045143)	EDUY76	USB WebCam	Shielded cable

*Equipment Under Test
[1]: Equipment used for radiated emission test
[2]: Equipment used for conducted emission test

1.4 Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4-1992, CISPR22-1993/A1:1995/A2:1996 and EN55022:1994/A1:1995/A2:1997.

Radiated testing was performed at an antenna to EUT distance of 10 meters. During testing, all equipment's and cables were moved relative to each other in order to identify the worst case set-up.

1.5 Test facility

Tests have been performed on May 19th 1999.

The test facility used to collect the radiated and conducted data is the Hewlett Packard Quality Engineering Test Center B10 EMI facility located 5, avenue Raymond Chanas – EYBENS, 3853 GRENOBLE, France. This test facility has been fully described in a report and accepted by FCC as compliant with the radiated and AC line conducted test site criteria in ANSI C63.4-1992 in a letter dated August 19, 1996 (31040/SIT, 1300F).

This test facility has also been accredited by COFRAC (French accreditation authority for European union test lab accreditation organization), accreditation number 1-0199 as compliant with test site criteria and competence in EN55022/CISPR22 norms for 89/336/EEC European EMC Directive application. All pertinent data for this test facility remains unchanged.

1.6 Data sheet of the product

SPECIFICATIONS

Inputs

Analog line inputs

. 2 balanced analog line inputs (can be used with unbalanced signals).

. software programmable microphone or line input level

. maximum input line level: +10dBu

       (-10dBV nominal with 18dB overhead).
. input micro line level : minimum -52dBu (-6mVcc)
. input impedance : >10 kOhms
. 24 bits analog to digital converters (64 x oversampling delta-sigma)
. line input level adjustment: digital Gain/Attenuation
. microphone input level adjustment: analog gain 30dB to 51dB by approx. 3dB steps

Digital ingut

. 1 S/PDIF.
. 24 bits available.

LTC input

. maximum input !eve!: +6 dBu.
. minimum input level (sensitivity): -20 dBu.
. speed: nominal +/- 20 %.

Outputs

Analog outputs

. 2 balanced analog outputs (can be used as unbalanced).

. maximum level : +10dBu (software adjustable)

. output impedance < 100 Ohms.
. 24 bits digital to analog converters (64 x oversampling delta-sigma).
. output level adjustment : down to -91.5 dBu by 0.5dB steps.
. maximum load: 600 Ohms.

Digital output

. 1 S/PDIF.
. 24 bits available.
. synchronization with digital input complies with AES 11

Sampling frequencies

. 8, 11.025, 16, 22.05, 24, 32, 44.1, 48 kHz available (complying with AES11)

Analog characteristics

. Signal / Noise ratio (un-weighted): better than 94 dB

. Total Harmonic Distortion + Noise (un-weighted): better than -89 dB (0.003%) with 1kHz signal at -2 dBFS
. Frequency response (20Hz/20kHz): +/- 0.15 dB
. Difference in phase (20Hz/20kHz): 0.2° I 2°

. Interchannel isolation at 1 kHz: better than -95 dB (Characteristics measured at 48 kHz sampling frequency, record + playback in linear).

Processing

Processing power is provided by a 56303 Motorola DSP associated with 768 kbytes of RAM.

Miscellaneous

<u>Physical</u>

. Card designed for PC-Card interface (Type Il Format)

<u>Power consumption</u>

. Supply voltage: + 5 V
. Power on: 320 mA (1.6 W) typical
. Power off: < 100 mA (0.5 W) typical