OPERATIONAL DESCRIPTION

1.1.   Product description of UAX220

The UAX220 is a portable professional USB Audio interface that has been specifically designed for broadcast and other demanding pro audio applications.

As a true plug-and-play device, when connected to the USB port of a computer, UAX220 is automatically recognized as an USB Audio-compliant device and is immediately operational.

Applications:
- Broadcast (newsroom, mobile journalist workstation)
- Live performance (theatrical playback, special effects, sound system calibration)
- Logging, legal recording, and archiving
- DJ applications
- Music production

The UAX220 is a Digigram product.

See §1.6 for more detail.

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 are:

Trade Mark – Model Number (Serial number)	FCC ID	Description	Cable description
DIGIGRAM UAX220* **(sn: 00000001)**	**IGTUAX220**	**USB Audio card**	I/0 cable, shielded
DELL Precision 670 pn:WHL (sn: 188X91J)	D.O.C.	Personnel computer	Standard power cable unshielded, All I/O cables are shielded.
HEWLETT PACKARD pn:D2846 (sn: JP74001000)	D.O.C.	monitor	Shielded cable
HEWLETT PACKARD pn:C4734-60111 (sn: M971168931)	GYUR38SK	Keyboard PS/2	Shielded cable
lOGITECH (sn:LZA6283121)	DZL211029	Mouse PS/2	Shielded cable
HEWLETT PACKARD – Deskjet 895CXI (sn: MY9761915S)	D.O.C.	Parallel Printer	Shielded cable
Telex (sn: 700373.000A)	None	Microphone	Unshielded cable
Labtec LT-100 pn:D8387A (sn: none)	None	Headset	Unshielded cable
Sennheiser HD 202 (sn: none)	None	Headset	Unshielded cable
HEWLETT PACKARD 48GX (sn:ID83802369)	None	Graphic calculator	Serial adapter shielded
Intel YC76 (sn: 0045143)	EDUYC76	WebCam	Shielded cable
DIGIGRAM	None	Load box	Standard power cable unshielded

* : Equipment under test

1.4. Test Methodology

Both conducted and radiated testing were performed according to the procedures in CISPR22-2003, FCC Part 15 Subpart B.
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 April 25th , 2005.

The test facility used to collect all the test data is the SMEE *Actions Mesures* facility, located ZI des Blanchisseries, 38500 VOIRON, 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 C63.4-2003 in a letter dated July 19, 2002 (registration number 94821).
This test facility has also been accredited by COFRAC (French accreditation authority for European union test lab accreditation organization) according to NF EN ISO/IEC 17025, accreditation number 1-0844 as compliant with test site criteria and competence in 47 CFR Part 15/ANSI C63.4 and EN55022/CISPR22 norms for 89/336/EEC European EMC Directive application. All pertinent data for this test facility remains unchanged.

1.6. Data sheets

Specifications

Configuration	
Bus/Format	USB1.1 (compatible with USB2.0 ports) - Compliant with the USB Audio specification
Size	90 mm X 81 mm X 22 mm - Integrated USB cable: 2 m - Integrated audio cable: 0.5 m
Operating: temp / humidity (non-condensing)	0°C/+50°C • 5%/90%
Storage : temp / humidity (non-condensing)	-5°C/+70°C • 0%/95%
Inputs/outputs	2 balanced
Maximum input level/impedance	+10 dBu / > 10 kOhms
Analog line outputs	2 servo-balanced
Maximum output level/impedance	+10 dBu / < 100 Ohms
Headphone output	Dedicated headphone stage with level adjustment knob
Maximum output power / minimum load	55 mW + 55 mW / 32 Ohms
Operating mode	
A/D and D/A converters	24-bit / 96 kHz
Sampling frequencies available	Default mode: fixed at 48 kHz*
	Free mode: 8 kHz, 11.025 kHz, 16 kHz, 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz
Audio formats	PCM 8, 16, and 24 bits
Simultaneous playback and record	Full duplex
Direct monitoring	Monitoring button on the device. Mixed with playback to line and headphone outputs
Audio performance measured at Fs=48 kHz	
Frequency response (In + Out)	20 Hz–20 kHz: ±0.2 dB
Dynamic range	Analog In: >104 dBA - Analog Out: >103 dBA - Analog In + Out: >103 dBA
THD + noise ref 1 kHz at –1 dBfs	Analog In: <–98 dB - Analog Out: <–97 dB - Analog In + Out: <–93 dB
Crosstalk (In + Out)	ref 1 kHz at 10 dBu: <–110 dB - ref 15 kHz at 10 dBu: <–95 dB
Channel phase difference: 20 Hz/20 kHz	0.2° / 2°
Connectors	
Audio connectors	Two Neutrik™ female XLR3, two Neutrik™ male XLR3 and one Neutrik™ jack with lock (for headphones)
USB connector	Standard A-type, cable attached to the box
Environments	
Management	Depending on the host operating system's implementation of the USB Audio specification: DirectSound, Core Audio, ALSA. Additional management: Third-party ASIO driver, and Digigram np SDK through Virtual PCX available
OS supported	Windows XP, Mac OS X, Linux

*: A frequency conversion is automatically applied by the host operating system if required