OPERATIONAL DESCRIPTION

1.1. EtherSound ES8 MIC description

EtherSound ES8mic

Configuration	
Size	1U 19" rack: 43.9 x 482.6 x 297.1 mm
Local audio channel selection	Manually by rotary switches
Inputs	
Analog mono inputs	8 mono balanced line/mic inputs with switchable 48 V phantom power
Impedance	22.2 kΩ
Maximum level	line: +22 dBu, mic: +10 dBu, software selectable
Programmable mic gain	0 to 66 dB in 0.5 dB steps
EtherSound ES8micCL with compressor-limiter option	
Maximum input level/impedance	+10 dBu/2kΩ
Programmable noise-gate threshold	-52 dB, -42 dB, -32 dB
Programmable compressor/limiter threshold	From −28 dB to 0 dB
Programmable compressor ratio	1, 1.5, 1.8, 2, 3, 4
Programmable compressor/limiter gain	From 0 to 16 dB
Limiter ratio	15:1
Compressor/limiter release time	150 ms
Connectivity	
Analog audio	8 female XLR3 or 24-point terminal block
EtherSound	2 EtherCon female RJ45 compatible (connections "IN"/"OUT")
GPIO	4 optocoupled inputs and 4 relay outputs on 8-point terminal blocks
Serial port	1 RS232 on DB9
Audio specifications	
Sampling frequency	48 kHz or 44.1 kHz
A/D and D/A converter resolution	24 bits
Frequency response at 48 kHz	20 Hz – 20 kHz: ± 0.2 dB
E.I.N. A/D-D/A at 48kHz, G=60 dB	<-122 dBu (without phantom power) <-116 dBu (with 48 V phantom power), G=36 dB
Dynamic range –60 dBfs with Fs=48 kHz (20 Hz/20 kHz, unweighted)	>96 dB at G=36 dB
Distortion and noise (THD+N) at 1 kHz (–1 dBfs with Fs=48 kHz)	<-92 dB (0.0025%)
Phase difference between channels: 20 Hz/20 kHz	0.5°/2°
Crosstalk: at 1 kHz	<-120 dB
at 15 kHz	<-110 dB
(–1 dBfs with Fs=48 kHz)	at G=36 dB

See complete product range description on file "EtherSound Product Description.PDF" for additional information.

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 ES8 MIC *
   –   **TB** (Sn: 166 00000002)
   –   **CL TB** (Sn: 168 00000002)
   –   **XLR** (Sn: 165 00000040)
   –   **CL XLR** (Sn: 166 00000002)
TB: Audio Terminal Block connectors
XLR: Audio XLR-3 connectors
CL: Compressor Limiter option
	IGTES8MIC	**Ethernet Audio bridges**	Standard power cable unshielded,
			Ethernet FTP cables
			RS232 shielded cable
			Microphone audio inputs lines, shielded.
			GPIO wires, unshielded

DIGIGRAM ES8 OUT (sn: 150.00000050) **DIGIGRAM ES8 IN** (sn: 150.00000053)	IGTES8	**Ethernet Audio bridges**	Standard power cable unshielded, Ethernet FTP cables Analog audio IN/OUT lines, shielded.

* : Equipment under test

1.4.   Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4-1992/2000, 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 18th and 23rd, 2003.

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 C63.4-2000 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.