

DIGIFACT™ E

AUDIO STREAMING AND ANALYTIC SYSTEM

DATASHEET AND QUICK START GUIDE

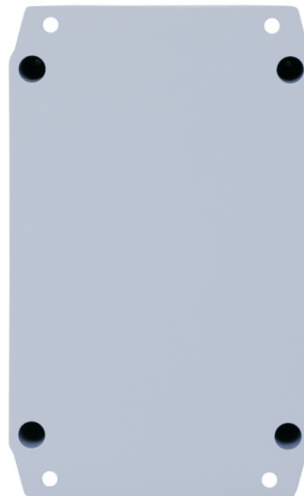
DESCRIPTION

The Digifact™ E is a networked audio monitoring and streaming device which streams audio over several industry standard RTP protocols. The Digifact™ E is enclosed in a NEMA rated housing that is suitable for outdoor use. The wide dynamic range microphone supports a wide frequency response capable of picking up low and high frequency sounds. The device features a robust quad-core microprocessor that has the capability of integrating signal processing applications, audio enhancements and analytic applications. Analytic applications can be added to the device to detect and report events such as:

- Aggression/Duress
- Gunshots/Explosions
- Breaking Glass
- Car/Panic Alarms



Front



Rear



NOTE:
Digifact™ E Microphone is recommended for outdoor use

IMPORTANT NOTICE
When this equipment is used as part of an audio monitoring system, the law requires that the public be given notice of AUDIO MONITORING ON THE PREMISES. A decal notice is included with each microphone shipped.



Federal Law References:
Federal Regulations, US Code, Title 18.
Crime and Criminal Procedure, Sec 2510.

WARRANTY

LOUROE ELECTRONICS® warrants that at the time of shipment products manufactured by LOUROE ELECTRONICS® to be free of defects in material and workmanship. Should a defect appear within one year (12 months) from date of shipment, LOUROE ELECTRONICS® will, at its sole discretion, repair or replace the defective equipment. This equipment shall not be accepted for repair or return without prior notification by LOUROE ELECTRONICS®.

This warranty does not extend to any Louroe product that has been subjected to improper or incorrect installation, misuse, accident, or in violation of installation instructions provided by LOUROE ELECTRONICS®.

Returned shipments to LOUROE ELECTRONICS® shall be at customer's expense. LOUROE ELECTRONICS® will return the equipment prepaid via best way.

TECHNICAL SPECIFICATIONS

AUDIO

Audio Streaming:	One-way
Audio Compression:	PCM, 16 bits linear G.711 a-Law G.711 mu-Law G.726-40 AAC
Sensitivity:	-45 dBV/Pa, 1 Pa = 94 dB SPL
Frequency Response:	50 Hz to 15 kHz

NETWORK

Security:	Password protection, user level access (admin and operator)
Supported protocols:	IPv4, HTTP, RTSP, RTP, TCP, SSH

SYSTEM INTEGRATION

Application programming interface	Open API for software integration, specifications at www.louroe.com
Analytics:	Louroe/SI audio analytics, audio level (dB) alarm
Event triggers:	Analytics, audio level
Event actions:	TCP notification, external output activation, pre and post-alarm audio recording to Network Attached Storage (NAS)

GENERAL

Enclosure:	Aluminum Alloy NEMA Enclosure
Power:	Power over Ethernet IEEE802.3af <u>optional</u> external 5V DC 2A (2-pin header)
Memory:	512 MB RAM
Event triggers:	Audio analytics, decibel threshold
Event actions:	TCP notification, external output activation, pre and post-alarm audio recording to Network Attached Storage (NAS)
Connectors:	Female RJ45 for 10BASE-T/100BASE-TX PoE; Quick connect header for four alarm outputs (5V DC), max load 100mA; 2-pin header for 5V DC 2A input
Operating Conditions:	-20°C to 50°C Humidity 10-85% RH
Storage Conditions:	-30°C to 60°C
Dimensions:	4.7 in (119mm) diameter x 2.0 in (50.8mm) height
Weight:	9.0 oz
Packaged weight:	1.0 lb
Included accessories:	User manual, 5-pin and 2-pin headers

INSTALLATION AND CONNECTIONS

MOUNTING

The Digifact™ Model E can either be surface mounted or strapped to a pole using the optional Louroe pole mount accessory kit (not included).

NETWORK, POWER AND OUTPUT CONNECTION

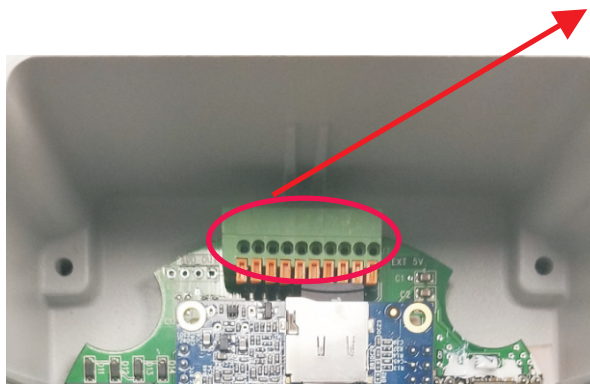
A moisture resistant Female Rj45 jack is located on the bottom of the unit for 10BASE-T/100BASE-TX PoE connection using CAT5/6 cable. If no PoE connection is available (network only) the device can be powered off 5V DC 2A external power supply (not included). Four alarm outputs are also available, details of the pin-outs of the power and alarm outputs terminal block are depicted below. The external power and alarm output cable assembly should be wired through the provided moisture resistant cable gland to preserve the moisture resistance of the unit.

ALARM OUTPUT CONNECTIONS

Four digital alarm output ports are available for connection to external devices, the alarm outputs can be set to trigger from analytic and volume threshold events. The output ports are “open drain” type outputs. If used with an inductive load, e.g. a relay, a diode must be connected in parallel with the load, for protection against voltage transients.

FUNCTION	PIN	NOTES
5V DC	1	Max load 100mA
Output 1	2	
Output 2	3	
Output 3	4	
Output 4	5	

Note: Output 1,2,3,4 connect to pin 1 (5V) when active, floating (unconnected) when deactivated. If connecting to a “dry contact” input, a 5V relay should be connected between the output and input ports of the two devices.



1 2 3 4 5
ALARM OUTPUT

+5VDC GND
EXT POWER

DEVICE DISCOVERY AND DEFAULT PASSWORD CHANGE

DEVICE DISCOVERY

The Digifact E is by default set to obtain an IP address from the network it is connected to (DHCP), hence it must be connected to a suitable DHCP server. To discover the device on a network, the following commands need to be run through windows powershell to locate the device name;

dns-sd -B _simic._tcp

NOTE: Apple Bonjour needs to be pre-installed on the PC where the powershell commands are being executed.

```
Administrator: Windows PowerShell
PS C:\> dns-sd -B _simic._tcp
Browsing for _simic._tcp
Timestamp A/R Flags if Domain Service Type Instance Name
15:10:17.198 Add 2 17 local. _simic._tcp. SIMic96c8f9abaed9
```

Once the device name has been located, the following script must be run:

dns-sd -G v4 <devicename>.local

to locate the device IP address:

```
Windows PowerShell
PS C:\> dns-sd -G v4 SIMic96c8f9abaed9.local
Timestamp A/R Flags if Hostname Address TTL
15:12:11.313 Add 2 17 SIMic96c8f9abaed9.local. 192.168.1.123 120
```

The device IP address can then be typed into an internet browser (**Google Chrome is recommended**) to access the device user interface page.

DEFAULT PASSWORD CHANGE

On first use the default password for the device is;

username: admin

password: admin

After entering the above information, the device will request the user to change the default password

Change default admin password

For security reasons, you must change the default admin password. Please enter a new password below and then type it again in the second field for verification. Press the submit button when you are done.

New password

Verify password

Change default admin password Submit password

For security reasons, you must change the default admin password. Please enter a new password below and then type it again in the second field for verification. Press the submit button when you are done.

New password

Verify password

192.168.1.122 says:

The password has been changed.

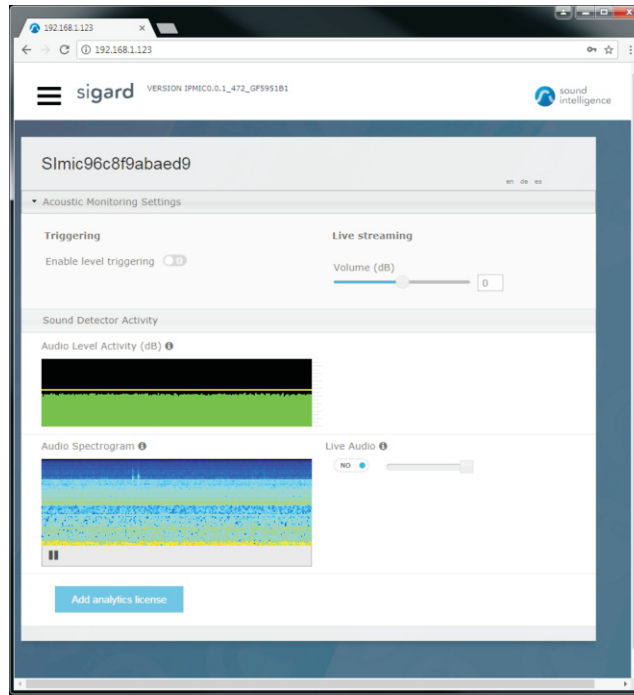
OK

Once the default password has been changed the device prompts to re-enter the new password to login to the device.

LIVE VIEW PAGE

LIVE VIEW

The live view screen of the device contains information and controls such as; Device firmware version, device name, acoustic monitoring settings, sound detector settings, audio activity spectrogram, listen live control, ability to add analytic licenses as well as access to the other device parameter pages.



Device firmware: System and firmware updates can be periodically updated from www.louroe.com

Acoustic Monitoring settings: Allows for enabling level triggering, setting level threshold, adjustment of streaming volume level (dB), adjustment of time and volume over ambient threshold (for analytic applications).

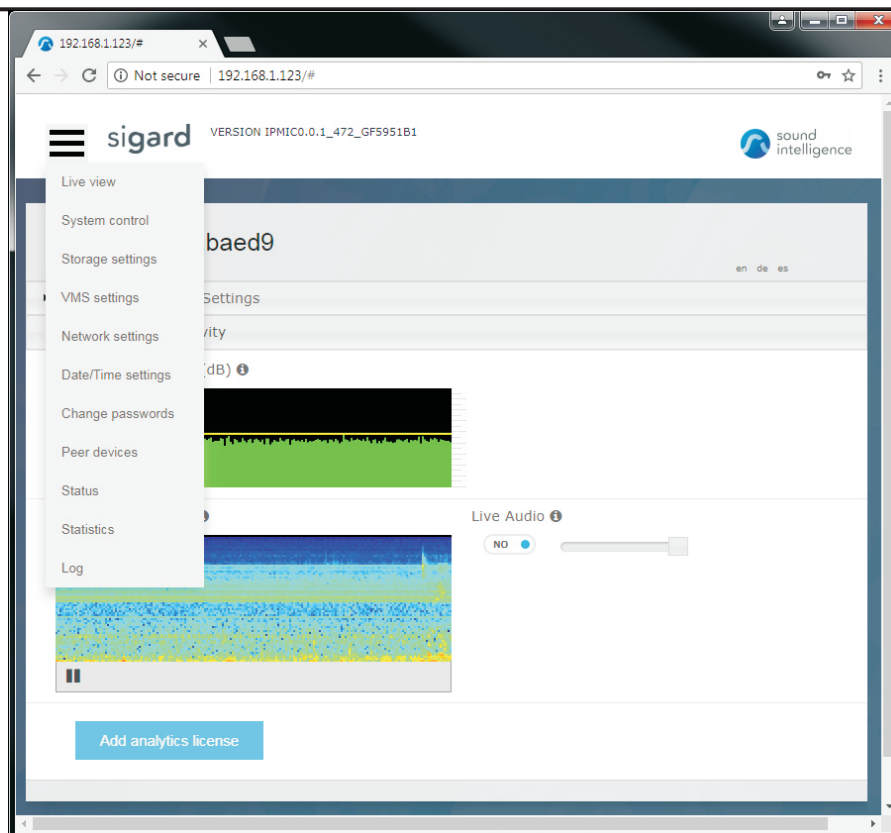
Sound Detector activity: Graphic representation of sound activity level and classification (for analytic applications) of audio signals detected by the device.

Live audio: Allows for enabling/disabling of live audio stream played from the speakers of the device from where the device user interface is being accessed.

Add Analytics License: Used to add audio analytic detector application licenses to the device, note clicking on the button displays a dialog page with the serial number of the device, using the serial number licenses can be requested by either calling Louroe customer service at: 1-818-994-6498 and/or emailing the serial number to sales@louroe.com with information regarding the type of application/s desired.

A blue dialog box for requesting a license. It displays the 'Serial number: 1420858051'. Below this is the text 'Enter license code:' followed by a white input field. At the bottom is a 'Submit' button.

MISCELLANEOUS DEVICE PARAMETERS



DEVICE PARAMETERS

The ≡ icon on the top left hand side of the live view page, grants access to miscellaneous device parameters such as;

System Control:

Revert to default settings - sets device setting to factory default

Reboot - reboot's the device

Device Name - character text box to rename the device (numeric and alpha-numeric only, no spaces)

Enable Live audio streaming - turns the audio stream on/off

Start/Stop/Change Analytics - starts/stops and modifies the type of analytic applications running on the device

Update to new firmware - updates device firmware; source file can be downloaded from www.louroe.com

Storage configuration:

Used to configure parameters for network attached storage device (NAS)

VMS configuration:

Used to configure meta-data transmission to Video Management Systems (VMS), detailed application notes of adding and configuring devices to VMS's can be found at www.louroe.com

Network Settings:

Set the device to a static IP address and configure device IP settings.

Date and Time configuration:

Configure devices date/time settings

Peer devices:

Used to detect and configure other Louroe devices on the same subnet.

Status:

Displays device status/health parameters such as; CPU usage and temperature, memory and network status.

Log:

Provides day/time stamped entries of system events, please note in the event of reported issues with the device please send a detailed email to techsupport@louroe.com and attach the latest downloaded copy of the log data for analysis and troubleshooting