# FREUND

FE-AMP-IP1

2x 10W LINUX SIP-AMPLIFIER IN 4M DIN-BOX

FE-AMP-IP1 is a class-D amplifier able to connect to any SIP-server as standard SIP-client and get a phone calls as standard SIP-extension. Tones and messages can be streamed live or uploaded to device to play them later or periodically from built-in timer/scheduler.
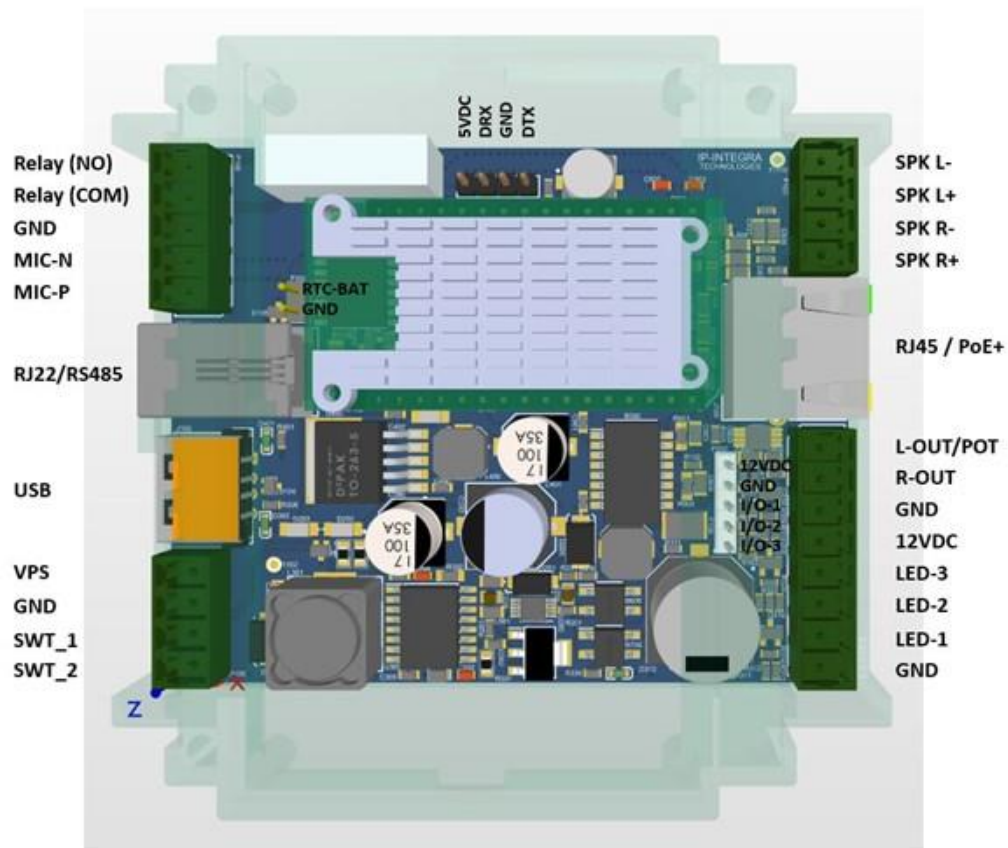
Auto-provisioning option through IP-INTEGRA SIP-server saves time, especially in the case of large-scale installations. FE-AMP-IP1 can easily integrate 3rd parts SIP-systems through WEB interface.

FE-AMP-IP1
Product: SIP AMPLIFIER
Model: FE-AMP-IP1
Input: 15-24VDC @ min. 2A or PoE+
Audio Output: 2x10 W
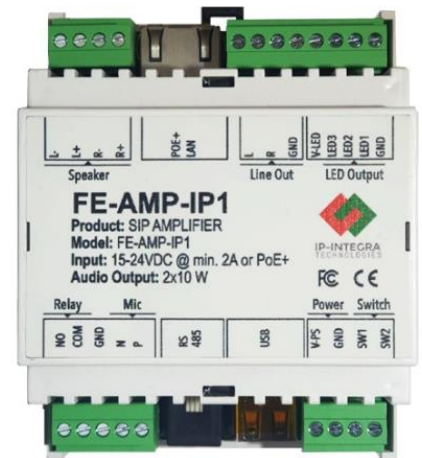
At a first glance

- SIP-Amplifier in 4M DIN box
- AUX audio output - can be integrated with all 100V amplifiers and Voice Alarm Systems with Control inputs or VOX-control
- Group multicast and individual paging by dialing extension number
- 4x I/O ports for call buttons/service/alarm/LED & 1X30VDC relay function
- MIC input / AUX output
- RS485 & USB interface
- Power Output RMS 2X10W
- Designed to wide response for Music & Speech in full quality
- OEM ready – can be customized for large quantities
- Easy SW setup through WEB interface & auto-provisioning

Specification

HARDWARE

Connectors	1x RJ 45
Power Options	PoE + IEE 802.3at or external 12V/2A DC
Power Consumption	Idle 1.8W, max. 24W (Volume dependant)
CPU	Allwiner H2+, Quad-Core Cortex A7

SOFTWARE

Web Interface	Dashboard with HTTPS based configuration, Alarm settings
Sound adjustments	Echo – cancelation, Sound mute, Silence Suppression, Paging Start/Stop tone, Microphone Boost/Mute
Scheduler	Bulk adding, Automatic fill-out, Ringtone upload
Remote provisioning	Automatic Synchronizing of SIP-server and Sound files; device discovery
Logging	Call, event, and scheduler logs

INPUT / OUTPUT

Speaker Output	4-8 Ω, 10 W
Line-Out	600 Ω, 2Vpp
Relay	1x 30V DC – DTMF and XML Controlled
Output	3 Open-Collector, 2A, up to 15V
Input	Optional for 2 Switch buttons, ground activated
Mic	Condenser Microphone Plug
General I/O	USB, RS 485

AUDIO

Internal Audio Amplifier	2x 10W Class D
Low Noise	-90 dB
Efficiency	>90%
Audio Codecs	MP3, PCM, G.729, G.722, GSM, A-law, u-law
THD+N	0.1% @ PO = 5W, f = 1KHz, RL = 8 Ω

NETWORKING

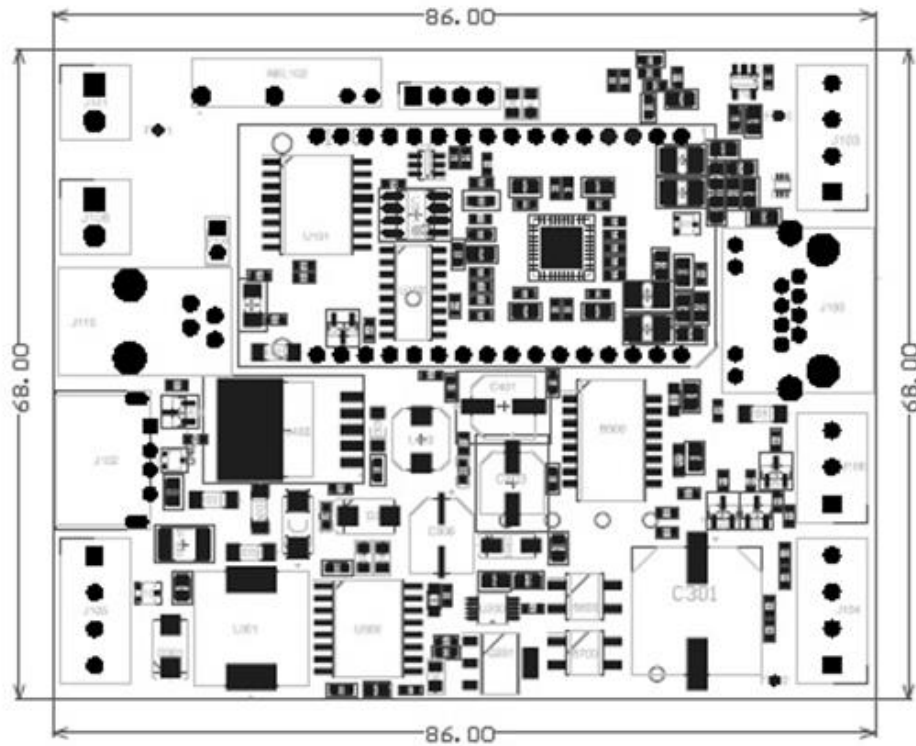|	
Protocols	IPv4, SIP, TCP, UDP, HTTP, RTP, DHCP, NTP
LAN Protocols	PoE (IEEE 802.3at) Network Access Control (IEEE 802.1x)
SIP Support	RFC 3261 (SIP Base standard), RFC 3515 (SIP Refer), RFC 2976 (SIP Info), RFC 5630 SIPS URI Scheme
STMF Support	RFC 2833, 2976 (SIP Info)
Management and operation	HTTP (Web configuration), DHCP and Static IP, remote Software Upgrade, and monitoring

Relay (NO)
Relay (COM)
GND
MIC-N
MIC-P

RTC-BAT
GND

RJ22/RS485

USB

VPS
GND
SWT_1
SWT_2

5VDC
DRX
GND
DTX

SPK L-
SPK L+
SPK R-
SPK R+

RJ45 / PoE+

L-OUT/POT
R-OUT
GND
12VDC
LED-3
LED-2
LED-1
GND

12VDC
GND
I/O-1
I/O-2
I/O-3

Dimensions:
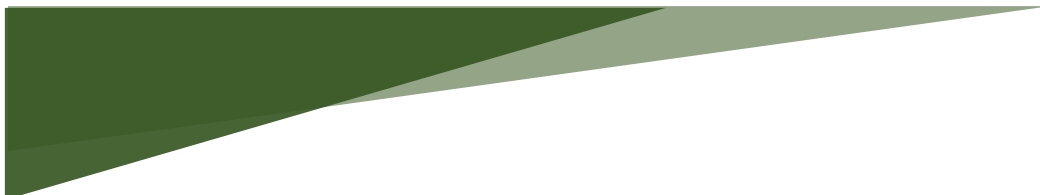
Freund Elektronik A/S, in cooperation with our sister company Freund Elektronika D.O.O. Sarajevo, is developing an IP-Based Intercoms, Audio Systems, Access Control and Smart Home solutions.

As a developer, manufacturer, and reseller, we have been self-improving and perfecting ourselves for over 30 years.

In the industry, we negotiate the most advanced and innovative solutions regarding the building communication. Our daily focus is on the development and user friendliness of our high quality and pleasantly designed products.

As a developer and manufacturer of our own IP-INTEGRA system, we have made a top-of-the-line products for Door Telephony, Public Audio, and Access Control solution.

Our development department, together with our partners, has created elegant and robust door phones, SIP-Centrals, Terminals, IP-Speakers, ACC Controllers, and applications with intelligent features using the most advanced technologies when available, and creating new technologies when they are not while keeping it simple for our customers.