

EFDAU500 Compact 500 amplifier unit



The EFDAU500 wall mounted voice alarm system offers flexibility and optimisation for a range of voice applications.

It is supplied in a compact single cabinet and this all-in-one voice solution includes the following:

- 100 Volt Line / 70 Volt Line compatibility
- 3 x 2 ch audio amplifier
- 1 x 2 ch backup amplifier
- AC surveillance continuously or pulse 20 kHz signal with EOL
- Battery charger included for 10-55AH
- Battery space inside enclosure
- Built-in fire microphone with front end controls
- Local Audio Network: 3 x L-NET for remote control devices
- Global Audio Network: 2 x G-NET for ring connectivity of up to 254 nodes

The system can be extended using the HEXAPOD6 (3 per EFDAU500 panel advised)

Features

- EN54-16 certified voice alarm
- Wall mounted
- Amplifier sharing concept
- Up to 254 panels per network
- 600 Watts maximum per EFDAU500 panel



Powering Business Worldwide

Additional Peripherals

EF-FMWB - Firefighter's Microphone

Fireman Microphone in secured wallbox:

- Handheld firemen's microphone with ALL-CALL button
- Coiled cord working length: 1.10 m
- Fully monitored fault system
- Access level 2 protected wallbox with STANDARD keylock
- Zone selection and busy indicators
- Power, Evac, Fault, Power supply, System fault & Network status indicators
- Lamp test, Silence, Function, Reset, Evac & Alert buttons
- Addressable
- Redundant LNet link, 2 x RJ45
- 2 x RJ45 for ring, spur or daisy-chain interfacing with the EFDAU500
- Dimensions: 385 H x 440 W x 140 D



EF-FMTC - Firefighter's / Paging Desktop Microphone

Fireman-Microphone, wall and desktop version:

- Table-top or wall mounted (wall bracket(s) included)
- Handheld firemen's microphone with ALL-CALL button
- Equipped with EN54-16 mandatory indicators
- Coiled cord working length: 1.10 m
- Fully monitored fault system
- Access level protection by transparent cover
- Addressable
- Redundant LNet link, 2 x RJ45
- 2 x RJ45 for ring, spur or daisy-chain interfacing with EFDAU500
- Configurable 7" touchscreen for paging control and status information
- 30 cm gooseneck with dynamic hyper-cardioid microphone



EF-HEXAPOD6 - Amplifier Sharing / Multiplexer

Remote Controlled Zone Extender Module for additional 6-sub-zones, dual source path A&B:

- Directly connected to a single/dual output line of the EFDAU500
- The HEXAPOD6 Zone Extender & Switching module sub-divides the signal path A & B into 6 x additional monitored speaker-line outputs
- All HEXAPOD6 -outputs can be individually addressed and are carrying signal path A or B
- Each output can switch to internal 20kHz line surveillance generator (path C)
- Each switched output zone requires an EOL-device for line-integrity detection
- Max. of 3 x HEXAPOD6 sharing 1x LNet connection for communication and power (Without additional 24VDC)
- The HEXAPOD6 can be remotely powered in case more than 3 x HEXAPOD units need to be linked to a single LNet line
- Max. load: 800 W
- Redundant LNet link, 2 x RJ45
- Addressable



EF-GPIO-16WAY - Programmable Input/Output module

Remote contact interface with following hardware configuration:

- DIN-RAIL
- 16 programmable monitored inputs
- 16 programmable outputs
- RS485 datalink with 2W DC aux output
- Balanced analogue audio input
- General Fault and EVAC status output
- Redundant LNet link, 2 x RJ45
- Addressable



EF-FSC-MM - Fiber Optic Interface Module

Fibre-optic interface module, CAT5 to 2 x SC (Multi-mode):

- Connects to ONE RJ45 Global-net port of the EFDAU500
- The EF-FSC-MM is directly powered from the Global-net port
- Requires RX and TX fiber multi-mode connection
- DIN-RAIL mounted
- Redundant LNet link, 2 x RJ45



EF-EOL-TL - End of Line Module

End Of Line module:

- Selectable load setting
- Thermal fuse
- 2-wire connection (100 mm)
- Protection rating: >IP33



Additional Peripherals



EF-FMP - Replacement DAU500 panel microphone

- Handheld firefighter's microphone
- Service replacement part for DAU500 panel
- Curl cord working length: 1.10m
- Supervised for fault
- Access level 2 protected



EF-FM - All Call Microphone

- Firefighter's microphone
- Desktop or wall mounted
- Wall-brackets included
- Handheld microphone with ALL-CALL button
- Curl cord working length: 1.10m
- Supervised for fault



EF-FMT - Fire Microphone with Touch-screen

- Firefighter's microphone
- Desktop or wall mounted
- Wall-brackets included
- Handheld microphone with ALL-CALL button
- Curl cord working length: 1.10m
- Supervised for fault
- Configurable 7" touchscreen for paging control and status information
- EN54-16 approved



EF-CMT - Paging Microphone with Touch-screen

- Desktop non-emergency paging microphone with touchscreen
- Addressable: 0-255
- 2 x RJ45 for ring, spur or daisy-chain interfacing with DAU500
- Configurable 7" touchscreen for paging control and status information
- 30 cm gooseneck with dynamic hyper-cardioid microphone
- Redundant L-NET link, 2 x RJ45



EF-CMP - Paging Microphone with buttons

- Desktop non-emergency paging microphone
- 6 zone selectable buttons plus a PTT (push-to-talk) button
- 30 cm gooseneck with dynamic hyper-cardioid microphone
- Addressable: 0-255
- Redundant L-NET link, 2 x RJ45
- 2 x RJ45 for ring, spur or daisy-chain interfacing with DAU500

Additional Peripherals



EF-DAU500-RS422 - DAU500 Programming Lead

- RS422 serial, LNET adapter
- L-NET line adapter supplied with:-
 - GUI driver
 - USB to CAT5 L-NET interface module
 - USB cable, 3 metres
 - Crossed CAT5e cable, 1 metre



EF-T107 - 100/70V Toroid Output Transformer

- 100 v line configuration, supports up to 100W
- 70 v line configuration, supports up to 100W in standard mode and 200W when bridged
- Used to couple the DAU500 transformers to the speaker lines
- Each DAU500 amplifier supports a connection to up to 2 output transformer
- Max 6 transformers per DAU500 panel



EF-T100 - 100V Toroid Output Transformer

- 100 v line configuration, supports up to 100 W in standard mode and 200 W when bridged
- 70 v line is not supported
- Used to couple the DAU500 transformers to the speaker lines
- Each DAU500 amplifier supports a connection to up to 2 output transformer
- Max 6 transformers per DAU500 panel



EF-DA200T - Replacement Amplifier Card

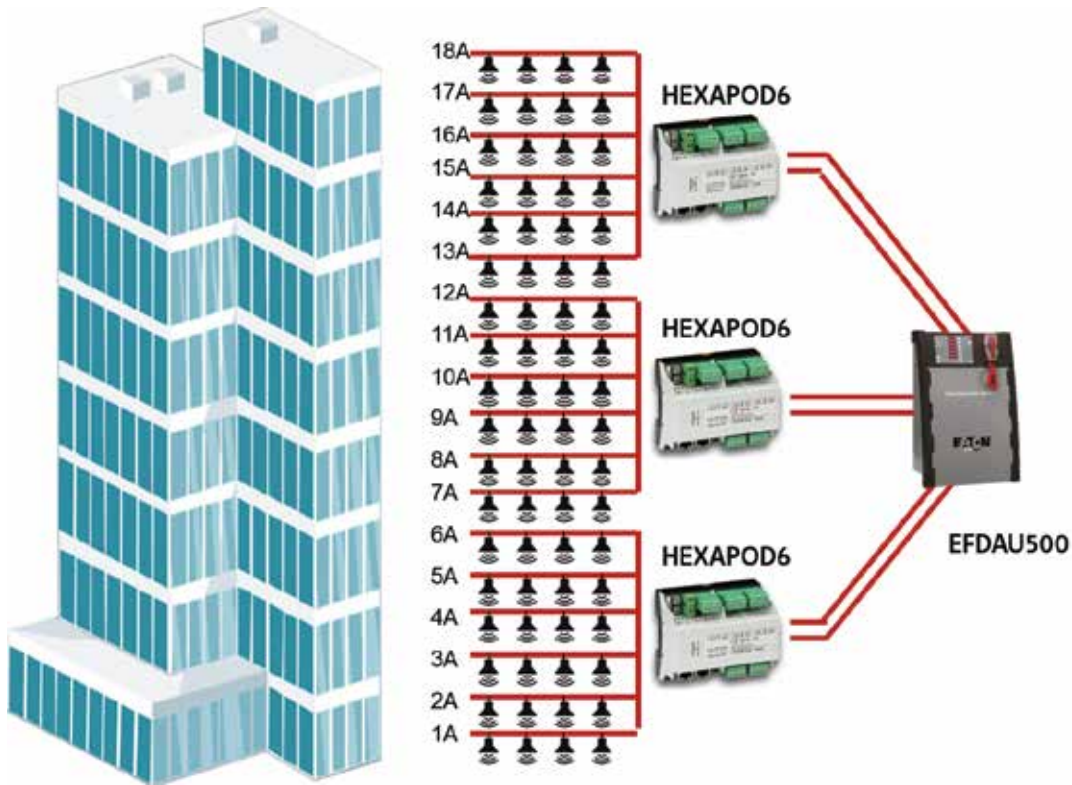
- 1 x 2 channel active amplifier
- Provides 2 x 100W per channel
- Max 3 x EF-DA200T per DAU500 panel



EF-DA200S - Replacement Standby Amplifier Card

- 1 x 2 channel standby amplifier
- Provides 2 x 100 W per channel
- Max 1 x EF-DA200T per DAU500 panel

Speaker line multiplexer example using 3 x EF-HEXAPOD6



Audio Performance and Mechanical Details

Audio

Frequency response	
Local BGM	50 Hz – 20 kHz
Messages, network streaming	100 Hz – 12 kHz
Analog input- output latency	< 10 ms (stand-alone system)
Network audio stream format	24 kHz sampling, ADPCM compressed
Message file input format	24 kHz, 16 bit, mono WAV
DSP features	HP/LP filter, multipoint parametric EQ

Mechanical

Dimensions (HxWxD)	80 x 52 x 28 cm
Weight (full config, without batteries)	29 kg
Housing material	Steel / ABS
IP rating	IP 30
Mounting	Wall-mounted box

Technical Specification

Number of zones	max. 6 local zones
Maximum total loudspeaker load	600 W RMS (420W RMS pure sinewave according to EN54-16)
Power amplifiers	6 x 100 W, modular (2 channels per module), bridgeable up to 3 x 200 W
Standby power amplifiers	2 x 100 W / 1 x 200 W dedicated backup amplifiers

Loudspeaker line monitoring

Built-in	20 kHz AC monitoring with EOL module, short/open/impedance deviation
Loopdrive	loop DC monitoring with short-circuit isolators, short/open/earth leakage, EN54-17 certified
Loudspeaker type	with 70 V/100 V step-down transformer

Voice messages

Storage	max. 22 audio files x 5 minutes each, micro-SD card with content monitoring
Message player	Max. 2 simultaneous local message playback

Controls and indications

General controls / indications	Lamp test button, silence button, power, evac, general fault LED indicators
Fault indications	Power supply, system fault, network, zone fault
Zone controls / indications	6 x configurable zone selection button, zone EVAC/FAULT/BUSY LED indicators
Evac manual control	EVAC message, ALERT message, SILENCE, RESET, fireman mic with PTT button
Fireman microphone	Integrated Fireman Mic with priority and electrical monitoring
Power supply equipment	Built-in power supply system, EN 54-4 certified.
AC supply	110 – 230 V AC, 50/60Hz
AC current consumption	max. 5.3A @115 V AC / 2.65 A @230V AC
Inrush current	20 A @115 V AC, 40 A @230 V AC
Power supply protection	Overload current limiting, over voltage shutdown, over temperature shutdown.

Battery requirements

Type	Sealed, rechargeable lead-acid battery for stationary use
Capacity	10 – 55 Ah
Charging time (80% capacity)	< 24 h
Rated voltage	24 V DC (2 x 12V)
Battery dimensions	2 batteries, each of max. 230 x 138 x 207 mm (LxWxH) (not supplied)
Battery weight	max. total 32.6 kg

Inputs

2 x BGM	2 x independent balanced analogue in, line-level mono, 22 kΩ input impedance
6 x EVAC in, 1 x SILENCE in, 1 x RESET in	monitored logic inputs, 4.7 kΩ + 10 kΩ EOL resistors
8 x GPI	unmonitored logic inputs (pull-down, configurable active low/hi)

Outputs

EVAC out, FAULT out	Potential-free relay output (configurable NO/NC)
GPO	8 x Open collector output, max 24VDC/110mA (configurable NO/NC)
Loudspeaker out	6 x 100 V transformer output, 20 kHz AC monitoring with EOL

Amplifiers

Type	Class D
Protection	over load shut down, over temperature shut down
Backup amplifiers	2 dedicated backup channels, auto backup at end stage failure, auto restore
Efficiency	80% @ rated power

Output voltage	max. 100 V RMS or 70 V RMS (according to transformer setting)
Rated power	max 100 W per channel
Output bandwidth	50 Hz – 20 kHz
SNR	>80 dB
THD + N	0.1% @ rated power

Networking

Max. number of devices in the network	254
Max. number of zones	255
Max. total system output power	152 kW
Number of simultaneous network audio	2
Network audio transmission latency	0.3 ms per device

Local network

Architecture	Master-slave, up to 16 slave devices per EFDAU500 main unit
Connection	3 x L-Net port, RJ-45, powered daisy chain, digital audio & control data
Cabling	X-over FTP CAT5e (or higher)
Current consumption	max. 500 mA (up to 8 slave devices) per L-Net port
Max. length of local bus	
default	250 m
with twisted-pair extender	500 m

Global network

Architecture	Peer-to-peer, up to 254 x EFDAU500 main units
Connection	2 x G-Net port, RJ-45, powered redundant ring, digital audio & control data
Cabling	X-over FTP CAT5e (or higher) / multi mode optical fiber
Current consumption	max. 500 mA per port, reserved only for network extenders
Max. distance between devices	
default	250 m
with copper extenders	750 m
with fiber extenders	2500 m (2 km on fiber, 2x 250 m copper)

Eaton order codes

Description	Model reference	Order code
COMPACT WALL MNT VOICE ALARM SYSTEM	EFDAU500	EFDAU500
FIRE MICROPHONE WALL MOUNTED	EF-FMWB	EF-FMWB
FIRE MICROPHONE W/TOUCH GNECK	EF-FMTC	EF-FMTC
SPEAKER LINE MULTIPLEXER	EF-HEXAPOD6	EF-HEXAPOD6
16 WAY I/O MODULE	EF-GPIO-16WAY	EF-GPIO-16WAY
MULTI MODE FIBER MODULE	EF-FSC-MM	EF-FSC-MM
END OF LINE MODULE - 10 PACK	EF-EOL-TL	EF-EOL-TL
REPLACEMENT PANEL MICROPHONE	EF-FMP	EF-FMP
ALL CALL MICROPHONE	EF-FM	EF-FM
FIRE MICROPHONE W/TOUCH	EF-FMT	EF-FMT
PAGING MICROPHONE W/TOUCH	EF-CMT	EF-CMT
PAGING MICROPHONE W/BUTTONS	EF-CMP	EF-CMP
DAU500 PROGRAMMING LEAD	EF-DAU500-RS422	EF-DAU500-RS422
100/70 V TOROID TRANSFORMER	EF-T107	EF-T107
100 V TOROID TRANSFORMER	EF-T100	EF-T100
REPLACEMENT ACTIVE AMP CARD	EF-DA200T	EF-DA200T
REPLACEMENT STANDBY AMP CARD	EF-DA200S	EF-DA200S