

# PRS 1AIP1 IP Audio Interface

www.boschsecurity.com



**BOSCH**  
Invented for life



- ▶ All-in-one solution for audio transport on IP-networks
- ▶ Supervised control inputs and outputs
- ▶ Supports re-broadcasting
- ▶ Configurable audio delay on the output for loudspeaker alignment
- ▶ Easy to install and configure via standard web-browser

The PRS-1AIP1 is a universal, IP-based audio device supporting VoIP and Audio over IP applications. It is an ideal solution for bridging audio and contact closures over long distance LAN and WAN networks, e.g. in and between conference centers and/or in remote interpretation applications. It extends and interfaces to DCN systems and non-network based traditional conference and public address systems without the need for a PC during operation.

The unit has analog audio inputs and outputs for easy interfacing. One audio input can be switched to microphone sensitivity with built-in microphone supervision. Also, the control inputs offer cable and connection supervision.

Control inputs and outputs can be used to pass channel engaged events to the DCN system.

## Functions

### Audio

Multiple audio formats are supported: single channel, full duplex 16-bit PCM or G.711 for very low latency, and two-channel send or receive MP3 for high quality audio with various sample rates and compression settings.

The unit provides two balanced line inputs and two balanced line outputs. One of the inputs can be configured as balanced microphone input with a phantom power supply for electret / condenser microphones. The output level is configurable. A configurable audio delay can be used to artificially delay the playback of audio for loudspeaker alignment.

### Audio Routing

Audio signals can be routed in uni-cast to up to 16 receivers, preconfigured or on activation of control inputs. Receivers are able to re-broadcast the incoming audio stream to other receivers. In case the interfaces are on the same LAN also broadcast is supported.

In PCM and G.711 (uLaw and aLaw) full duplex audio interfacing between two units is possible.

### Control inputs and outputs

The unit has eight control inputs. Eight control outputs have dry relay contacts. Control inputs can be routed to control outputs for remote actions or to pass on fault information between audio transmitter and receiver, in both directions. Control inputs can also be configured to change the audio routing.

An additional dry relay contact is provided for fault indication of the unit, including a high temperature fault situation.

### Network Interfaces

The unit interfaces to 10 and 100 Mbit Ethernet networks and announces its IP-address that was given by a DHCP server. It can also search the network for a free IP-address or can be given a static IP-address. A second Ethernet connection is available to support network redundancy.

An RS 232 interface is build-in to communicate additional serial data over the IP network.

### Power Supplies

Two power supply connections are provided as main input and backup input with supervision of both supplies.

### Controls and Indicators (front)

- Reset button, recessed
- Two status indicator LEDs for network
- Eight status LEDs for control inputs

### Interconnections (rear)

- Eight control inputs on Euro-connector
- Eight control outputs on Euro-connector
- Fault relay output on Euro-connector
- Two balanced audio inputs on Euro-connector (one line input, one line / microphone input)
- Two balanced audio outputs on Euro-connector
- Two Ethernet connections on RJ45
- RS 232 on Sub-D
- RS 485 on Euro-connector (future use)
- Main power supply on jack
- Backup power supply on Euro-connector

### Certifications and approvals

Safety	acc. to IEC 60065-98
Immunity	acc. to EN 55103-2 / EN 50130-4 / EN 55024
Emissions	acc. to EN 55103-1 / EN 55022
Emergency	acc. to EN 60849

### Parts included

Quantity	Component
1	PRS-1AIP1 IP Audio Interface
1	Power supply
1	Set of connectors

### Technical specifications

#### Electrical

External power supply 1	18 to 56 VDC
External power supply 2	18 to 56 VDC
Power consumption	8 W max
<b>Microphone input</b>	
Sensitivity	-48.5 to -26 dBV

Impedance	1360 ohm
Frequency response	100 Hz to 15 kHz
S/N	>60 dB
Supervision detection	Electret: 0.4 – 5 mA Dynamic: 120 – 1300 ohm
<b>Line Inputs</b>	
Sensitivity	-16.5 to +6 dBV
Impedance	22 kohm
Frequency response	20 Hz to 15 kHz
S/N	>70 dB
Pilot tone detection level (input 2 only)	-30 dBV
<b>Line outputs</b>	
Level	6 dBV max
Pilot tone level (output 2 only)	-20 dBV (20 kHz)
<b>Audio formats</b>	
MPEG 1-layer 3 (MP3)	32, 44.1 and 48 kHz sample rate
	Encoding up to 192 kbps VBR
	Decoding up to 320 kbps (stereo)
MPEG 1-layer 2	16, 22.05 and 24 kHz sample rate
G.711	uLaw, aLaw at 8, 24 or 32 kHz sample rate
PCM	16-bit at 8, 24 or 32 kHz sample rate
<b>Control inputs</b>	
Connectors	Removable screw terminals
Operation	Closing contact (with supervision)
<b>Control / fault outputs</b>	
Connectors	Removable screw terminals
Operation	Make contact (SPST, voltage free)
Rating	24 V, 0.5 A
<b>Ethernet</b>	
Connector	Dual RJ45, DTE-pinout
Standard	802.3i / 802.3u
Speed	10 / 100 Mbps, auto-negotiation
Flow	Full / half-duplex, auto-negotiation
Protocol	TCP/IP, UDP, RTP, IGMP, DHCP, SNMP

<b>RS 232</b>	
Connector	9-pin Sub-D male, DTE-pinout
Pinout	300 to 115.200 Baud
Setting (default)	9600, 8, N, 1

### Mechanical

Dimensions (H x W x D)	216 x 38 x 125 mm( 8.5 x 1.5 x 4.92 in) (half 19" wide)
Weight	0.7 kg (1.5 lb)
Mounting	Stand-alone or in 19"-rack with additional frame
Color	Silver with Charcoal

### Environmental

Operating temperature	-5 °C to +50 °C (+23 °F to +122 °F)
Start-up temperature	0 °C to +50 °C (+32 °F to +122 °F)
Storage temperature	-20 °C to +70 °C (-4 °F to +158 °F)
Humidity	15 to 90 %
Air pressure	600 to 1100 hPa

### Ordering information

#### PRS-1AIP1 IP Audio Interface

universal, IP-based audio device supporting VoIP and Audio over IP applications.

Order number **PRS-1AIP1**

#### Represented by:

##### Americas:

Bosch Security Systems, Inc.  
12000 Portland Avenue South  
Burnsville MN 55337, USA  
Phone: +1-800-392-3497  
Fax: +1-800-955-6831  
audiosupport@us.bosch.com  
www.boschsecurity.com

##### Europe, Middle East, Africa:

Bosch Security Systems B.V.  
P.O. Box 80002  
5617 BA Eindhoven, The Netherlands  
Phone: + 31 40 2577 284  
Fax: +31 40 2577 330  
emea.securitysystems@bosch.com  
www.boschsecurity.com

##### Asia-Pacific:

Robert Bosch (SEA) Pte Ltd, Security Systems  
11 Bishan Street 21  
Singapore 573943  
Phone: +65 6571 2808  
Fax: +65 6571 2699  
apr.securitysystems@bosch.com  
www.boschsecurity.asia

##### China:

Bosch (Shanghai) Security Systems Ltd.  
201 Building, No. 333 Fuquan Road  
North IBP  
Changning District, Shanghai  
200335 China  
Phone +86 21 22181111  
Fax: +86 21 22182398  
www.boschsecurity.com.cn

##### America Latina:

Robert Bosch Ltda Security Systems Division  
Via Anhanguera, Km 98  
CEP 13065-900  
Campinas, Sao Paulo, Brazil  
Phone: +55 19 2103 2860  
Fax: +55 19 2103 2862  
al.securitysystems@bosch.com  
www.boschsecurity.com