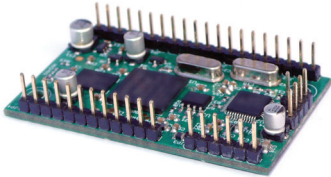


BARIX

IP AUDIO MODULE 302

Audio encoding / decoding, one serial port, 4 digital I/O, 3.3V supply



The IPAM 302 is a universal, standalone, IP Audio function block which can be easily embedded into OEM products. The module encodes and decodes IP Audio streams from/to analog sources (stereo). Supporting a large range of protocols and codecs the module can be used for both VoIP and IP paging as well as high quality music distribution and IP music streaming applications. Control I/O (one serial port, four digital inputs/outputs) allow the use with UI and control interfaces.

Various software packages for standard applications are available for download from the Barix website, optimized for encoding, audio distribution, paging and intercom, including a full featured SIP client. Custom software can easily be written, based on existing packages from Barix written in the ABCL language.

For hardware integration a development specification with schematic, pinout and suggestions for the layout of a custom carrier PCB is available. Barix Annuncicom60 and Instreamer are based on this module.

The IPAM302 is pin compatible with the Barix IP AUDIO MODULE 300 (decoder only), adding the full duplex capability on the same form factor and power supply.

Applications IP Audio Module 302

- Commercial Audio Streaming Applications
- Digital Annunciator, Message Player, Message Repeater
- Generic, bidirectional full-duplex VoIP module for Paging and Intercom Applications
- Source Encoder for IP Audio Distribution Applications
- Background Music and Music-on-Hold encoder for VoIP Applications
- Low latency IP Audio Encoder for multichannel applications

Software IP Audio Module 302 available

- G.711, G.722, PCM, MP3 Encoding
 - AACplus, MP3, Ogg Vorbis, G.711, G.722, PCM linear Decoding
 - Shoutcast/Icecast Source capability
 - Audio Level Supervision with SNMP Trap generation
 - IP Streaming via TCP, UDP, RTP, Multicast
 - Microphone Input
 - Line Level Input (Stereo)
 - Line Level Output (Stereo)
 - General Purpose I/O (4)
 - RS-232 Serial Port (TTL Level)
 - Supply Voltage (3.3V)
 - USB Flash Memory Interface
-

Technical Specifications

Audio Interfaces

Mic input 118 mVpp max. (with Bias power)
Stereo input 2.2 Vpp max., both adjustable in sensitivity

- Frequency response 20Hz ... 20kHz (-3 dB)
- Dynamic range 90 dB, SNR -89 dB, THD <0.03% (-3 dBFS) Stereo Output 2.37 Vpp max. volume, bass and treble adjustable
- Frequency response 20 Hz ... 20 kHz (-3 dB)
- Dynamic range 90 dB, SNR -90 dB, THD <0.05% (-3 dBFS) I2S bus (inter-IC Sound)

Audio Formats

- I2S bus (Inter-IC Sound), Analog stereo out 1.5Vpp,
- Volume, base and treble adjustable by application
- G.711 and G.722
- PCM 16 bit and 8 bit (uLaw, aLaw) @ 8..48KHz
- MP3 encoding/decoding up to 192/320 kbps
- OggVorbis
- AAC+(deconde only)

Note: AAC+ requires separate licensing by OEM

Network Interface

- 10/100 Mbit Ethernet (Auto), TCP/IP, UDP, RTP, HTTP, DHCP, SNMP, AutoIP, SonicIP, IPzator

Misc. Interfaces

- TTL Level UART 300..230'400 Baud
- Outputs for 2 dualcolor Ethernet status LEDs,
- 4 General Purpose I/Os, 1 input for reset button,
- 2 status LED outputs, USB1.1 interface for memory

CPU / Memory

- Integrated CPU / MAC / IO controller with on-chip 256 KB RAM, 2 KB EEPROM (configuration), 2 MB Flash memory (application and web server content)

Operating System

- Embedded, robust OS, IP stack with Multicast support

User / Application Interfaces

- Integrated web server (control/configuration),
- browser based, serial or Ethernet control API,
- programmable software environment

Power requirements

- Single 3.3 VDC, 1.6 Watt max.

Weight, dimensions

- 14 g approx.
- 2.2" x 1.3" x 0.39", 56 mm x 33 mm x 10 mm

MTBF

- Min. 1200 000h acc. to MIL217F at 40°C

Environmental

Operating Environment

0 to +60°C / 32 to 140°F

Storage Conditions

0 to +85°C / 32 to 185°F,
both 0 - 70% relative humidity, non-condensing

Certifications/compliant WITH

RoHS compliant (lead free)

Ordering Information

2012.9129 IPAM 302
Sold in quantities of 10, 200 and 1000.

For commercial related questions (distributors contacts, price list, business opportunities) please contact **sales@barix.com**

For technical inquiries (problem reports, request for documentation, etc) please contact **support@barix.com**

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