

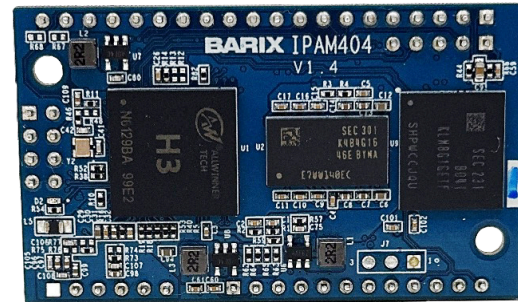
BARIX

IP Audio Module 404

Powerful and versatile audio module for OEM products, Linux based, with Quadcore Cortex™ A7 Processor, 3x USB interface, serial port, digital I/O. (IPAM 404 with 8GB eMMC flash)

The IP Audio Module (IPAM) 40x is a powerful universal, standalone, Linux based IP Audio function block, which can be easily embedded into OEM products and programmed with the programming language of your choice including C++ and PHYTON. Supporting a vast range of protocols, codecs and interfaces and providing on board memory as well as a µSD card slot, the module is ideal for all audio related applications such as VoIP, IP intercom and paging as well as high quality music distribution..

10/100 Mbit Ethernet port, three USB interfaces a variety of I/Os as well as a serial interface are provided. The Quadcore Cortex™ A7 processor allows for very fast encoding and packet handling and is performant enough to support all advanced security end encryption requirements.



OEM Applications

- Internet radio receiver
- SIP and IP paging devices
- Emergency call stations
- Intercom & paging solutions
- Public transport installations
- Scheduling Audio
- VoIP decoder for paging
- Any kind of commercial audio
- AES67 capable IP audio device
- Dante capable IP Audio device (license not included)

Firmware for a variety of applications is available via a licensing agreement from Barix. Enquire with sales@barix.com.

Features

- Stereo line input and output
- Microphone input (balanced or unbalanced))
- I2S input and output (192k capable)
- Integrated SoC with Quad-Core Cortex™ A7 Processor
- 10/100Mbit Ethernet port (with PHY)
- 16MB SPI Flash, SD/TF card slot
- 8 GB EMMC memory (IPAM404)
- TTL level UART
- USB2.0 OTG interface, two USB2.0 Host
- 7 GPIOs + Dallas 1-wire interface (e.g. for Real Time Clock)
- Small form factor, low power consumption, runs off a single +3.3Volt DC power source
- Embedded and robust operating system with IPv4/IPv6 IP
- IP standard based protocols (TCP/IP, UDP, HTTP, ICMP, SNMP)
- High quality, multi standard audio encoding and decoding can be implemented in software: G.711, G.722, PCM linear, MP3, AAC+, OPUS, FLAC (license for licensed codecs not included)
- Acoustic echo cancellation (AEC)

Technical Specifications

Operation System

- Yocto (OpenEmbedded), Linux (Armbian) including update functionality
- IPv4/IPv6, security, full fledged linux

User Interfaces

- Web interface for control, status and configuration

Network Interface

- one physical layer (PHY)
- Ethernet interface, IPv4, IPv6 capable
- TCP/IP, RTP, UDP, ICMP, DHCP, SIP, SNMP
- 10/100 fdx/hdx, auto negotiation

Compatibility

- Fully compatible with IPAM400 hw and firmware

Serial Interface

- 2 x UART, one with hardware handshake (TTL level)
- 1 x USB 2.0 On-the-go
- 2 x USB 2.0 full/hi/low speed capable host

Power Requirements

- Single 3.3V DC supply voltage, +/- 5%, 2A max
- Separate Audio ground domain/connection

Memory, Cache

- 256MB DDR3 RAM
- 16MB SPI flash
- 32KB L1 Instruction cache, 32KB L1 data cache
- 512KB L2 cache
- VFPv4 Floating point unit
- LPAE and NEON advanced SIMD

CPUs / Boot

- Barix IPAM400 Processor Module
- Quad-Core ARM Cortex™ -A7 (clocked up to 1.29 Ghz)
- Separate NEON coprocessor
- supports fast boot process from Flash or SD/TF
- Crypto Engine Encryption type

Analog Audio

- 1 x Stereo Output (L&R)
- 1 x Microphone Input (balanced/unbalanced) or 1 x Stereo Input

Miscellaneous Interfaces

- I2S digital audio interface
- digital audio interface (S/PDIF)
- I2C interface

Peripheral I/O

- seven 3.3VDC level digital general purpose I/Os

Flash Memory (Micro SD)

- 8GB eMMC (IPAM404 only)
- On-board uSD card socket

Reset functionality

- Reset and Recovery functions on hardware and software triggers

MTBF

- > 950'000h

Measurement

- 2.2" x 0.45" x 1.3" / 56.1mm x 11.44mm x 33mm

Weight

- 14g (IPAM403) / 16g (IPAM404)

Warranty

- Two years

Environmental

Operating Environment

0 to +50°C / 32 to 122°F

0 - 70% relative humidity, non-condensing

Storage Conditions

-20 to +70°C / -4 to 158°F

0 - 70% relative humidity, non-condensing

Certifications

CE, RoHS, FCC

Ordering Information

2023.9379P IPAM403 Package

2023.9390P IPAM404 Package

Barix AG

Limmatstrasse 21, 8005 Zürich, Switzerland

Phone: +41 434 33 22 11

www.barix.com



Direct Link

© Barix AG 2021, all rights reserved. All information is subject to change without notice.
All mentioned trademarks belong to their respective owners and are used for reference only. Product Sheet V1.0



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

