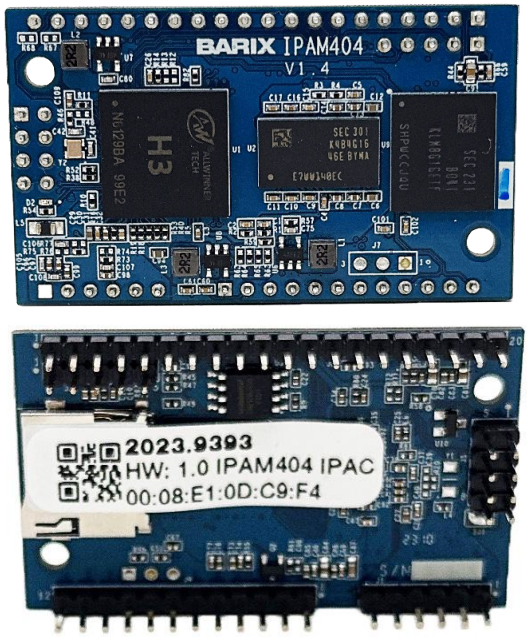
BARIX

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 4GB 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
- 4 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

Compatibilty

- Fully compatible with IPAM400 hw

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)

- 4GB 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 11.44mmx 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

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Direct Link