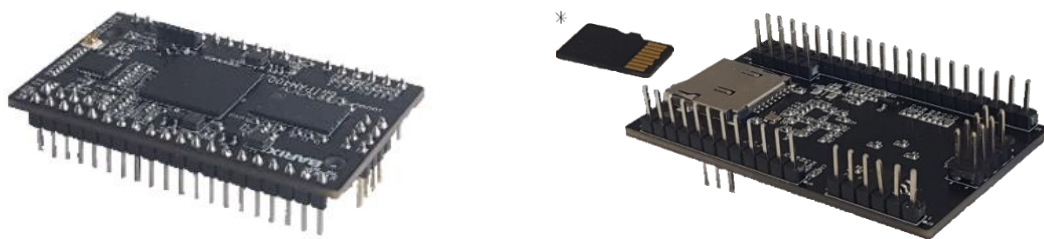# BARIX

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IP AUDIO MODULE 400

Powerful and versatile audio module for OEM products, Linux based, with Quadcore Cortex™ A7 Processor, 3x USB interface, serial port, digital I/O,
WiFi 802.11

‖ microSD card needs to be ordered
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The IP Audio Module (IPAM) 400 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++, LUA 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 and WiFi 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.

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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

Specification
- Quad-Core Cortex™ A7 Processor
- 2 Gbit DDR 3L memory
- 128Mbit Flash memory
- High performance CPU allows execution of software codecs for all common Audio codecs such as G.711, G.722, PCM linear, Ogg Vorbis, MP3, AAC+
- Acoustic echo cancellation
- Microphone/Line level stereo input
- High quality stereo DAC with level control
- SPDIF and I2S digital audio interface
- SD/TFcard slot
- TTL level UART
- 7 General purpose I/Os, I2C interface
- WiFi (for specification contact Barix)

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Technical Specifications

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

User Interface
• Web interface for control, status and configuration

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

WiFi Interface
• For specifications contact Barix

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

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

Memory, Cache
• 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
• 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)
• On-board uSD card socket (up to 32GB)

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

Warranty
• Two years

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Environmental

Operating Environment
0 to +50°C / 32 to 140°F environmental higher operating range with downclocking
0 - 70% relative humidity, non-condensing

Storage Conditions
0 to +70°C / 32 to 158°F
0 - 70% relative humidity, non-condensing

Certifications

• RoHS
• FCC ID: 2APAE-IPAM400 [1]
• CE
• RED

Ordering Information

2017_9225_IPAM400 OEM

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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