

## AR168M VOIP module Product Brief

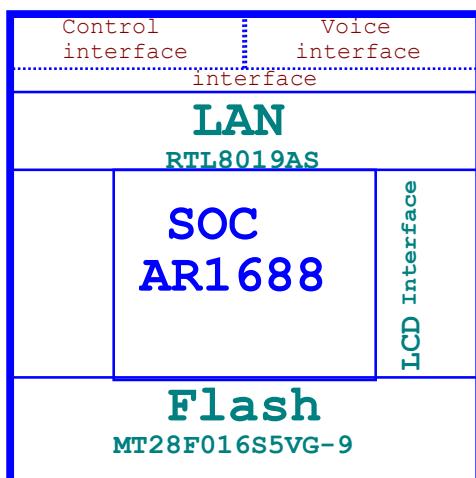
AR168M is a high integrated and low cost module based on the SOC AR1688. It can be through UART (Universal Asynchronous Receiver/Transmitter) or SPI (Serial Peripheral Interface) connect to upper host.

It support SIP and IAX2 VOIP protocol and most popular CODEC algorithm and can meet various requirements for different applications.

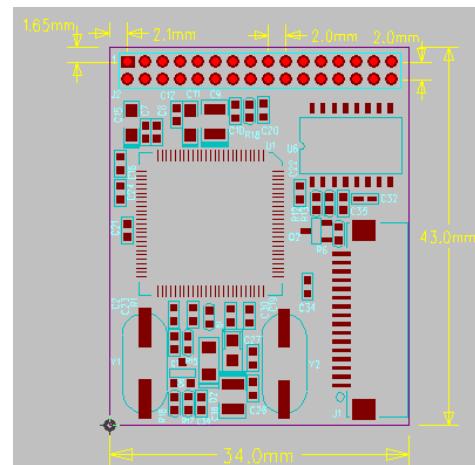
One can easily use AR168M to implement an IP phone without need to understand the complex technical details. It will be helpful to shorten the time to market for most users.

- SOC AR1688: 60MHZ Integrated MCU, the instruction set is compatible with Z80  
72MIPS 24 bits DSP Core, 2181-instruction-set compatible DSP co-processor
- Host Interface: SPI;UART
- Ethernet Interface: 802.3 10Bast-T
- LCD Interface: 8080 Series interface, Support ST7565 compatible controller
- Operating Voltage :DC 5V;3.3V
- Voice Input: MIC ;Line L/R
- Voice Output: Audio Output L/R can directly drive a 32ohm headphone
- Module Size: 43X34X9.5 mm

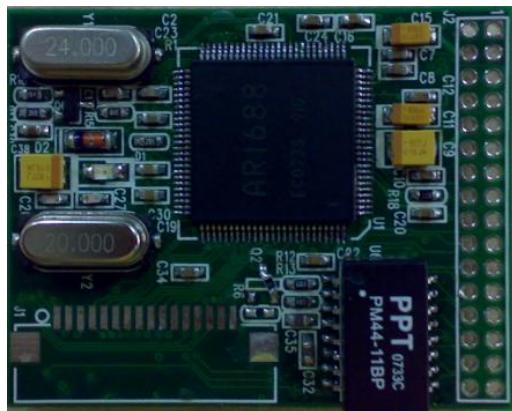
### ➤ System block architecture and Dimensions



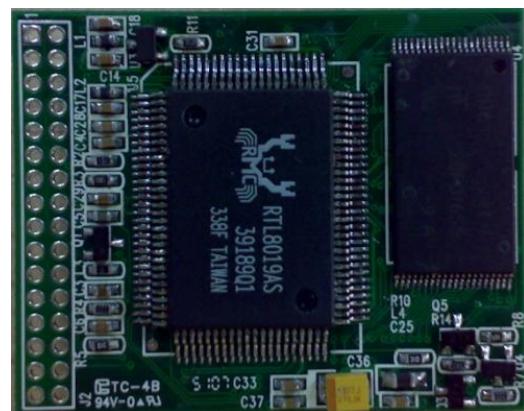
AR168M Architecture



AR168M Dimensions



AR168M Top side view



AR168M Bottom side view

## ➤ Application

- IP Phone
- Wi-Fi IP Phone
- DECT Cordless IP Phone
- PSTN/IP Dual mode Phone
- IP Door Phone
- Echo Cancellation Application
- Active Noise Reduction Application
- Voice Application For Embedded System

## ➤ AR168M Features

IP Protocol	Voice Codec	Voice Features
<ul style="list-style-type: none"> <li>● TCP(RFC793)</li> <li>● IP(RFC791)</li> <li>● UDP(RFC768)</li> <li>● ICMP(RFC792)</li> <li>● ARP(RFC826)</li> <li>● SNTP(RFC2030)</li> <li>● HTTP(RFC2616)</li> <li>● DHCP(RFC2131)</li> <li>● TFTP (RFC1350)</li> <li>● DNS(RFC1034,RFC1035)</li> </ul>	<ul style="list-style-type: none"> <li>● G711A/U</li> <li>● G729;a;b;ab</li> <li>● G723.1 5.3K/6.3K *</li> <li>● G726-32</li> <li>● iLBC</li> <li>● SpeeX</li> <li>● GSM610</li> </ul>	<ul style="list-style-type: none"> <li>● VAD (Voice Activity Detection)</li> <li>● CNG (Comfortable Noise Generation)</li> <li>● AEC (G.168 32ms acoustic echo cancel)</li> <li>● Standard DTMF tone generation and detection</li> <li>● Adaptive jitter buffer</li> <li>● Accord with ITU-T standard signal tone</li> </ul>
VOIP Protocol		Host Interface
<ul style="list-style-type: none"> <li>● SIP</li> <li>● IAX2</li> </ul>	<ul style="list-style-type: none"> <li>● UART</li> <li>● SPI</li> </ul>	

\* Not Ready