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### **Embedded - Microcontrollers - Application Specific: Tailored Solutions for Precision and Performance**



**Embedded - Microcontrollers - Application Specific** represents a category of microcontrollers designed with unique features and capabilities tailored to specific application needs. Unlike general-purpose microcontrollers, application-specific microcontrollers are optimized for particular tasks, offering enhanced performance, efficiency, and functionality to meet the demands of specialized applications.

### **What Are Embedded - Microcontrollers - Application Specific?**

Application specific microcontrollers are engineered to

#### **Details**

Product Status	Obsolete
Applications	Network Processor
Core Processor	4Kc
Program Memory Type	-
Controller Series	-
RAM Size	16K x 8
Interface	Ethernet, UART, USB
Number of I/O	-
Voltage - Supply	1.8V, 3.3V
Operating Temperature	-
Mounting Type	Surface Mount
Package / Case	324-BBGA
Supplier Device Package	PG-BGA-324
Purchase URL	<a href="https://www.e-xfl.com/product-detail/infineon-technologies/adm5120x-ab-t-2-g">https://www.e-xfl.com/product-detail/infineon-technologies/adm5120x-ab-t-2-g</a>



# ADM5120

System on Chip (SoC) Network Controller

The ADM5120 is a high performance, integrated and highly flexible SOC (System-On-Chip) network controller.

Internally, the ADM5120 consists of a high performance (227 MIPS) embedded MIPS CPU, an embedded switch engine, a five port 10/100M PHY, an embedded USB host and interfaces for PCI, UART, SDRAM and Flash. The ADM5120 enables the sharing of IP-based broadband services throughout the home and office using wired and wireless computers, entertainment equipment, printers and other intelligent devices.

It's applications include a SOHO/SME Gateway, NAT Router, USB Print Server and a Single / Multi band WLAN Access Point as well as a range of PCI connected applications. The ADM5120 can be combined with a number of Infineon's other products to add functionality to VoIP and ADSL among other technologies.

## Applications

- Soho and SME Gateways
- NAT Routers
- USB Print Servers
- WLAN Access Points
- Wired and Wireless ATAs

## Features

- 175 MHz/227 MIPS 4Kc CPU with an embedded cache, 8K-byte I-cache and 8K D-cache
- An embedded memory management unit (MMU) 32-entry TLB (Translation Lookaside Buffer), with 16 organized entry pairs
- IEEE 802.3 Fast Ethernet 5 auto-MDIX (auto-crossover) twisted paired LAN interfaces with embedded 10/100M PHY and 1 GMII/MII interface
- PCI, UART, SDRAM and Flash interfaces

- Flexible WAN port selection and embedded switch engine and Data-buffer/Address-look-up table
- Look-up table (read/write-able)
- MAC layer security and MAC clone
- MAC filtering, Bandwidth control and a Class of Services (CoS) with two priority levels
- Shared dynamic data buffer management with embedded SSRAM
- Port grouping VLAN (overlap-able)
- Supports store & forward, modify cut-through, and fast cut-through frame forwarding.

## Software Features

- Linux OS
- IEEE 802.3 Ethernet Driver, IEEE 802.11 WLAN Driver and RS232 Driver for Console User Interface
- DHCP Server/Client, PPP over Ethernet (PPPoE), Network Address Translation (NAT) for IP Address Mapping/Sharing/Security
- DNS Proxy, Simple Network Time Protocol (SNTP) and Firewall

## Physical Characteristics

- CSM CMOS, 0.18 1P5M
- 324-ball BGA package
- 1.8/3.3 V Variable Voltage

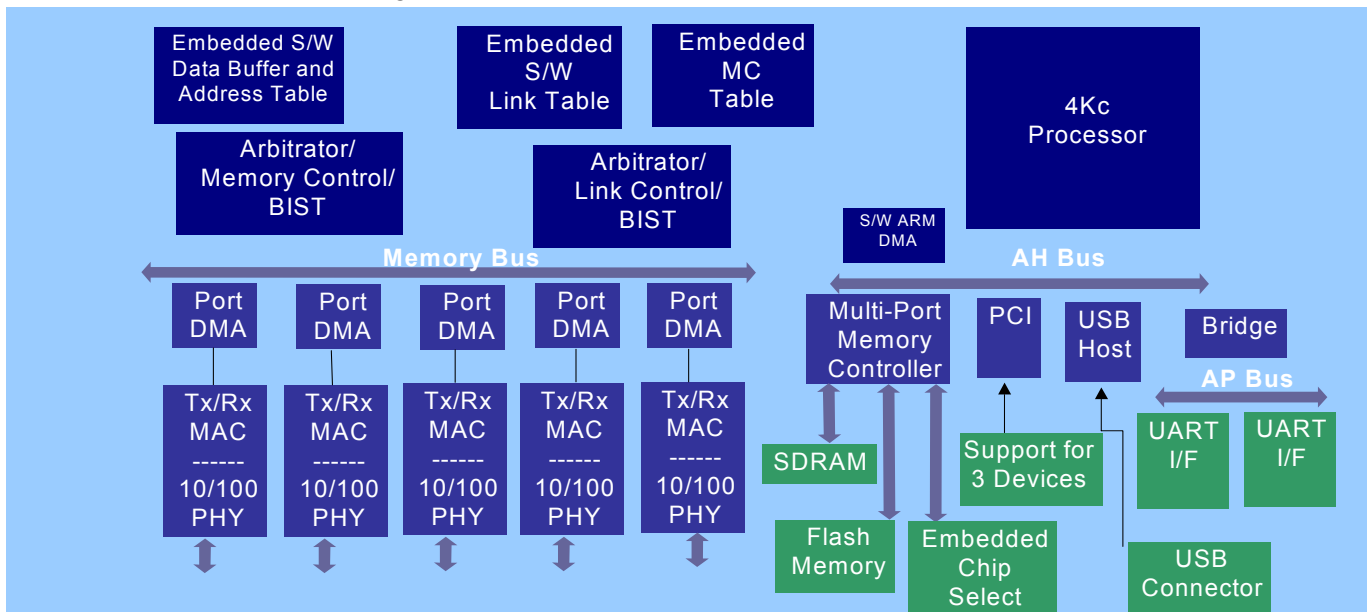
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Wireline Communications



Never stop thinking.

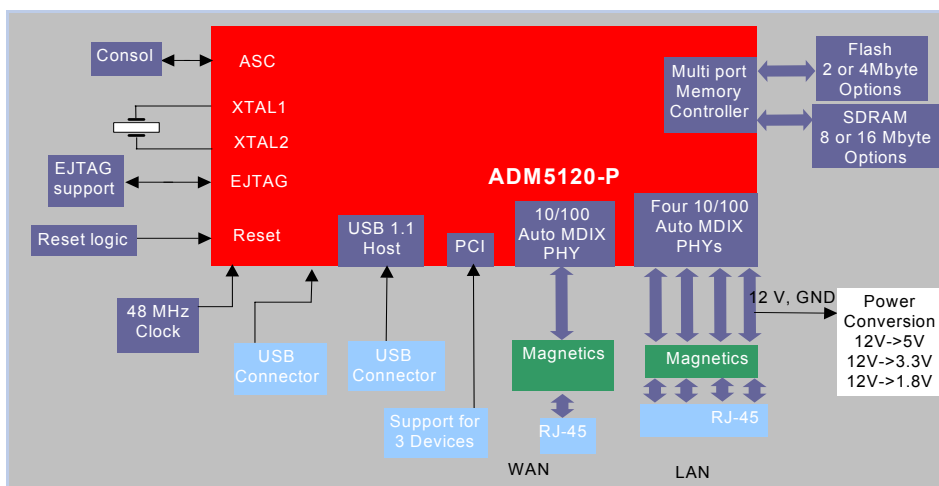
## ADM5120 Block Diagram



## Product Summary

ADM5120

Product	Sales Code	Description	Package
ADM5120	ADM5120	Network Controller	BGA324



ADM5120

Application Example

How to reach us:

<http://www.infineon.com>

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