



MICROCHIP

Connectivity

Ethernet



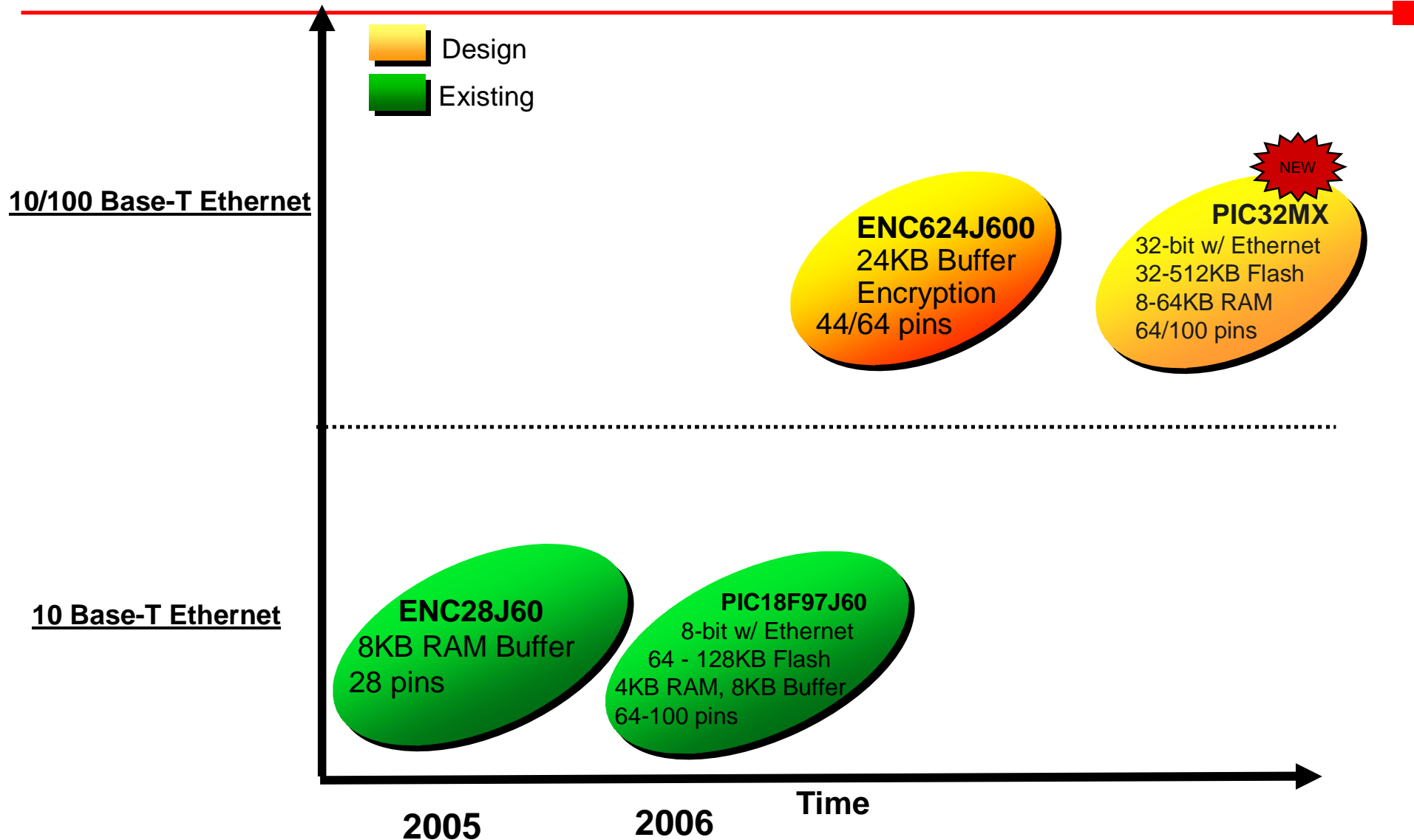
MICROCHIP

ENC624J600

Stand-Alone 10/100 Ethernet Controller

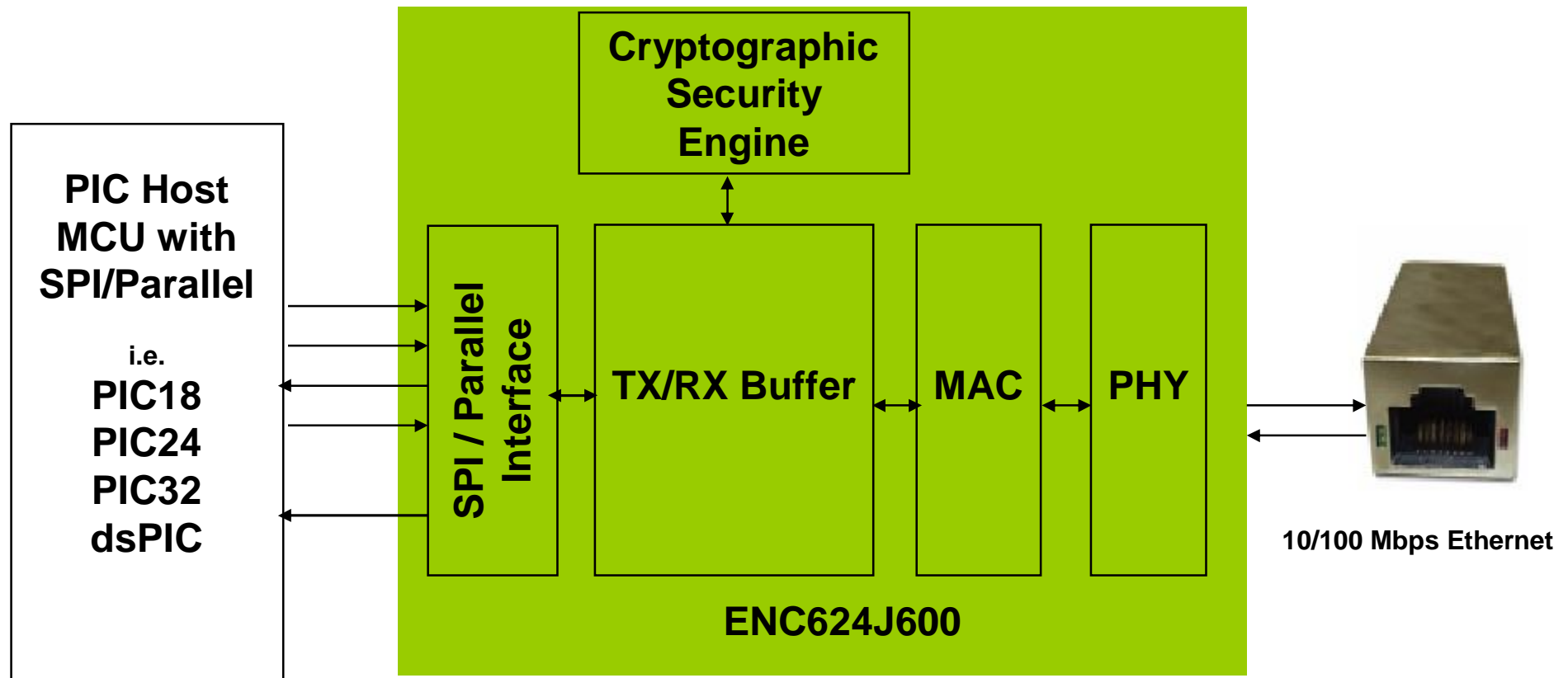


Ethernet Family Roadmap





ENC624J600 Block Diagram



Stand-alone Ethernet Controller with MAC and PHY



ENC624J600 Stand-alone 10/100Mbps Ethernet controller

Operational Features

- | Operating voltage 3.0 to 3.6V
- | 24 KB Ethernet Buffer
- | Temperature range -40° to 85°C
- | Package options
 - | **44-pin TQFP and QFN**
 - | **64-pin TQFP**
- | 25 MHz Input Clock
- | Clock out pin with programmable frequencies from 50KHz to 33MHz

Hardware Cryptographic Security Engines

- | RSA® and Diffie-Hellman Key Exchange Algorithms
- | AES Encrypt/Decrypt with up to 256 bit key
- | Hardware AES ECB, CBC,CFB and OFB mode capability
- | Fast MD5 hash computations
- | Fast SHA-1 hash computations
- | Hardware features help accelerate SSL protocol enabled applications

Ethernet Controller Features

- | IEEE 802.3 complaint
- | Integrated MAC and single port 10/100 Base-T PHY
- | Hardware Security Engines
- | SPI interface with speeds up to 20Mbps
- | Supports JTAG Boundary scan
- | 8 or 16-bit parallel interface for 44- and 64- pin packages
- | MAC
 - | **Supports unicast, multicast and broadcast packets**
 - | **Programmable receive packet filtering**
- | PHY
 - | **Loopback mode**
 - | **Energy Detect power down mode**

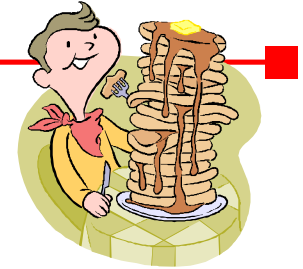


Application Examples

- | Telecommunication
- | Inventory Management
- | Remote Diagnostics/alerts
- | Security
- | Sensing/actuators
- | Industrial Control/Automation
- | Data Acquisition
- | VoIP Intercoms
- | Traffic Control/Monitoring
- | Medical Monitoring
- | Networking Control/Monitoring
- | Internet Appliances
- | Instrumentation
- | Home Control/Automation
- | Building Control/Automation



Microchip TCP/IP Stack



- | **C source code provided**
 - | No-fee license agreement
 - | Use Microchip PIC[®] MCU or dsPIC[®] DSC
 - | Download: www.microchip.com/tcpip
 - | ENC624J600 support
- | **PIC18, PIC24, dsPIC DSC, PIC32**
- | **RTOS Independent & Modular**
- | **Supports multiple connections**
- | **Example projects**
- | **Standard Microchip technical support**



Wi-Fi 802.11

Wi-Fi ZeroG 802.11 PICTail + Card :

We have partnered with ZeroG a provider of a low-cost, low-power IEEE 802.11b Wi-Fi transceiver and transceiver module to create a PICTail/PICtail + daughter card that operated with our PIC18Explorer, Explorer16, and PICDEM.Net development boards. ZeroG's solution is ideal for embedded microcontroller applications and works seamlessly with our TCP/IP stack.

Features:

- | **IEEE 802.11b Module from ZeroG**
- | **Data rate – 1Mbps & 2Mbps**
- | **Transceiver Module implementation – similar to our MRF24J40MA**
- | **FCC and Wi-Fi Certified**

Status:

- | **Demo Kit available NOW – AC164136**

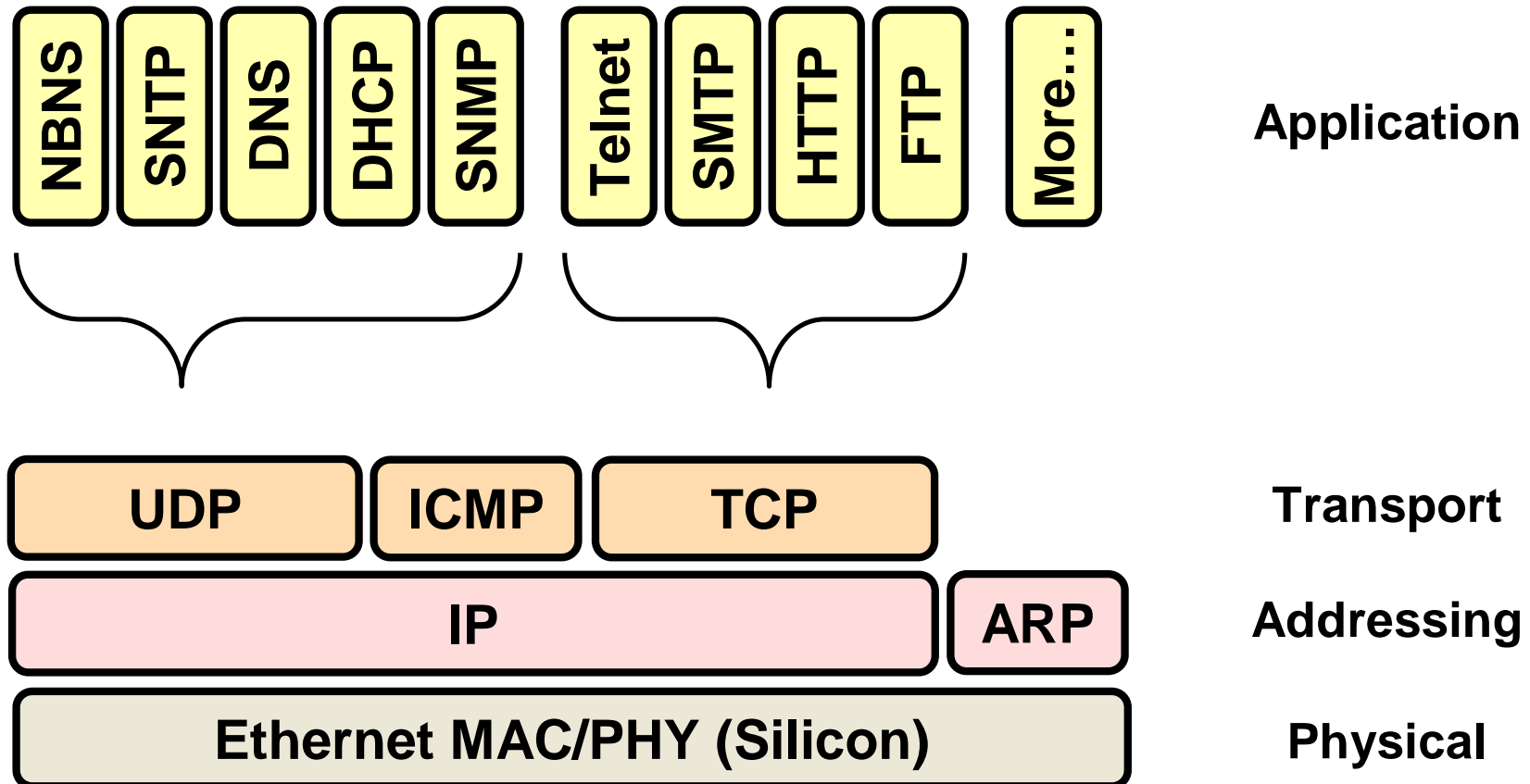
Schedule:

- | **TCP/IP Stack with ZeroG driver –TCP/IP ver 5.x**
- | **Website Update –www.microchip.com/wireless**
- | **PICTail/PICtail Plus Daughter Cards – AC164136-2**
- | **ZG2100M Modules**





What's Included?





MICROCHIP

Сопутствующие

КОМПОНЕНТЫ



MAC Address Chips

Need easy, low-cost access to MAC addresses?

Will access to plug-and-play MAC address chips enable faster time to market?

EUI-48™ Programmed Serial EEPROMs



2 Kb – Serial EEPROMs

1/2 array WP - Hardware	1/4 Array WP - Software	1/4 Array WP - Software
1.8V – 5.5V 400KHz	1.8V – 5.5V 10MHz	1.8V – 5.5V 100KHz
I ² C	SPI	UNI/O®

- ü Pre-Programmed 48-bit MAC Address Chips

- ü EUI-48™ & EUI-64™ Compatible

- ü 1.5 Kb Serial EEPROM Functionality

- ü SPI, I²C and UNI/O® Bus

- ü Write-Protected Codes

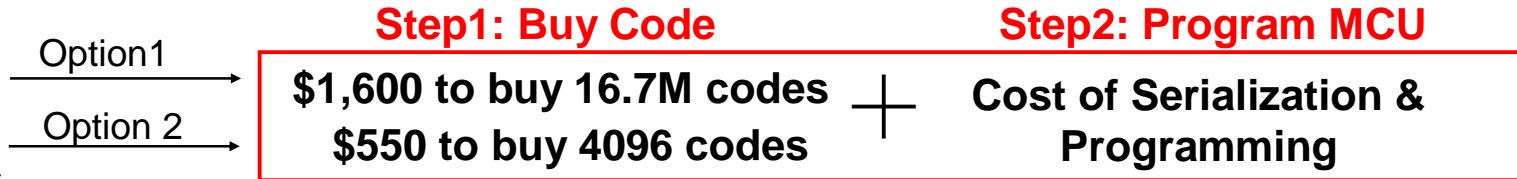
- ü SOIC and SOT-23





...and what does it solve?

EUI-48™ codes are sold by IEEE – Volume based



Issue:

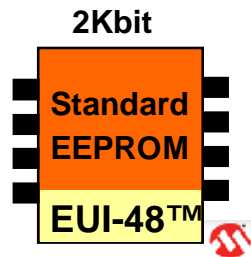
- EUI-48™ is difficult to obtain, expensive, time consuming
- Most MCU's don't come with built-in EUI-48™Address.



Microchip's MAC Address Chips

We do all the above!

- ü Low Cost
- ü Easy to access
- ü Faster time to market
- ü EUI-64™ Compatible



Plug-and-Play!

~\$0.25 each!!

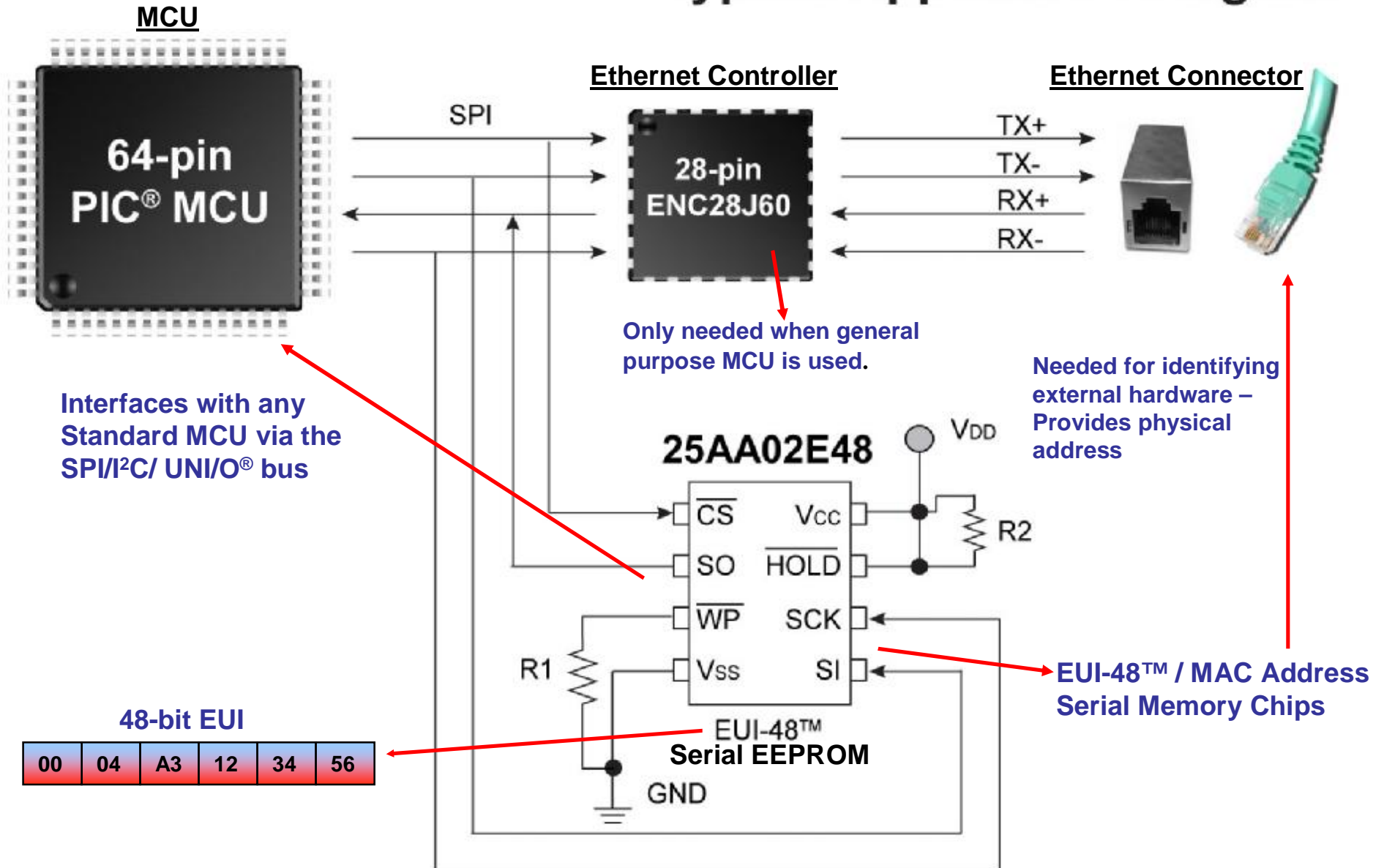
- Available in SPI, I²C and UNI/O® Bus
- Scratch Pad EEPROM
- Write- Protected

Serial EEPROM Functionailty

No Hassles, Easy Access

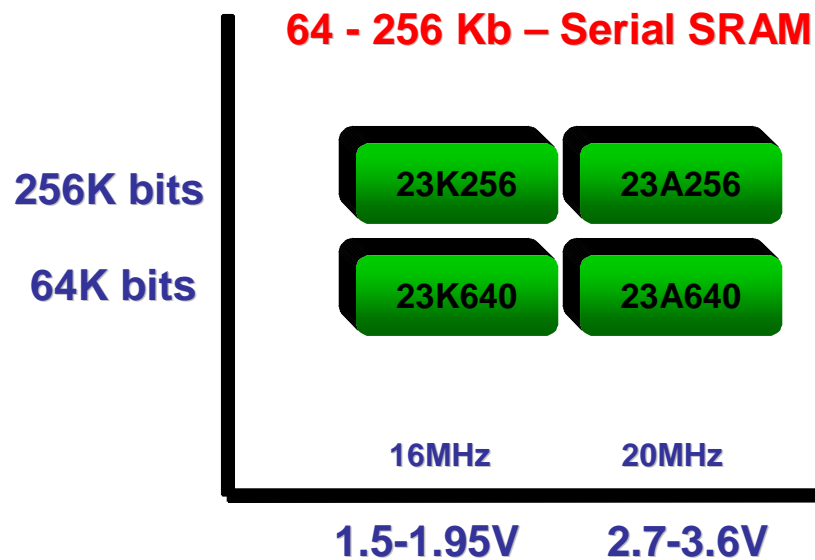
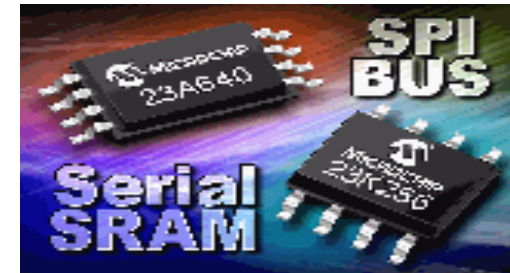
No Volume Restrictions!!

25AA02E48 Serial EEPROM Typical Application Diagram





Serial SRAM



Low-Power CMOS Technology: -
Read Current: 3 mA at 1 MHz –
Standby Current: 4 μ A Max. at 3.6V

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

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[AC164136-2](#)