

Connectivity

Ethernet

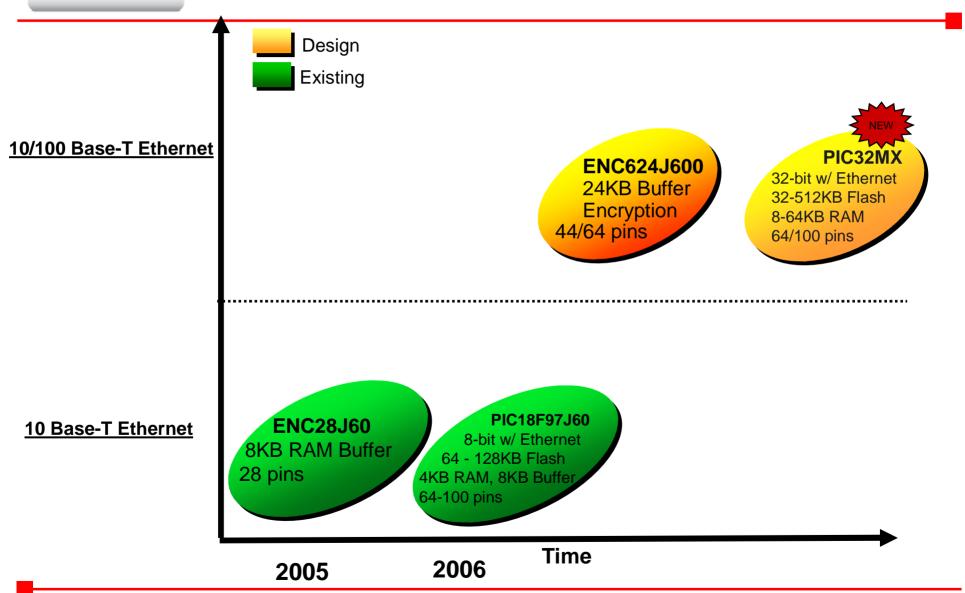


ENC624J600

Stand-Alone 10/100 Ethernet Controller

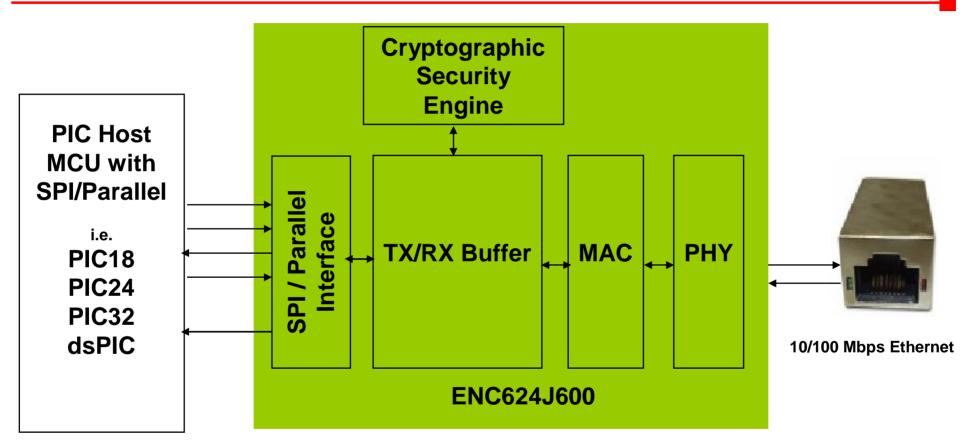


Ethernet Family Roadmap





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
- i Package options
 - 1 44-pin TQFP and QFN
 - 1 64-pin TQFP
- i 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
- i AES Encrypt/Decrypt with up to 256 bit key
- Hardware AES ECB, CBC,CFB and OFB mode capability
- r Fast MD5 hash computations
- r Fast SHA-1 hash computations
- Hardware features help accelerate SSL protocol enabled applications

Ethernet Controller Features

- I 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
- i Security
- i Sensing/actuators
- Industrial Control/Automation
- Data Acquisition

- i VoIP Intercoms
- Traffic Control/Monitoring
- Medical Monitoring
- Networking Control/Monitoring
- Internet Appliances
- Instrumentation
- I Home Control/Automation
- Building Control/Automation



Microchip TCP/IP Stack

C source code provided

- No-fee license agreement
- I Use Microchip PIC® MCU or dsPIC® DSC
- I Download: www.microchip.com/tcpip
- I ENC624J600 support
- I 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 & 2Mpbs
- **Transceiver Module implementation similar to our MRF24J40MA**
- FCC and Wi-Fi Certified

Status:

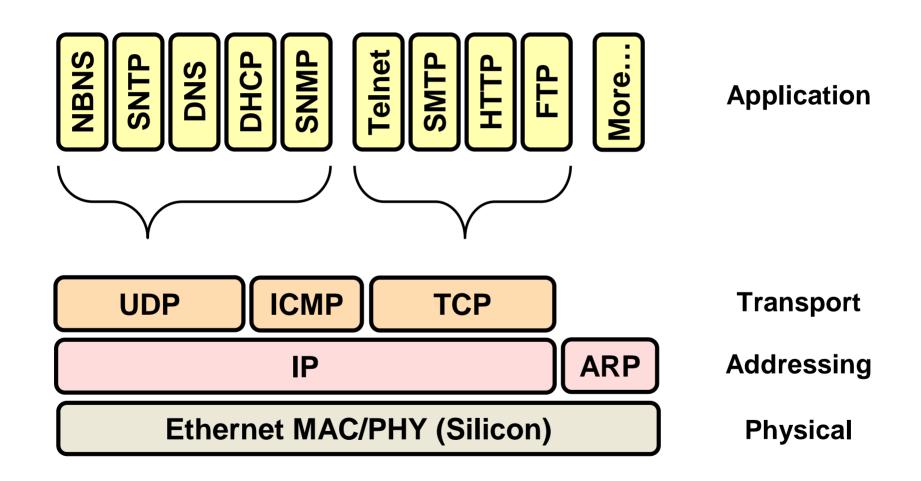
Demo Kit available NOW – AC164136

Schedule:

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



What's Included?





Сопутствующие компоненты

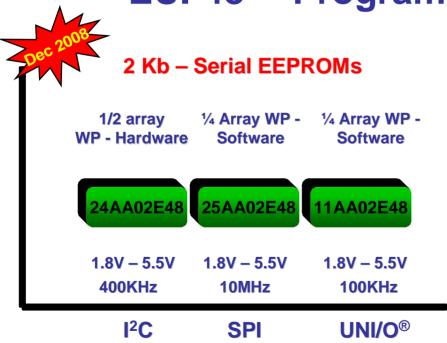


MAC Address Chips

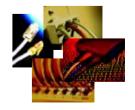
Need easy, low-cost access to MAC addresses?

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

EUI-48™ Programmed Serial EEPROMs



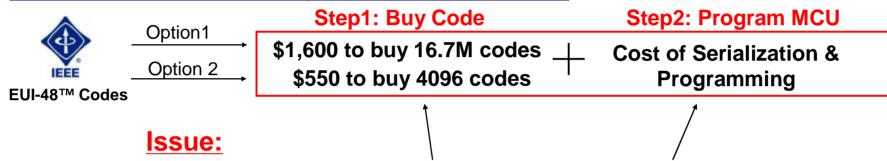
üPre-Programmed 48-bit MAC
Address Chips
üEUI-48™ & EUI-64™ Compatible
ü1.5 Kb Serial EEPROM Functionailty
ü SPI, I²C and UNI/O® Bus
üWrite-Protected Codes
üSOIC and SOT-23





...and what does it solve?

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



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

Microchip's MAC Address Chips

We do all the above!

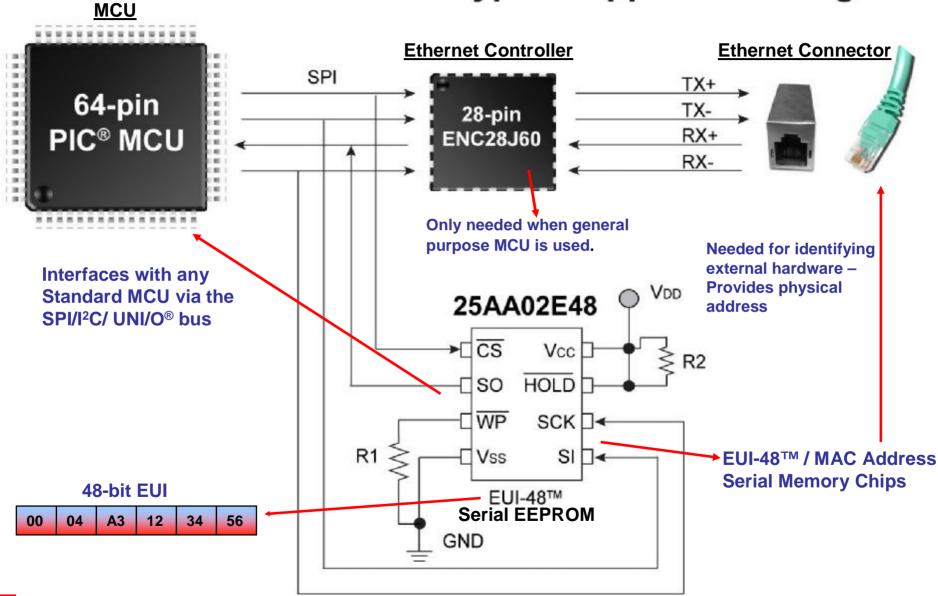
ü Low Cost ü Easy to access ü Faster time to market ü EUI-64™ Compatible



Serial EEPROM Functionality
No Hassles, Easy Access
No Volume Restrictions!!



25AA02E48 Serial EEPROM Typical Application Diagram





Serial SRAM



