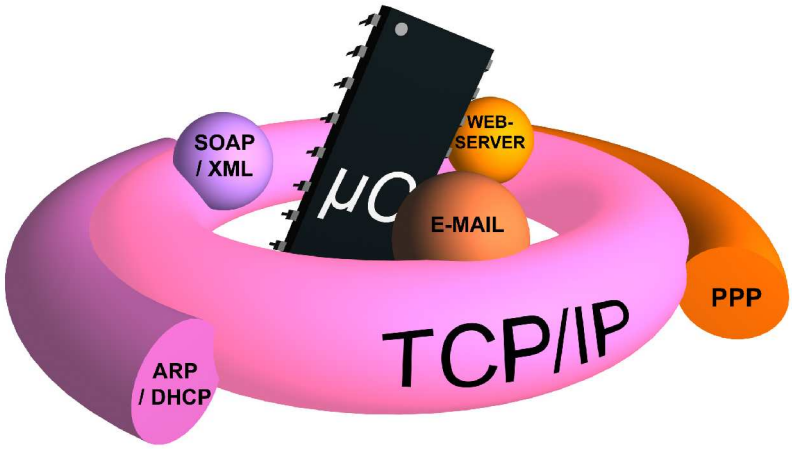
sevenstax Ethernet Drivers and Auxiliary Protocols

Embedded Internet meets the LAN

The sevenstax Ethernet collection of drivers and protocols enables sevenstaxTCP as well as third party ones to take an active part in Local Area Networks. While they are designed to run in small, embedded systems, they also can be used to connect a fully equipped TCP/IP implementation such as 4.4 BSD stack to the LAN.

The sevenstax Ethernet Drivers and auxiliary protocols are completely new implemented with the result of a lean, fast and efficient software, containing all the functionality required for TCP/IP running on the LAN.

In short, when unit cost is of direct influence and a high level of system security is required, that is when the advantages of sevenstax Ethernet are most evident.



Characteristics:

- Small memory footprint.
- Suitable for use in small micro controllers. Portable ANSI C code.
- Choose between BOOTP or DHCP.
- Seamless integrated with sevenstaxTCP but can also be used with 3rd party TCP's.
- Easy integration into existing software because of simple interface.
- Runs with or without an OS such as embOS, CMX-RTX, eCos.
- Hardware Abstraction Layer (HAL) which allows to plug in various Ethernet Controller drivers
- Minimal development time. Often only an Ethernet Controller driver must be developed.

What you get:

- ARP (Address Resolution Protocol) automatically converts IP addresses into Ethernet addresses.
- BOOTP (Bootstrap Protocol) to obtain IP address from BOOTP servers.
- DHCP (Dynamic Host Configuration Protocol) to obtain IP address from DHCP servers.
- Hardware Abstraction Layer.
- Sample driver for LAN91C96.
- Sample driver for CS8900A.
- Ethernet simulation under Win32 using WinPCAP packet driver (Any network card required).

Memory in Bytes (16 bit CPU):

ROM:	HAL:	937
	ARP:	1300
	BOOTP:	451
	DHCP:	1526
RAM:	HAL:	3064(***)
	ARP:	15(*)
	BOOTP:	451(**)
	DHCP:	97(**)

+ some memory for Ethernet Controller driver.

(*) without cache
(**) needs temporary RAM for packet
(***) including RX/TX buffers

Other Requirements:

32-bit timer/counter with an resolution of 1ms.

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Internet on small chips