µC/TCP-IP
Protocol Stack

µC/TCP-IP is a compact, reliable, high performance TCP/IP protocol stack. Built from the ground up with Micrium's renowned quality, scalability and reliability, µC/TCP-IP enables the rapid configuration of required network options to minimize your time to market.

FEATURES AND BENEFITS

CLEANEST SOURCE CODE µC/TCP-IP provides you with the highest quality source code in the industry. µC/TCP-IP is a clean-room design and is not derived from publicly available Unix stacks, yet still maintains compatibility with the Berkeley 4.4 socket layer interface. As with all Micrium products, µC/TCP-IP is written in ANSI C enabling its usage with a wide array of best-of-class cross-development tools.

PORTABLE µC/TCP-IP can be used on 16–, 32– and even some 64-bit CPUs.

HIGH PERFORMANCE µC/TCP-IP was designed specifically for the demanding requirements of embedded systems. Critical sections were kept to a minimum and selected run-time validations can be disabled to enhance performance. µC/TCP-IP implements zero copy buffer management for highest efficiency.

SCALABLE AND ROMABLE µC/TCP-IP allows you to adjust the memory footprint based on your requirements. µC/TCP-IP can be configured to include only those network modules absolutely required by your system. When a module is not used, it's not included in the build to save valuable memory space for resource limited embedded systems.

ROYALTY FREE is licensed on a per end-product basis and does not require any run-time royalties.

ETHERNET µC/TCP-IP currently supports Ethernet NICs and can easily be ported to any Ethernet controller.

RTOS REQUIRED µC/TCP-IP requires the presence of a Real-Time Operating System (RTOS) or Kernel for task scheduling and mutual exclusion. µC/TCP-IP includes all the source code to interface to the µC/OS-II RTOS, but can easily be used with other RTOSs.
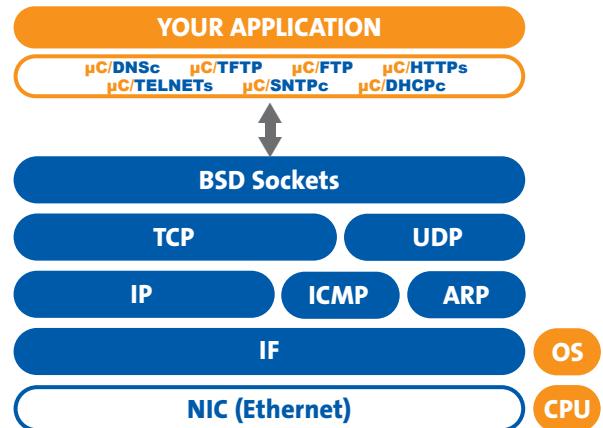
µC/TCP-IP BASIC PROTOCOLS

Protocol	Description
NIC / IF	Network Interface (Ethernet)
ARP	Address Resolution Protocol
IP	Internet Protocol
ICMP	Internet Control Message Protocol
UDP	User Datagram Protocol
TCP	Transport Control Protocol
Sockets	BSD Socket API

ADD-ON OPTIONS

Protocol	Description
µC/DHCPc	Dynamic Host Configuration Protocol (client)
µC/DNSc	Domain Name System (client)
µC/TFTP	Trivial File Transfer Protocol (client/server)
µC/FTP	File Transfer Protocol (client/server)
µC/HTTPs	HyperText Transport Protocol (server)
µC/TELNETs	Terminal Emulation Protocol (server)
µC/SNTPc	Simple Network Time Protocol (client)

MEMORY FOOTPRINT

These numbers have been achieved using an ARM7 target in ARM mode with the IAR compiler. The compiler was set to optimize for speed. Options mean whether we enable code to check for arguments, NULL pointers, range within bound, statistic counters, error counters, etc.

Protocols	All options enabled (Kbytes)	All options disabled (Kbytes)
NIC	2.25	2.1
IP, ARP, ICMP	42	18
UDP	3.6	2.1
TCP	15	10
BSD Sockets	18	10
TOTAL	**81**	**42.2**