

Product Bulletin

# TMS320C6000™ DSP TCP/IP Stack

**Key Benefits**

- Integrates seamlessly into the DSP/BIOS™ software kernel
- Enables quick time-to-market with stable, well-documented networking stack
- Reduces cost-of-creation, optimization, testing and implementation associated with developing your own software
- Offers fully optimized and highly efficient performance on TI's C6000™ DSP platform

**Overview**

Texas Instruments TMS320C6000 DSP Transmission Control Protocol / Internet Protocol (TCP/IP) Stack is a suite of communications protocols used to connect hosts on the Internet. The primary feature of TI's C6000™ DSP TCP/IP Stack is its ability to seamlessly integrate into the DSP/BIOS software kernel and not disrupt real-time tasks.

The software is designed as a platform for the development, demonstration and deployment of network-enabled applications with the C6000 DSP platform. The software includes demonstrations

showcasing C6000 DSP capabilities across a range of network-enabled applications, including support for classical buffer-based sockets (for transactions involving payloads like Telnet), packet queue-based sockets (non-copy) and enhancements to the sockets' application interface (API) that allow the application to directly receive non-copy TCP data.

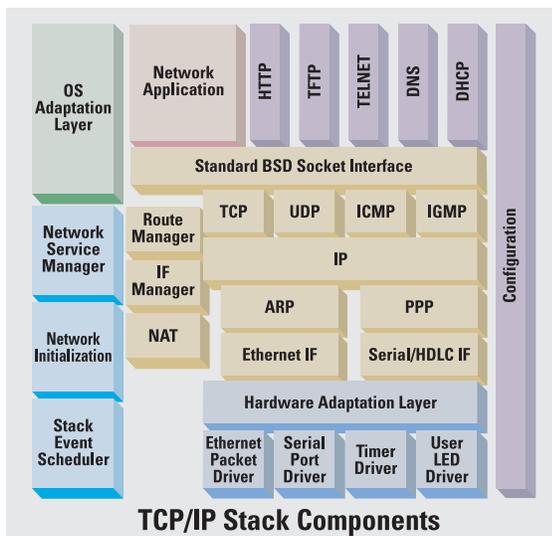
**The TCP/IP Standard**

TCP/IP was initially built into the UNIX® operating system and is now used by the Internet and operating systems around the world, making it the standard for transmitting data over networks.

**Key Features**

- **High-Level Berkeley Sockets Compatibility:** Standard sockets compatibility allows network applications to be easily ported. Application developers get started immediately, without having to learn a proprietary networking API or adapting their applications for its use
- **Compact and Efficient:** The TCP/IP stack is full-featured, uses a small footprint and is designed to create efficient use of memory buffers while minimizing need for data copies
- **Addressable Configuration:** The stack configuration and its related services are convertible to linear storage and are programmed through a configuration database that is addressable by identification and instance tags
- **Home Networks:** When acting as a router, the software supports the creation of virtual home networks independent of an Internet Service Provider (ISP)
- **Network-Related Services**
  - CIDR routing
  - Telnet server
  - DHCP server and client
  - PPP client and server support
  - IGMP v2 client support

**Component Library Design**



TCP/IP Stack Components

- DNS client
- HTTP 1.0 server
- TFTP client
- PPPoE client and server support
- **Two Code-Compatible Versions for Code Composer Studio™ Integrated Development Environment (IDE) 3.3**

### Get Started Today

- Download here  
[https://www-a.ti.com/downloads/sds\\_support/targetcontent/NDK/index.html](https://www-a.ti.com/downloads/sds_support/targetcontent/NDK/index.html)
- Free evaluation period with four hours support provided by TI Authorized Software Providers (ASPs). For more information, contact your local TI sales representative.



- At the DSP eStore  
**www.dspestore.com**
  - Purchase a Digital Media Development Kit (DMDK), part number TMDSDMK642 OR
  - Purchase a Digital Video Development Platform (DVDP), part number TMDXVDP6437
- Related devices:
  - TMS320DM643x DSP
  - TMS320C6455 DSP



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