

# Nucleus C++ NET

## Description:

Nucleus C++ NET is an object-oriented embedded TCP/IP networking component that provides reentrant classes and collaborations to help programmers deal with inherent complexities associated with developing real-time embedded multitasking systems that incorporate networking. Exchanging data with the desktop and other embedded devices is simplified and the underlying protocol is standard.

The Nucleus C++ NET component includes a C++ class interface into the efficient Nucleus NET TCP/IP networking stack. It initializes the underlying Nucleus NET stack and models its traditional networking services as objects. This allows the various real-time elements in an embedded system to be easily managed in cohesive units and the association between them is natural.

Working real-time embedded design patterns that include TCP sockets, UDP sockets, raw sockets, IP addresses, and socket addresses are easily captured. By encapsulating the different specific typed sockets, proper use depending on the protocol is naturally enforced and makes more sense.

As a member of the Nucleus C++ Components family, Nucleus C++ NET plugs into the base framework. Specification, startup, and initialization are natural, easy, and efficient. Since the framework and the Nucleus C++ NET component are extendable, the special networking needs of your embedded device such as custom transport layers and removable networking devices are easier to design.

Nucleus C++ NET exhibits real-time performance in a very small memory footprint. This promotes effective reuse of working solutions in an embedded environment to deliver efficient, quality real-time embedded designs on time.

All features are portable across many embedded processor platforms and a desktop prototype environment is available to allow development to progress prior to the availability of your embedded hardware.

## Features:

- Object-oriented and real-time, specifically designed for use in embedded designs to enhance development productivity
- Portable across many embedded processors
- Real-time performance with small memory footprints and natural scalability
- Reentrant C++ class interface into the efficient Nucleus NET TCP/IP networking stack including classes for:
  - TCP sockets
  - UDP sockets
  - Raw sockets
  - IP addresses
  - Socket addresses
- Initializes the Nucleus NET TCP/IP networking stack
- Provides, supports, and enhances embedded software design patterns to promote better association between the software elements in your device
- Desktop prototype of Nucleus C++ NET allows your embedded design to progress prior to the availability of your embedded target hardware
- Extendable to meet the specific networking needs of your embedded device
- Source code included
- No royalties

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