

C++ PRODUCTS



NUCLEUS C++ PLUS

NUCLEUS C++ NET

NUCLEUS C++ MNT

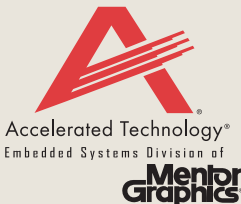
NUCLEUS C++ BASE

NUCLEUS C++ FILE

AcceleratedTechnology.com

NUCLEUS

EMBEDDED SOFTWARE

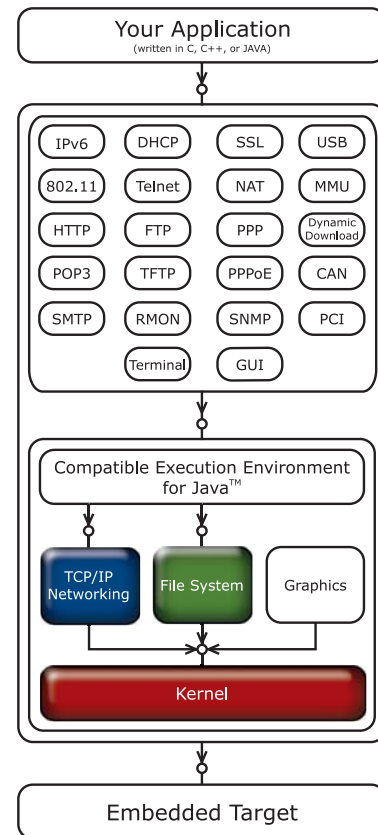


C++ PRODUCTS

The power of C++ comes from its support for new ways of programming and thinking about programming problems. At Accelerated Technology®, we view this as being a significant breakthrough for the embedded industry. With C++, you can develop applications quickly by using the object-oriented programming method which encourages reuse. Accelerated Technology provides a complete set of efficient, ready-to-use components specifically designed for embedded applications.

Nucleus C++ is a real-time object-oriented embedded software family specifically designed for embedded systems. It includes software components that are portable across many embedded processor platforms. Successful teams utilize Nucleus C++ to deal with complexity and deliver efficient, quality products on time.

Nucleus C++ provides an object-oriented C++ interface into the various corresponding Nucleus “C” services. In general, Nucleus C++ supports you to use the C++ programming language. It also provides an extendable object-oriented application framework for developing end applications. You can take an existing Nucleus “C” application and link it with a Nucleus C++ application.



NUCLEUS C++ COMPONENTS

Nucleus C++ includes a family of portable object-oriented embedded software components that provides real-time performance in small memory footprints, enhancing the reuse of efficient embedded software design patterns.

Scalability and reuse are natural since each component provides only the core software for a particular topic. Topics include C++ language support (Nucleus C++ BASE), hard real-time operating system (Nucleus C++ PLUS), TCP/IP networking (Nucleus C++ NET) and data storage (Nucleus C++ FILE).

NUCLEUS C++ COMPONENTS FEATURES

- No royalty fees
- Source code included
- Object-oriented and real-time, specifically designed for use in embedded designs
- Real-time performance with small memory footprints and natural scalability
- Portable across many embedded processors
- Provides, supports and enhances embedded software design patterns

NUCLEUS C++ PLUS

Nucleus C++ PLUS is an object-oriented embedded RTOS component that provides classes and collaborations to help you deal with built-in complexities that are associated with developing real-time embedded multi-tasking systems.

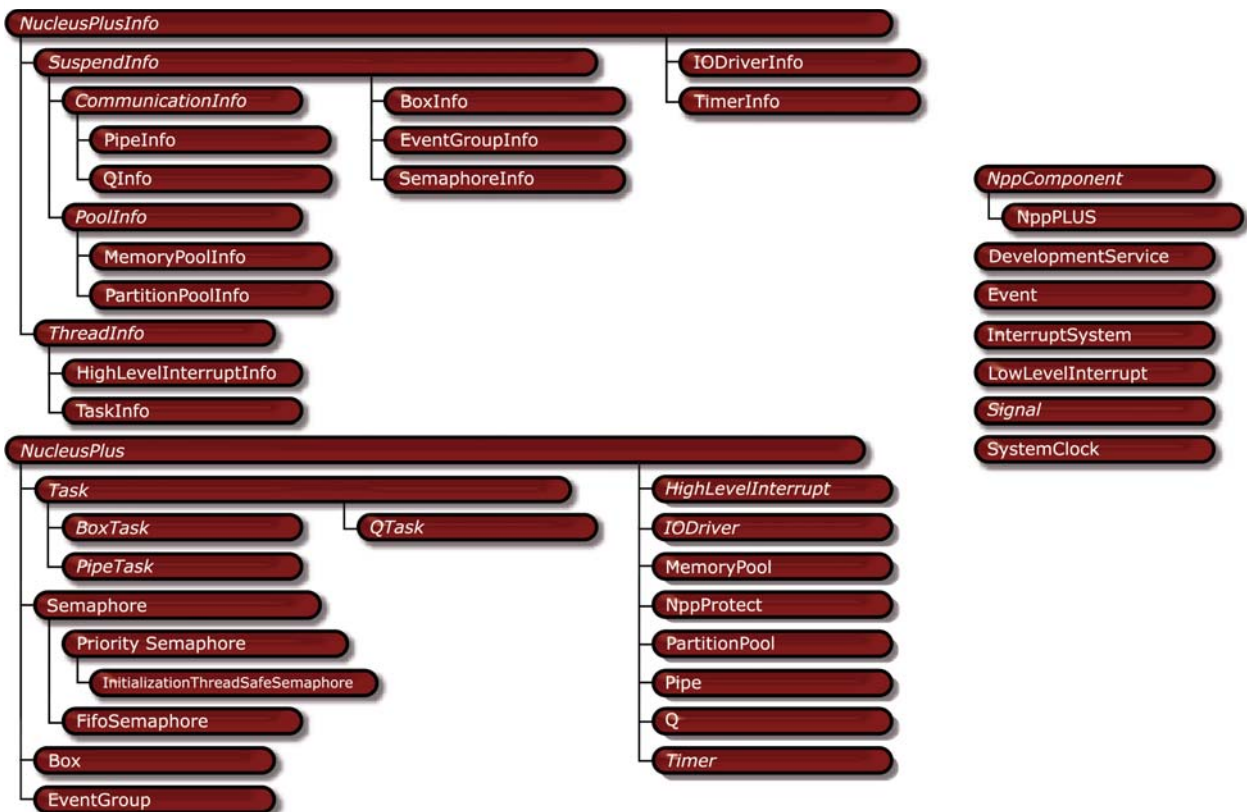
The Nucleus C++ PLUS component includes a C++ class interface into the Nucleus PLUS "C" kernel. Nucleus C++ PLUS models traditional RTOS services as objects, allowing the various real-time elements in an embedded system to be easily managed in cohesive units, thus making the association between them more natural.

Working real-time embedded software design patterns that include threads, interrupts, messaging, events, signals, timers and semaphores are easily captured.

NUCLEUS C++ PLUS FEATURES

- Real-time performance with small memory footprints and natural scalability
- C++ class interface into the Nucleus PLUS "C" kernel including classes for:
 - Threads
 - Interrupts
 - Messaging
 - Events
 - Signals
 - Timers
 - Semaphores
- Extendable to meet the specific real-time multitasking needs of your embedded device

Nucleus C++ PLUS Class Hierarchy



NUCLEUS C++ NET

NUCLEUS C++ NET FEATURES

- Real-time performance with small memory footprints and natural scalability
- C++ class interface into the Nucleus NET "C" 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
- Extendable to meet the specific networking needs of you embedded device

Nucleus C++ NET is an object-oriented embedded TCP/IP networking component. 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 Nucleus NET "C" TCP/IP networking stack. It initializes the underlying Nucleus NET stack and models its traditional networking services as objects.

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.

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.

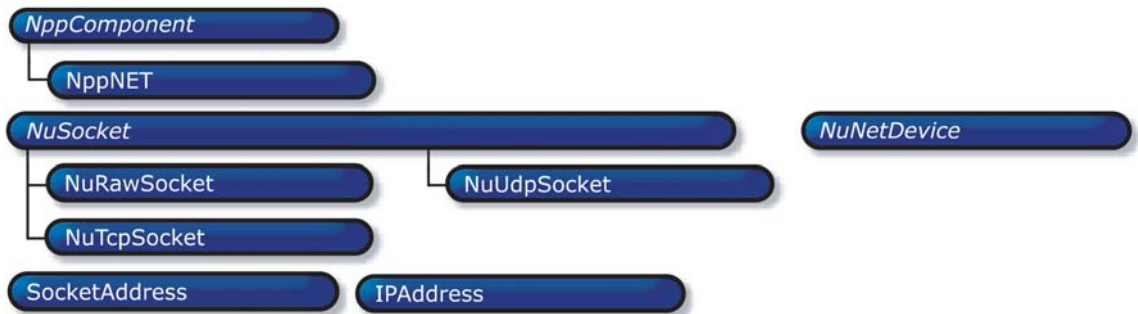


Clair iO, DSP Loudspeaker Controller
from Lake Technology Ltd.

Nucleus C++ provides a very efficient framework allowing developers to combine components, including their application, into a cohesive unit. Specification and initialization patterns are supplied to give you complete low-level control over the initialization of your embedded device.

Desktop prototypes are also available for each Nucleus C++ product to allow your embedded design to progress prior to the availability of your embedded target hardware.

Nucleus C++ NET Class Hierarchy





NUCLEUS C++ FILE

Nucleus C++ FILE is an object-oriented embedded file-system component. Exchanging data with the desktop and other embedded devices is simplified and the DOS-compatible disk format is standard.

The Nucleus C++ FILE component includes a C++ class interface into the Nucleus FILE "C" file-system. It initializes Nucleus FILE and models its traditional file-system 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 storage devices, files and directories are easily captured. Encapsulating file-system services into objects provides clearer ownership and association of data storage objects to other objects, making more sense.

Since the framework and the Nucleus C++ FILE component are extendable, the special data storage needs of your embedded device such as support for removable devices are easier to design.

Nucleus C++ FILE Class Hierarchy



NUCLEUS C++ FILE FEATURES

- Real-time performance with small memory footprints and natural scalability
- Reentrant C++ class interface into the Nucleus FILE "C" file-system including classes for:
 - Storage devices
 - Files
 - Directories
- Initializes the Nucleus FILE file-system.
- Extendable to meet the specific data storage needs of your embedded device

NUCLEUS C++ MNT

NUCLEUS C++ MNT FEAT- URES

- Object-oriented
- Allows your embedded design to progress prior to the availability of your embedded target hardware
- C/C++ browser for easier code navigation and understanding
- Prototyped versions of all Nucleus C++ Components
- Prototyped applications run as native Windows NT® or Windows 95/98/2000® processes

In the world of ever-shrinking market windows, it is essential to begin software development at an early stage of a project. With Nucleus C++ MNT embedded prototyping components, software development can begin immediately, prior to the availability of your embedded target hardware!

Based on the popular Nucleus MNT prototyping product, Nucleus C++ MNT provides the same functionality for object-oriented applications. You develop Nucleus C++-based applications that execute as native Windows processes, allowing you to take your application to an almost complete state before moving it to the target hardware.

Since Nucleus C++ is portable across many embedded processors, moving a Nucleus C++ prototyped application to an embedded processor is a snap. Our base software provides the portability layer.

In addition to providing core functions, many of today's embedded devices require user interfaces, network connectivity and data storage. The development of these functions and the base architecture of your real-time embedded system can now be performed on the desktop.

The Nucleus C++ MNT prototyping environment works within Microsoft Visual C++®. The complete integrated C/C++ development environment is available to you including the make/project capabilities, editor, browser, compiler, librarian, assembler, linker and debugger.

Unlike most prototyping environments, Nucleus C++ MNT includes working hardware devices, mapping your embedded target peripherals to physical devices on your host development workstation. This represents more than a virtual environment and provides a realistic real-world development and testing platform.



TransPort® PT878
Transit-time Flowmeter
from Panametrics, Inc.

NUCLEUS C++ PLUS

Nucleus C++ PLUS is an object-oriented embedded RTOS component that provides classes and collaborations to help you deal with built-in complexities that are associated with developing real-time embedded multi-tasking systems.

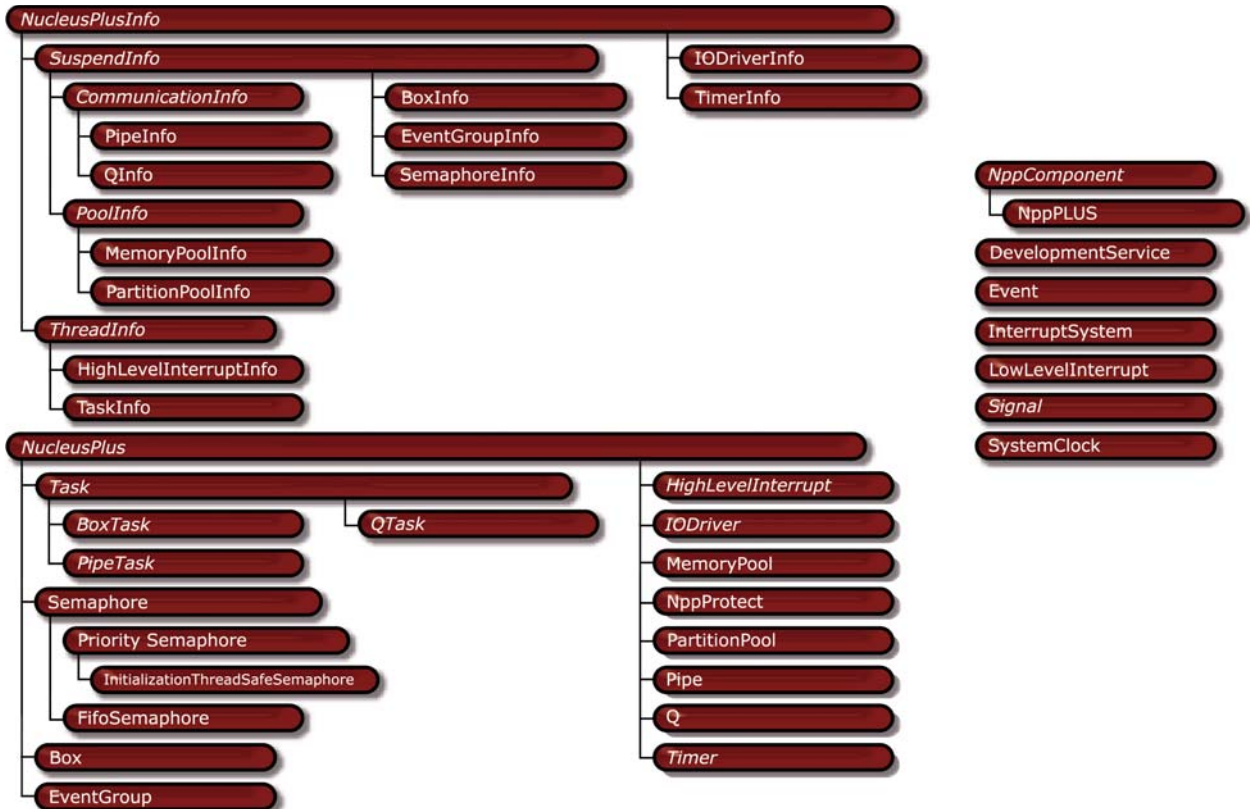
The Nucleus C++ PLUS component includes a C++ class interface into the Nucleus PLUS "C" kernel. Nucleus C++ PLUS models traditional RTOS services as objects, allowing the various real-time elements in an embedded system to be easily managed in cohesive units, thus making the association between them more natural.

Working real-time embedded software design patterns that include threads, interrupts, messaging, events, signals, timers and semaphores are easily captured.

NUCLEUS C++ PLUS FEATURES

- Real-time performance with small memory footprints and natural scalability
- C++ class interface into the Nucleus PLUS "C" kernel including classes for:
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- Extendable to meet the specific real-time multitasking needs of your embedded device

Nucleus C++ PLUS Class Hierarchy



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