N e t B u r n e r
Networking in 1 Day!

Embedded (Non-network) Platform Software

Applicable hardware platforms: MOD5213

The NetBurner Solution
NetBurner's solution is unique because it enables you to write application specific code immediately. All of the necessary elements are combined in a unique package that lets you concentrate on developing your product instead of reinventing network protocols and designing hardware.

Real-Time Operating System
The included uC/OS RTOS is a pre-emptive multitasking real-time operating system designed to be very efficient and full featured, providing rapid real-time response and a small footprint. You can easily create and manage multiple tasks and communicate between tasks with the intuitive API. The RTOS is integrated with the I/O system to make communication with the other system components (such as the TCP/IP Stack), quick and easy.

• Based on uC/OS
• Pre-emptive with priority scheduling
• Semaphores, Mail Boxes, Message Queues and FIFOs
• Timers
• Stack Checking
• Task debugging tools

C/C++ Compiler and Linker
The GCC C/C++ compiler is one of the most well known and widely used ANSI compliant compilers available today. NetBurner maintains and supports the latest updates and releases so developers can stay focused on product development. Each release of GCC is tested with the Net-
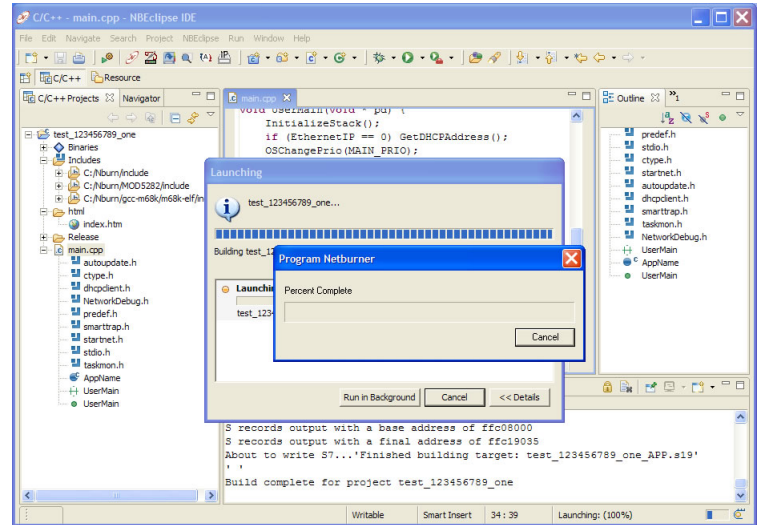

Figure 1: **NetBurner Eclipse IDE with one click compile-and-load**

Burner tools and software.

• Fully ANSI compliant C/C++ compiler and linker
• Integrated with the NetBurner Eclipse IDE. It can also be used with other IDE's such as Codewrite and Visual SlickEdit, or run from a command prompt

Eclipse based Integrated Development Environment
The full-featured NetBurner Eclipse Integrated Development Environment (IDE) for C/C++ enables you to create, edit and download applications

• One-click compile and load to target flash
• Application Wizard to create new applications

Table 2: **System Software**

Product	Software Description
uC/OS RTOS[1]	This full-featured preemptive real-time OS allows you to easily create multiple tasks, semaphores, mail boxes, mutexs, timers and more
C/C++ Compiler and Linker	Begin writing code immediately with the familiar ANSI compliant GCC C/C++ compiler and linker
CAN	Add a CAN device to the bus and begin communicating with it with NetBurners CAN library

Table 3: **Development Software**

Product	Software Description
NetBurner's Eclipse IDE	Shorten development time with one click compile-and-load capability, intelligent code completion, and an integrated debugger
Example Source	Source code examples show you how to load your first application and control serial ports.
Command Line Tools	Link the NetBurner tools to your favorite development environment such as Codewrite or Visual SlickEdit.

Note:

1. The NetBurner version of uC/OS has many added features not included with uC/OS-II. We do however encourage developers to read

"MicroC/OS-II" by Jean Labrosse, since most of the functions are basically the same.

Real-Time Operating System
The included uC/OS RTOS is a pre-emptive multitasking real-time operating system designed to be very efficient and full featured, providing rapid real-time response and a small footprint. You can easily create and manage multiple tasks and communicate between tasks with the intuitive API. The RTOS is integrated with the I/O system to make communication with the other system components (such as the TCP/IP Stack), quick and easy.

• Based on uC/OS
• Pre-emptive with priority scheduling
• Semaphores, Mail Boxes, Message Queues and FIFOs
• Timers
• Stack Checking
• Task debugging tools

C/C++ Compiler and Linker
The GCC C/C++ compiler is one of the most well known and widely used ANSI compliant compilers available today. NetBurner maintains and supports the latest updates and releases so developers can stay focused on product development. Each release of GCC is tested with the NetBurner tools and software.

• Fully ANSI compliant C/C++ compiler and linker
• Integrated with the NetBurner Eclipse IDE. It can also be used with other IDE's such as Codewrite and Visual SlickEdit, or run from a command prompt

Eclipse based Integrated Development Environment
The full-featured NetBurner Eclipse Integrated Development Environment (IDE) for C/C++ enables you to create, edit and download applications

• One-click compile and load to target flash
• Application Wizard to create new applications
• Intelligent code completion
• Bracket matching

• Auto Indentation
• Build Environment
• Customize views to fit work style
• Full-featured web browser
• Customizable syntax highlighting
• Project manager
• Managed makefiles
• Network flash code image update capability
• Class browser and function listing

Graphical Debugger
NetBurner Eclipse has an integrated debugger that includes all of the standard features you would expect from a excellent debug application including:

• Single step, step into, step out
• 1-click debug compile/load
• Register Window
• Thread/Process Window
• Function Browser Window
• Start/Stop button
• Memory Window
• Watch Window
• Source Window
• Console Window

• View C/C++ source, assembly, or mixed mode
• Set/Clear breakpoints
• Integrated remote debugging capability
• Graphical error reporting

Table 4: **Software Utilities**

Product	Software Description
MTTTY Serial Terminal	Use this simple high performance serial communications program to communicate with your serial devices
SmartTrap WinAddr2Line	This network debugging tool will help you troubleshoot where your application trapped