



Red Suite™ 4

High quality, low cost development tools
for ARM®-based Microcontrollers

RED SUITE 4

Red Suite is a fully featured software development environment for

ARM-

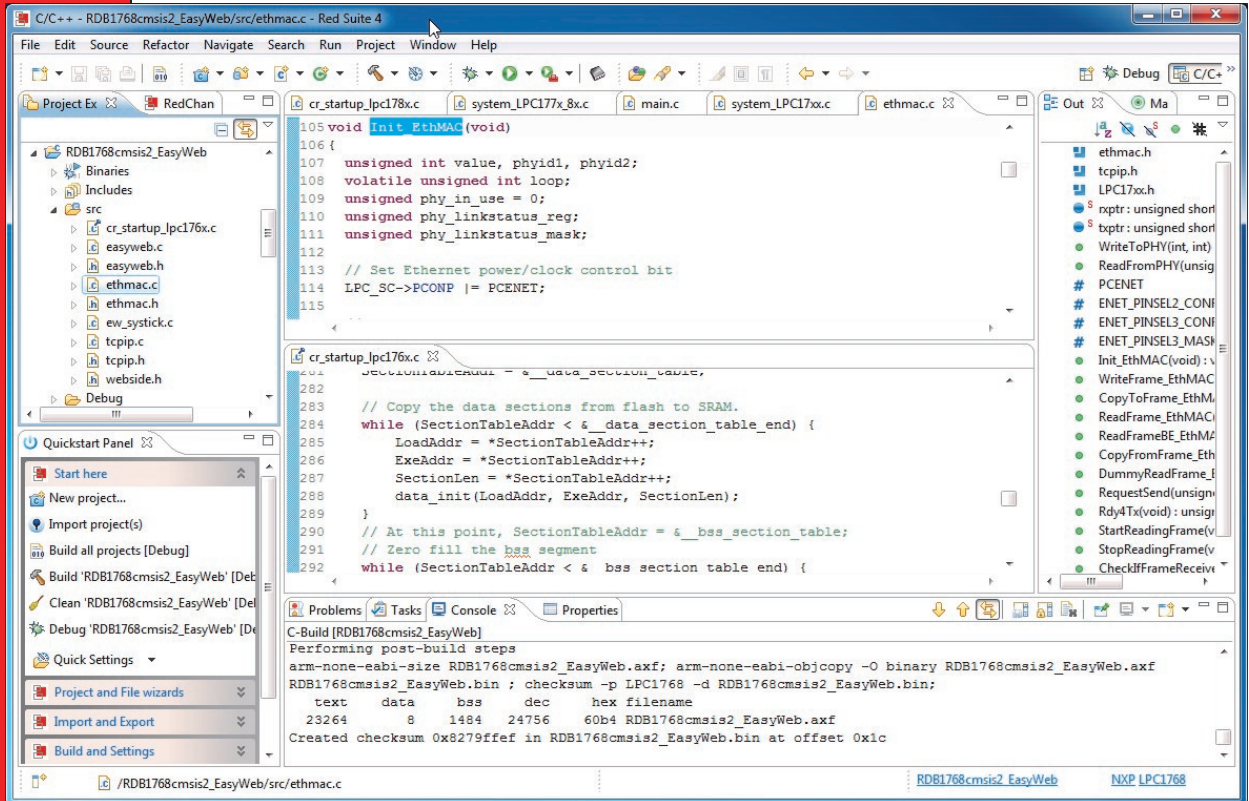
based Microcontrollers, and includes all the tools necessary to develop high quality embedded software applications in a timely and cost effective fashion.

The Red Suite IDE is based on the highly popular Eclipse platform and features many ease-of-use and Microcontroller specific enhancements. Red Suite includes the industry standard GNU

tools enabling professional quality tools at low cost.

The fully featured debugger supports both SWD and JTAG debugging, and features direct download to on-chip flash.

Red Suite 4 is a significant upgrade over previous releases and includes support for Cortex-M4 based processors, new compilers and libraries which further reducing target code size and is now also available on Linux and (coming soon) Mac OS-X hosts.



KEY BENEFITS

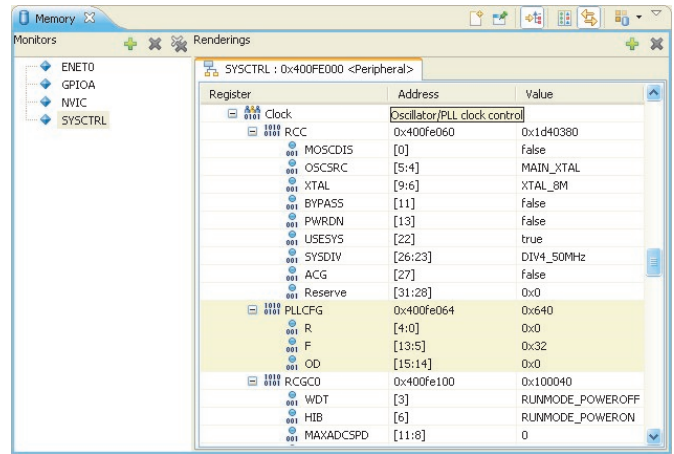
- Sophisticated Eclipse-based IDE with many ease-of-use enhancements
- Regularly updated device-specific support hundreds of microcontrollers from NXP® LPC, STMicroelectronics® STM32 and Texas Instruments® Stellaris™ families
- Red Trace capabilities giving unprecedented visibility into microcontroller execution.
- Red State state machine designer and code generator
- User-extensible Wizards to create target-specific embedded applications
- Structured display of on-chip peripherals for all supported microcontrollers.
- Full support SWD and JTAG debugging via Red Probe+, NXP LPC-Link and TI ICD1
 - Multiple devices on a JTAG scan-chain supported with Red Probe+
- Enhanced Redlib C library provides significant code and data size savings.
- Managed linker scripts to reduce the complexity and improve maintenance of embedded applications across a range of devices
- Support for CMSIS v2.0 (Cortex Microcontroller Software Interface Standard).
- No-fuss, single install for complete product, including 1-year of email-based support
- Fully functional evaluation version available.
- Available for Microsoft Windows, Linux and Mac OS X

Features

PERIPHERAL VIEWS

The peripheral viewer provides complete visibility of all registers and bit-fields in all target peripherals in a simple tree-structured display.

The Red Suite Integrated Development Environment (IDE) provides a C/C++ programming environment second to none, with syntax-coloring, source formatting, function folding, online and offline integrated help, extensive project management automation and integrated source repository support (CVS integrated or Subversion via download).



Peripheral View

RED TRACE

When used with Red Probe on Cortex-M3 or Cortex-M4 based Microcontrollers, the integrated Red Trace functionality gives the developer an unprecedented

level of visibility into what is

really happening on the target device.

Unlike traditional trace solutions, Red Trace gathers

trace data non-

intrusively while the target application continues to run at full speed.

Features include:

- User extensible Wizards for creating embedded applications complete with startup code and linker scripts correctly configured for target MCU.

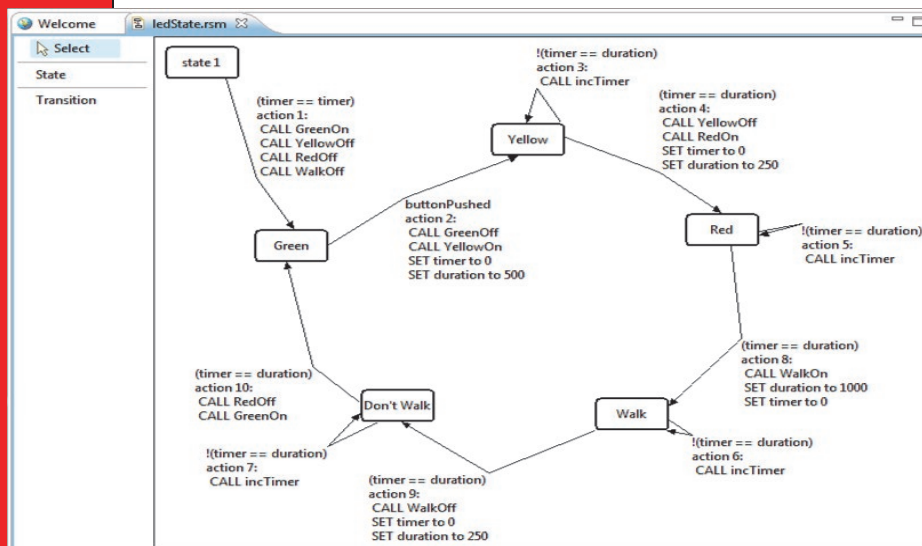
Function	Cumul...	Cumulativ...	Current sa...	Coverage %	First	Last	Since	Avg Be...	Start	End	Covera...
DoNetworkStuff	45643	48%	48%	14% (70/492)	40.960us	1.933s	40.960us	42.339us	0xd132c	0xd1705	1111111...
CheckIfFrameReceived	19717	20%	20%	71% (15/21)	20.480us	1.933s	0.000ns	98.015us	0xf20	0xf4b	1110101...
HTTPServer	16653	17%	17%	4% (22/249)	81.920us	1.933s	20.480us	116.044us	0x3e0	0x5d3	1110101...
main	12151	12%	12%	18% (21/111)	163.840us	1.932s	245.761us	159.013us	0x300	0x3df	0010000...
<unknown>	114	0%	0%	0% (0/268425677)	19.804ms	1.925s	7.885ms	16.710ms	0x4c64	0xd1ffffff	
ReadFrame_EthMAC	2	0%	0%	10% (2/19)	178.217...	552.306...	1.380s	187.044...	0xd4c	0xd73	1000000...
ReadFrameBE_EthMAC	1	0%	0%	3% (1/26)	60.375ms	60.375ms	1.872s	0.000ns	0xd74	0xd9	0000000...
StopReadingFrame	8	0%	0%	14% (4/27)	151.921...	1.399s	533.485...	155.897...	0xee8	0xf1f	0000000...
NVIC_SetPriority	4	0%	0%	8% (4/45)	135.045...	1.722s	210.351...	396.796...	0xf4c	0xfa7	0100010...

Profile Trace

- Choice of C libraries:
 - Redlib – our small footprint embedded C library
 - Newlib – industry standard fully featured C library
- Comprehensive debugger provide easy way to access target resources, including built-in flash programming, C-statement or instruction level stepping, display of all target registers and complete access to all on-chip peripherals

RED STATE

Red State is a graphical tool for designing state machines and automatically generating the code required to implement the state machine. It supports both software state machines and the NXP State Configurable Timer (SCT) peripheral.



including registers and bitfield displays

- Support for the powerful tracing facilities of the Cortex-M3 and Cortex-M4 processors, including
 - Profile tracing
 - Interrupt trace and display
 - Datawatch trace
 - Built-in datasheet browser
 - No assembler required with Cortex-M based devices, even for start-up code and interrupt handlers.

Red State designer



Code Red Technologies Inc.: 2180 Folsom Street, 3rd Floor, San Francisco, CA 94110
 Code Red Technologies Ltd: 6b Lower Court, Copley Hill Business Park, Babraham, Cambridge, CB22 3GN

Tel: US Office: +1 415 420 2467; EU/UK Office +44 1223 853753
 Email: information@code-red-tech.com Web: www.code-red-tech.com