µC/OS-II
µC/Probe
and the
NXP LPC2378 Processor
(Using the IAR LPC2378-SK Evaluation Board)

Read Me

www.Micrium.com
About Micrium

Micrium provides high-quality embedded software components in the industry by way of engineer-friendly source code, unsurpassed documentation, and customer support. The company's world-renowned real-time operating system, the Micrium µC/OS-II, features the highest-quality source code available for today's embedded market. Micrium delivers to the embedded marketplace a full portfolio of embedded software components that complement µC/OS-II. A TCP/IP stack, USB stack, CAN stack, File System (FS), Graphical User Interface (GUI), as well as many other high-quality embedded components. Micrium's products consistently shorten time-to-market throughout all product development cycles. For additional information on Micrium, please visit www.micrium.com.

About µC/OS-II

Thank you for your interest in µC/OS-II. µC/OS-II is a preemptive, real-time, multitasking kernel. µC/OS-II has been ported to over 45 different CPU architectures and now, has been ported to the LPC2378 CPU available from NXP.

µC/OS-II is small yet provides all the services you'd expect from an RTOS: task management, time and timer management, semaphore and mutex, message mailboxes and queues, event flags an much more.

You will find that µC/OS-II delivers on all your expectations and you will be pleased by its ease of use.

Licensing

µC/OS-II is provided in source form for FREE evaluation, for educational use or for peaceful research. If you plan on using µC/OS-II in a commercial product you need to contact Micrium to properly license its use in your product. We provide ALL the source code with this application note for your convenience and to help you experience µC/OS-II. The fact that the source is provided DOES NOT mean that you can use it without paying a licensing fee. Please help us continue to provide the Embedded community with the finest software available. Your honesty is greatly appreciated.
**About µC/Probe**

µC/Probe is a Windows application that allows a user to display the value (at run-time) of virtually any variable or memory location on a connected embedded target. The user simply populates µC/Probe’s graphical environment with gauges, tables, graphs, and other components, and associates each of these with a variable or memory location. Once the application is loaded onto the target, the user can begin µC/Probe’s data collection, which will update the screen with variable values fetched from the target.

µC/Probe retrieves the values of global variables from a connected embedded target and displays the values in an engineer-friendly format. The supported data-types are: booleans, integers, floats, and ASCII strings.

µC/Probe can have any number of ‘data screens’ where these variables are displayed. This allows to logically group different ‘views’ into a product.

A 30-day trial version of µC/Probe is available on the Micrium website:

Installing the Micrium Software

The source code for \texttt{\textmu C/OS-II} is provided in source form along with IAR EW project files that allows you to run \texttt{\textmu C/OS-II} on the IAR LPC2378-SK evaluation board. To install the software, simply run the self-extracting executable.

The self-extracting executable is called \texttt{Micrium-NXP-uCOS-II-LPC2378-SK.exe}.

You will be prompted to accept the simple terms of the licensing agreement. If you answer ‘Yes’, the software will be installed on your PC under the \texttt{\textbackslash Micrium} directory from the root:

\begin{itemize}
\item \texttt{Micrium}
\item \texttt{AppNotes}
\item \texttt{AN1xxx-RTOS}
\item \texttt{AN1014-uCOS-II-ARM}
\item \texttt{AN1077-uCOS-II-NXP-LPC2378-SK}
\item \texttt{Licensing}
\item \texttt{Software}
\item \texttt{EvalBoards}
\item \texttt{NXP}
\item \texttt{LPC2378-SK}
\item \texttt{IAR}
\item \texttt{BSP}
\item \texttt{GLCD}
\item \texttt{OS-Probe}
\item \texttt{OS-View}
\end{itemize}

\texttt{\textmu C/LIB}

\texttt{Run-Time Libraries}

\texttt{\textmu C/OS-II}

\texttt{The Real Time Kernel}

\texttt{\textmu C/OS-II documentation}

\texttt{\textmu C/OS-II processor independent source code}

\texttt{IAR Example Project (with \textmu C/Probe)}

\texttt{\textmu C/OS-II port}

\texttt{ARM7 / ARM9}

Licensing agreements

(If \texttt{\textmu C/OS-II} is used commercially)

Contact \url{www.Micrium.com} for pricing
Micrium
μC/OS-II and μC/Probe for the NXP LPC2378 CPU

μC/Probe
Real-Time Monitor

Target Communication

RS-232 Communication

μC/Probe
LPC2378 Port

- uC-Probe
  - Target
    - Communication
      - Generic
      - OS
      - uCOS-II
    - RS-232
      - OS
      - uCOS-II
    - Ports
      - NXP
      - LPC2378
    - Source
    - Source
  - Plugins
    - uCOS-II
Using the Micrium IAR Example Project

You should open AN-1077, which describes how the example code works, and read AN-1014 if you are interested in further information about the port for ARM processors.

To view the example project, start an instance of IAR Embedded Workbench, and open the project file LPC2378-SK-OS-Probe.ewp, located in the directory marked “IAR Example Project” in the tree above. To do this, use the Add Existing Project... menu command under the Project menu:

![IAR Embedded Workbench IDE](image)

The µC/OS-II Kernel Awareness plugin will allow you to examine information about system objects while using the C-Spy debugger. To gain access to this feature, enable the plug-in by right-clicking on the project name in the work space browser and choosing Options... Then, select the “Debugger” entry in the list box, and the “Plugins” tab pane. Find the µC/OS-II entry in the list and, finally, select the check box beside the entry.
Erratas

If you find any errors in the documentation or code provided, please send those corrections to Support@Micrium.com. Be sure to specify the processor, version of µC/OS-II and any other pertinent information about the error being reported.

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