

Table 1: Cross Reference of Applicable Products

MANUFACTURER PART NUMBER	SMD #	DEVICE TYPE	INTERNAL PIC NUMBER
UT32M0R500	5962-17212	microcontroller	QS30

1.0 Overview

The UT32M0R500 Quick Start Guide references the documents and tools you will need to get up and running.

The UT32M0R500 is a highly integrated, full featured, low power microcontroller targeted for distributed processing network applications. The UT32M0R500 microcontroller utilizes the Arm® Cortex®-M0+ 32-bit processor with a RISC based architecture operating at a 50 MHz frequency.

2.0 Product Documentation

The latest UT32M0R500 documentation is available on our website.

Link: <http://ams.aeroflex.com/pagesproduct/prods-hirel-arm.cfm>

2.1 Datasheet

Link: http://ams.aeroflex.com/pagesproduct/datasheets/UT32M0R500_Datasheet.pdf

2.2 Functional Manual

Link: https://ams.aeroflex.com/pagesproduct/datasheets/UT32M0R500_Functional_Manual.pdf

2.3 Application Notes

2.3.1 UT32M0R500 Unused Pin Termination

Link:

http://ams.aeroflex.com/pagesproduct/appnotes/ApNote_UT32M0R500_Unused_Pin_Termination_Info.pdf

2.3.2 Creating UT32M0R500 Project in the Keil IDE

Link: http://ams.aeroflex.com/pagesproduct/appnotes/ApNote_UT32M0R500_Creating_Projects.pdf

2.3.3 Enable the GPIO Module

Link: http://ams.aeroflex.com/pagesproduct/appnotes/ApNote_Enable_the_GPIO_UT32M0R500.pdf

2.3.4 Enable the PWM Module

Link: http://ams.aeroflex.com/pagesproduct/appnotes/ApNote_Enable_the_PWM_UT32M0R500.pdf

2.3.5 CAN Protocol for Updating Firmware in the UT32M0R50x NVM

Link: http://ams.aeroflex.com/pagesproduct/appnotes/ApNote_UT32M0R500_CAN_Update_Protocol.pdf

3.0 Development and Debug Tools

The U32M0R500 integrates the industry standard Arm® Cortex®-M0+ processor that supports a powerful set of development and debug tools.

3.1 ARM Keil MDK

The MDK is a Microcontroller Development Kit. The MDK includes two ARM C.C++ compilers with Assembler, Linker, Run-time libraries, etc. To download the Keil software development tools, go to this link: <https://www.keil.com/demo/eval/arm.htm>

3.2 Keil ARM ULNK2 Adapter

The debug adapter connects your PC's USB port to the target system via JTAG and allows you to program and debug embedded programs on target hardware. More information on the ULNK2 Debug Adapter can be found at this link: <http://www.keil.com/arm/ulink2/>



4.0 Source Code

An application program interface (API) is code that allows two software programs to communicate to each other. Driver APIs and example code is available for the UT32M0R500.

4.1 UT32M0R500 Driver APIs

Go to the Cobham website to request access to the software support package.

Link: <http://ams.aeroflex.com/pagesproduct/software/access/default.cfm>

4.2 UT32M0R500 Example Code

Initial example code is available. Please contact the factory if you require other examples and the code can be provided on a case by case basis.

Go to the Cobham website to request access to the software support package.

Link: <http://ams.aeroflex.com/pagesproduct/software/access/default.cfm>

5.0 Real Time Operating System (RTOS)

A royalty-free RTOS is also available from two sources and are optional to aid you in your development effort.

5.1 Real-Time eXecutive (RTX)

Directly supported by ARM Keil. Link: <http://www.keil.com/arm/rl-arm/kernel.asp>

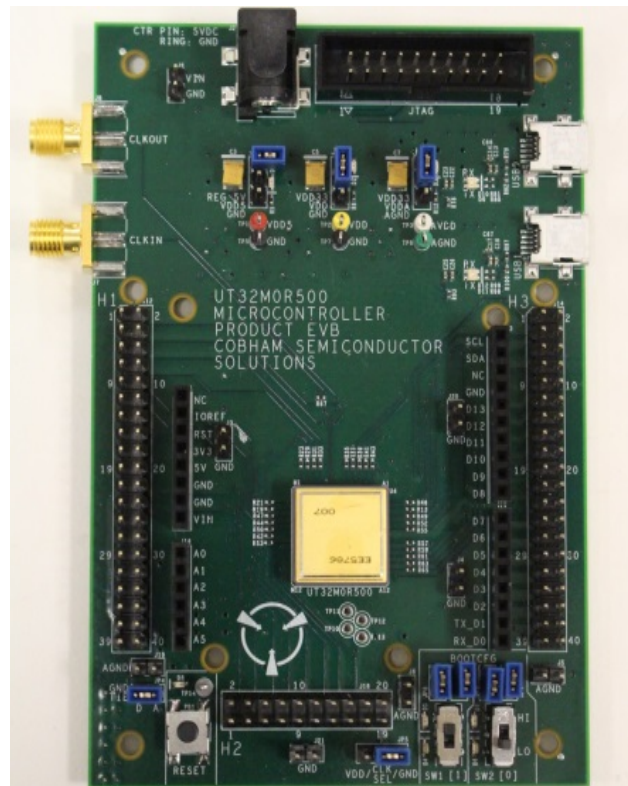
5.2 FreeRTOS

Open Source FreeRTOS. Link: <https://www.freertos.org/>

6.0 Development Board

The UT32M0R500-EVB development board is available for purchase. This board provides a comprehensive and rapid prototyping platform for the UT32M0R500 Microcontroller. The Arduino™ Uno connectivity and full product pinout allow for easy expansion and accessibility. Along with the microcontroller, the subject board includes JTAG connectors for debugging and USB-to-UART connectors for communicating from a PC and supports an external clock.

The UT32M0R500-EVB Development Board User Manual can be found at this link:
http://ams.aeroflex.com/pagesproduct/datasheets/UT32M0R500_EVB_Users_Guide.pdf



7.0 Summary and Conclusion

All product documentation and software development environment has been summarized in this document.

REVISION HISTORY

Date	Rev. #	Author	Change Description
05/8/2018	1.0	Anthony Wilson	Initial Release
08/29/2018	1.1	JoLyn Maly	Added functional manual link



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