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APPLICATION NOTE 3919

Initialization and Configuration of the DS26303 LIU

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Abstract: This application note describes how to properly configure the DS26303 T1, E1, J1 Line Interface Unit (LIU). It contains C style example code and will ease the initial software development by allowing the designer to quickly achieve basic system operation.

Introduction

When developing software for a newly designed telecommunications system, the task of achieving basic device operation is often the toughest undertaking. The DS26303 transceiver adds the complexity of an extensive set of functions and multiport operation. To ease the initial hurdle to getting the system up and running, Maxim created a C code style example which will initialize the devices for basic operation in either T1 or E1 mode. The software developer only has to modify the code for the desired operation and write code for two system-dependant functions. Once the code is compiled it should be ready to load onto the system for test and evaluation. It should be noted that there are two varients of the DS26303, these are the DS26303-120 and the DS26303-75. While the differences are very minor and only affect a couple of settings, one needs to be aware of which device is used in a design.

Code Example

The following code example in **Figure 1** will need some modification before it can be correctly compiled for use in the target system. The code for the function calls "write(address, data)" and "wait(milliseconds)" are system-dependant, so they need to be written for the current microprocessor environment. The code assumes that the device is mapped into a 16-bit local bus at address offset 0x0000 and that the device data bus is only eight bits. If this is not the case, either the code can be modified or the function calls can be written to account for this. The code also contains may different settings for certain registers to give the developer several options for items like clock frequency, line coding, and more. Although the code covers a wide range of basic functionality, it is in no way complete. The data sheet should be referenced for any additional desired functionality.

Download complete code (TXT, 16kB)

Figure 1. Code to initialize and configure the DS26303 line interface unit.

References

If you have additional questions on the LIU initialization and configuration, please contact the Telecommunication Applications support team.

For more information about the DS26303 Octal T1/E1/J1 Line Interface Unit please consult the appropriate data sheet which is available on the Maxim website at   T/E Carrier and Packetized Products.

Related Parts		
DS26303	3.3V, E1/T1/J1, Short-Haul, Octal Line Interface Unit	Free Samples

More Information

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