Application Note: AN01001

Adding TCP/IP to AVB

This application note describes how to add TCP/IP and a Webserver to the AVB Endpoint Software on a XMOS Multicore Microcontroller.

Details of prerequisites and required software components are provided, together with instructions to build an example application that combines AVB Endpoint (Audio Listener) functionality with a simple webserver.

For the discovery and control of AVB networks the use of the AVB standard 1722.1 protocol is always recommended. However some applications, such as Automotive SOME/IP or an audio endpoint with a built-in webserver, also require layer 3 functionality - which this note facilitates.

Required tools and libraries

- xTIMEcomposer Tools - Version 13.2.0
- XMOS AVB Stack - Version 6.0.4
- Ethernet/TCP Module - Version 3.2.1rc1.a

Required hardware

The example code provided with the application note has been implemented and tested on the XMOS AVB-LC Kit[1] connected to a MacBook Pro 9,2.

Prerequisites

- This document assumes familiarity with the XMOS xCORE architecture, the XMOS tool chain and the xC language. Documentation related to these aspects which are not specific to this application note are linked to in the references appendix.
- Basic knowledge of Ethernet Networks and the applicable Protocols (TCP/IP, AVB)
- Reading the **AVB Endpoint Quickstart Guide** and **AVB System Requirements Guide**.
- For descriptions of XMOS related terms found in this document please see the XMOS Glossary[2].

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[1] http://www.xmos.com/products/reference-designs/avb-lc
[2] http://www.xmos.com/published/glossary