

## ***Using the TMS320C6474 Antenna Interface (AIF) for Inter-DSP Communication***

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*Daniel Chen*

### **ABSTRACT**

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The TMS320C6474 Antenna Interface (AIF) is a CPRI and OBSAI-compliant peripheral whose primary purpose is to transfer baseband antenna samples, via a high-speed SerDes interface, between a radio sub-system and a baseband sub-system in cellular infrastructure applications.

This article describes how the AIF peripheral can be used for generic inter-DSP communication. We start by introducing relevant concepts of the OBSAI protocol. Next, a software protocol is defined, built on top of OBSAI, for transmission of variable size packets, at a variable (bursty) transfer rate, between two DSP devices connected via the AIF.

This software protocol has been implemented and is available as Inter-DSP AIF Communication Library (IAClib), which can be considered a low-level driver for inter-DSP AIF communication. The driver, as well as a sample application demonstrating the use of the driver, is explained in this document, and the corresponding source code is made available as a starting point for further development and customization.

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