

42nd SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) – The
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A LOW COST SPECTRUM ANALYZER FOR SETI OBSERVATIONS.

Abstract

The high resolution spectrum analysis has always represented one of the more crucial steps of the Seti program data processing. Up to now the spectrometers required for this purpose have been expensive but, exploiting the state of the art of nowadays technology, we have now the opportunity to design and build very powerful low cost high resolution spectrometer. In this paper we present a Polyphase/ FFT based high resolution system, composed by a Quad core engine and a high speed and wide dynamic range A/D converter, powered by an onboard FPGA (Field Programmable Gate Array) from the Virtex family. Basically the operating bandwidth could be in the range of few hundred of MHz.