Development of a High-Speed Digital Signal-Process Board for the KEKB Bunch Feedback Systems, E. KIKUTANI, S. KUROKAWA, M. TOBIYAMA, KEK - We have been developing bunch feedback systems to cure expected coupled bunch instabilities in KEKB, a b-Factory project in Japan. In KEKB, the number of stored bunches amounts to >> 5000 per ring and their spacing is only 2 nano-seconds. In order to treat these bunches each part of the feedback systems should be very wide-banded. The signal process part of these feedback systems is a digital system to ensure the reliability under the severe condition. We developed a prototype of a digital signal process board consisting of an analog-to-digital converter, a main signal process part and a digital-to-analog converter. In the main signal process part, custom-made de-multiplexer/multiplexer IC's are implemented to reduce the frequency in the logic. The logic works as both simple digital delay and a two-tap FIR filter with a flexible tap configuration. In this paper, we describe basic performance of the signal process board.