

**Product Name :**

DSP Lab - DSP based Embedded System Lab for DSP Teaching Labs

**Product Code :**

DSP-TR-02

**Description :**

DSP Lab - DSP based Embedded System Lab - Digital Signal Processing is a technique that converts signals from real world sources (usually in analog form) into digital data that can then be analyzed. Analysis is performed in digital form because once a signal has been reduced to numbers; its components can be isolated, analyzed and rearranged more easily than in analog form. Digital Signal Processing (DSP) applications are becoming more prevalent in everyday use. Because of this widespread usage and advances in computer technology, the DSP algorithms themselves are being subjected to more demanding specifications. There is a constant need for designing systems with lower power, higher speed and less space and to achieve this we are developing new algorithms, techniques. It's an integrated solution for establishing DSP based Embedded System Lab, based on TI 6000 platform. The lab is designed to learn about the signal processing in Digital Domain. DSP Lab is equipped with complete set of Hardware and Software to perform DSP experiments. Real-Time DSP Lab is complete solution to understand the real-time DSP systems principles and Real-world applications using, C and various assembly programs based on TI's TMS320C6713 Processor. Here we designed Real-Time Signal Processing. Audio Signal Processing & applications oriented windows. In Real- Time signal processing the outputs are controlled by external inputs as well as virtual inputs. It is advantageous in many areas of DSP like Instrumentation & telecommunication etc. Audio signal processing is the processing to represent an auditory signals or sound. The audio effects can be heard by Audio player, which is included withing the software. Single-Channel, Double-Channel of Multi-Channel windows give the concept of single channel RTDX & multichannel RTDX. The software is designed to interact with DSP Processor and consists theory of DSP, TMS320C6713 Processor and lab experiments. The processing power of the integrated 'C6713 (floating point) DSP allow Real-Time Processing of high bandwidth data streams thereby reducing the processing load placed on the host CPU.

## Naugra Export

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