

16-Bit Development Platform

Nvis 5005



Nvis 5005 is a 16 bit Development Platform incorporating state of the art 16-bit MSP430F54xx microcontroller from Texas Instruments. The platform utilizes all the peripheral of microcontroller in a best possible way that suits the need of students and developers. Peripherals are brought out on the platform and categorized keeping in mind the ease of use. A full set of support software including examples are provided to quick start application development. In brief, Nvis 5005 provides a perfect hardware and software platform to start the application development in no span of time and makes learning microcontroller a fun. Nvis 5005 allows users to evaluate, prototype and create application specific designs.

Features

- MSP430F54xx (x430 core with 16-bit RISC architecture) ultra low power MCU clocked at maximum speed of 18 MHz
- 16 KB of on-chip static RAM and up to 256 kB of on-chip Flash
- 18 MHz maximum CPU clock available from programmable on-chip PLL
- Both Serial and JTAG Programming Interfaces
- One touch Power supply switch
- On platform GPIO Connectors
- Selectable On platform 3.3V and 5V Power Supply output to power external circuits
- Ultralow Power Consumption with five different power modes
- Self contained trainer with On platform DC Power Supply



Scope of Learning

- Study of MSP430 Microcontroller architecture
- Pin to pin study of MCU
- To study serial protocol(I2C/SPI)
- To study internal PWM
- To study Timer/Interrupt
- To study RTC
- To study Internal ADC
- Interface various external MCXX series modules

Technical Specifications

MCU	:	MSP430F54xx
Main Oscillator	:	Internal Digitally Controlled Oscillator (DCO) with PLL
LED's	:	8 nos.
ADC	:	Four 12 bit ADC Input Channels On-Platform with single variable DC Input
Interrupts	:	Four External Interrupts on-platform
TIMER	:	Seven Timer compare outputs and Timer clock output
GPIO's	:	Ten GPIO Ports on Platform
Clock Output	:	Three clock outputs from MCU
Serial Communication	:	One RS232 Port
Philips I2C	:	One I2C interface (Master/Slave) with $Data$ and $Clock$ bus pulled up to Vcc
SPI	:	A four wire SPI interface (Master/Slave)
Programmer	:	USB port for programming
Programmer Mode	:	Run/ISP Switch Selection
Interconnections	:	2 mm Patch Chords with FRC Cables
Learning Material	:	Online (Theory, procedure, reference results etc)
Dimensions (mm)	:	W 326 x D 252 x H 52
Power Supply	:	110V - 260V AC, 50/60Hz
Weight	:	1.5Kg (approximately)
Operating Conditions	:	0-40°C, 85% RH
Included Accessories	:	RS232 serial cable FRC cable, Power Supply, Interface adaptor for MC Series, CD.

Optional

NVIS Technologies makes MCXX Series extension module to interface with this platform.

