ADVANCE TECHNOLOGY
(An ISO 9001:2008 Company)

EQUIPMENTS/ TOOLS / INSTRUMENTS
for Students
for Project Purpose

- ➤ **Interfacing Module**
- ➤ **Full Development Boards**
- ➤ **Wireless Modems**
- ➤ **Student Boards**
- ➤ **Nano Series**
- ➤ **Programmer**
- ➤ **Sensors**
- ➤ **Special Chip Pragrammer**

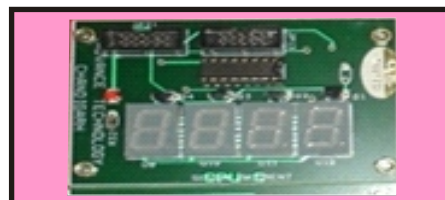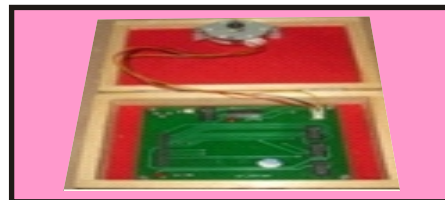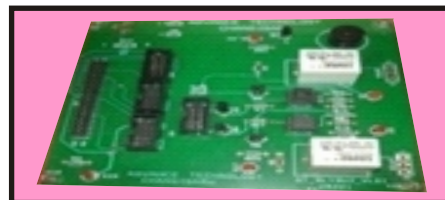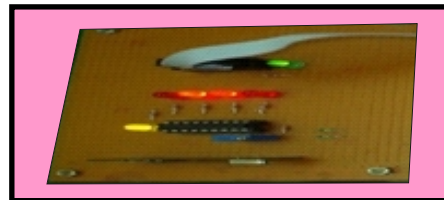| Interfacing Module	
DAC Interface The DAC0808 module is an 8-bit monolithic digital-to-analog converter (DAC) featuring a full scale output current settling time of 150 ns while dissipating only 33 mW with ±5V supplies with example program.	
ADC Interface ADC0809 interface module is a monolithic CMOS device with an 8-bit analog-to-digital converter, 8-channel multiplexer and microprocessor compatible control logic. The 8-bit A/D converter uses successive approximation as the conversiontechnique with example program	
LED Interface Led module is based on 8 bit output indication with 8 leds easy to interface with every microcontroller series with +5v supply with example program	
7- Segment Interface Seven segment module is based on 4 multiplexed common anode displays with easy to interface with every microcontroller series with +5v supply with example program	
DC Motor Interface This interface consists of DC Motor +6v Power Supply with driver circuitry along with the necessary software to control of the DC Motor using PWM. This interface permits the speed control of DC Motor using PWM.	
Stepper motor Interface This interface consists of stepper motor with 7.5 degree stepping +6v Power Supply withrequired driver circuitry along with the necessary software to control of the stepping and direction. This interface permits the speed control of stepper Motor.	
Traffic Light Interface This interface simulates the control of Traffic Lights at a traffic island. In each of four directions (East, West, North, South). LED indicators Amber, Red, Pedestrian (Green) are provided. These 16 LED's are controlled though 16 Port Lines on the Card.	
Relay- Buzzer Interface This interface simulates the control of electromagnetic switch called relay. Two relays with on-off status LED indicators, with supply 5v dc easy to interface	
SD MMC Card Interface This module simplify the electrical connection of Micro SD card with general purpose MCUs like AVRs and PICs. The board brings out all SPI pins of micro SD card via standard 0.1 inch headers. The board required input 5v and have on board conversion 3.3v regulator, power and activity indicator LEDs, SD Pull-up resistors, 5v to 3.3 volt level shifter IC. This board is fully compatible with 5v MCUs.	

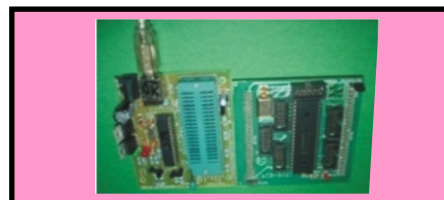|	
RF 433Mhz Interface 433 Mhz ASK Transmitter and Receiver Modules to transmit and receive serial data with dazzling 100 m range in open space.	
Full Development Boards	
8051 Daughter board -USB Interface Philips89V51RD2BN/ 89C51RD2BN with 10pin FRC for 4 data I/O with VCC & GND on each connector. Power jack for 5 volt supply and 11.0592 MHz crystal, so that it can be used in stand alone mode also, with USB interface programming cable, and Downloading tools	
AVR Daughter board-parallel port AVR AT Mega 8515/8515L Mcs with 10 pin FRC headers, with power jack, along with Evaluation version of code vision IDE and pony parallel port Prog. programming tools.	
AVR Daughter board-usb version AVR AT Mega 8515/8515L Mcs with 10 pin FRC headers, with power jack, along with Evaluation version of code vision IDE and extreme usb programming hardware tool. **Now AT MEGA 16/32 128 boards are also availabale**	
PIC 16F877A Daughter board-parallel port PIC16F877A Microcontroller with 10 Pin FRC header for 5 ports with power jack ,parallel port programming connector along with compatible Evaluation Version of sources boost /miKroC IDE and PPP3 Downloading tool with example programs.	
PIC16F/18F Daughter board-USB PIC Microcontroller 16/18 with 10 Pin FRC headers for 5 ports with power jack ,USB port programming connector along with compatible Evaluation Version of **miKroC IDE** and **extreme** Downloading tool with example programs.	
Serial Wireless Modems	
(GSM / Bluetooth / wi-fi/ biometric / GPS and many type of modems available) **Bluetooth modem development board** This board has Serial Bluetooth modem (class1) 3.0V to 3.6V operation , Full Bluetooth Data rate over UART and USB Support	
Bluetooth AD-HOC Networking development boards These development board has 3 Serial Bluetooth modems (class1) 3.0V to 3.6V operation ,Full Bluetooth Data rate over UART and USB Support and easy to interface with any microcontroller series and to learn Bluetooth based wireless network like point to point and AD-HOC using Bluetooth AT-command set.	
Finger Print modem development board This development board has rs232 board to interface finger print modem data with serial microcontrollers to development security and identification applications.	

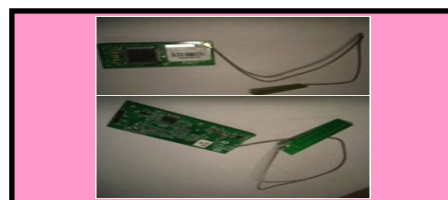|	
GPS Receiver modem development board This development board has rs232 conversion circuit to condition High quality GPS modem data and easy to interface with microcontrollers and desktop to develop applications	
GSM modem development board This development board has rs232 conversion circuit to condition GSM modem data and easy to interface with Serial microcontrollers and desktop to develop applications like security systems and to study AT command set.	
Wi- Fi modem development board WI-FI modem is third generation Embedded uart module, support wireless IEEE 802.11b/g standard frequency range 2.412-2.484 GHz. support quick networking and multiple security authentication mechanism.	
X- Bee modem development board Long Range Data Integrity, Advanced Networking & Security, serial communication, digital I/O and adc support different xbee operation modes, X-CTU software support to reconfigure modem.	
Student Boards **Low cost ready to use development boards** **8051 Student practice board** This 8051 board has 16X2 character LCD display 4 multiplexed 7-segment displays Buzzer ,8 I/Ps from DIP switches,8 O/Ps available on LED's Compatible to program AT89S51 and P89C51RD2/P89v51 All four ports are available on connector for xternalinterface,RTC,4KEPROMI2cprotocol,relay 5V.	
8051 student board Compatible to program P89C51RD2/P89v51 microcontroller All four ports are available on board to develop hobby and industrial projects. **Very low cost along with Large General purpose area for component soldering .**	
PIC Student board Compatible to program PIC16F/18F microcontrollers having same pin configuration with usb and parallel port ,All ports are available on board to develop PIC based hobby and industrial projects. **Very low cost along with Large General purpose area for component soldering**	
CPLD 44 Student PCB Compatible to program XILINX- XC9572-PC44 VLSI chip pin configuration with usb and parallel port ,All ports are available on board to develop VLSI /CPLD based hobby and industrial projects.	
CPLD 44 Student practice board Compatible to program XILINX- XC9572-PC44 VLSI chip, pin configuration with usb and parallel port ,All ports are available on board to develop PIC based hobby and industrial projects. **Very low cost along with Large General purpose area for component soldering**	

Nano Series

Nano 8051-Serial

Nano 8051 with serial ,16X2 LCD display,4 multiplexed 7-segment displays, Buzzer ,8 -I/Ps from DIP switches. 8-O/Ps available on LED's, Compatible to program AT89S51 and P89C51RD2,All four ports are available on connector, for external interface. On board reset circuit, Stepper motor interface,2 x 2 Matrix keypad,4 on board Tactile switches

Nano 8051- usb

16X2 LCD display,4 multiplexed 7-segment displays ,Buzzer ,8- I/Ps from DIP switches.8- O/Ps available on LED's, Compatible to program AT89S51 and P89C51RD2,All four ports are available on connector, for external interface. On board reset circuit, Stepper motor interface,2 x 2 Matrix keypad,4 on board Tactile switches, USB powered / power jack

Nano CPLD 44 parallel

XC9572 CPLD Device,8 Digital I/Ps and O/Ps with LED indication, Four 7 segment multiplexed display, Onboard 8 Mhz clock & power on reset circuit 16 x 2 LCD, single Relay 5V ,Buzzer, Four Push buttons for digital input, PARALLEL Programming cable,16 I/O for external interface CD user manual Single ADC with LM35 temperature sensor.


Nano CPLD 44 USB

XC9572 CPLD Device,8 Digital I/Ps and O/Ps with LED indication, Four 7 segment multiplexed display, Onboard 8 Mhz clock & power on reset circuit 16 x 2 LCD, single Relay 5V ,Buzzer, Four Push buttons for digital input, USB Programming cable,16 I/O for external interface CD user manual Single ADC with LM35 temperature sensor.

Nano - FPGA Spartan 3E-USB

Santa Cruz connector for docking FPGA card.,8bit input Dip switch and 8outputLeds, Xilinx FPGA XC3S250E-4PQ208 72 Microcells with 8MHZ Oscillator ,USB JTAG connector ,User Manuals, Sample Code Maximum User I/O 32 for Xilinx FPGA on board usb mode Programming facility.
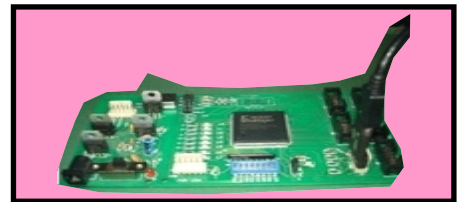

Nano - FPGA Spartan 3E-PARALLEL

Santa Cruz connector for docking FPGA card.,8bit input Dip switch and 8output Leds, Xilinx FPGA XC3S250E-4PQ208 72 Microcells with 8MHZ Oscillator ,USB JTAG connector ,User Manuals, Sample Code Maximum User I/O 32 for Xilinx FPGA on board parallel mode Programming facility


Nano ARM lpc 2106 board

MCU: 32 bit ,128K Bytes Program Flash, 64K Bytes RAM, RTC, 2xUARTs, I2C, SPI, 2x 32bit TIMERS, 7x CCR, 6x PWM, WDT, 5V tolerant I/O, up to 60MHz operation standard JTAG connector with ARM 2x10 pin layout for programming/debugging with ARM-JTAG, On board status LED two on board voltage regulators 1.8V And 3.3V with up to 800mA current Power plug-in jack single power supply: 5VDC required
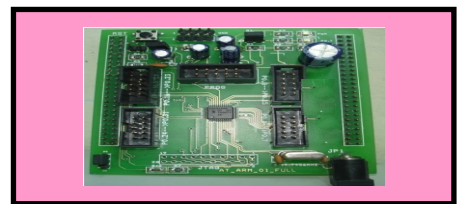
Nano PIC Board-USB

PIC16F877 Controller with 10 Pin box header for 5 ports with power jack , connectors, With USB programming connector along with Evaluation Version of sources boost IDE MIKRO C and Downloading Software.
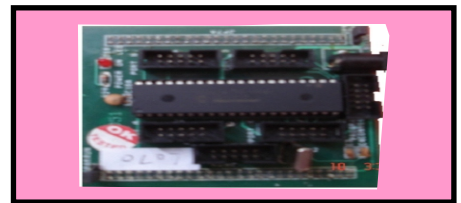
Programmer
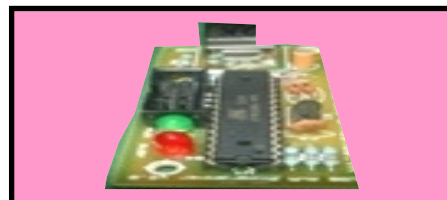
PIC USB 16/18 series Programmer

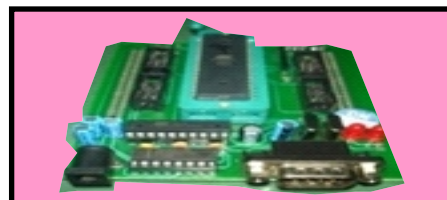Support pic 16f and 18f chip ISP and ZIF mode programming via usb easy to use with supportable software.

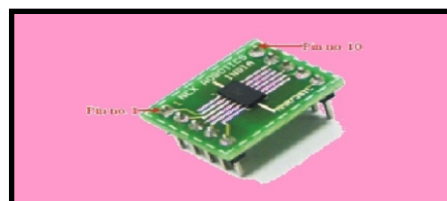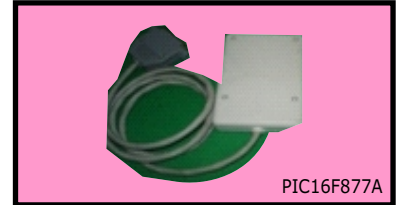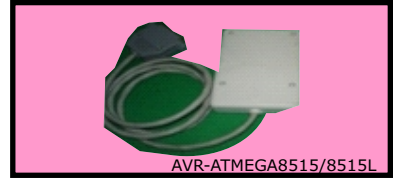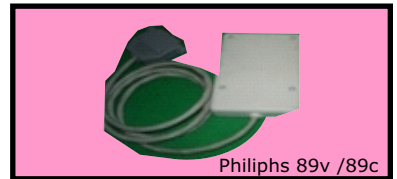|	
AVR USB Programmer Support AVR Chip ISP mode programming via usb easy to use with supportable software.	
ATMEL 89 S Serial programmer Support ISP serial programming ,Atmel 89s51,89s52,89s825,89s8252	
Sensors	
Humidity Sensor module Humidity sensor module with resistance type, Linear dc Output voltage for 0-100 % RH, On board SYH-2 / SYHW-2 Sensors, Wide temp compensation range ,Facility for interface , with microcontrollers.	
Temperature Sensor module- LM 35 LM35 Sensor Facility to interface adc and microcontroller to monitor temp.	
Pressure Sensor module-2PSI On board pressure sensor, with 2 PSI, Output is ratio metric to the power supply ,Facility to generate and monitor pressure on scale In Both engineering Units mmHg as well as psi Unit.	
Proximity Sensor module Proximately switch system with 8051 kit Inductive type Proximity switch Sensors with speed monitoring ,Thru dc motors , for display of rotation on 7 segments , Proximity Sensors with temperatures ranging from −0 to 600C.	
Accelerometer Sensor module Facility for interface with microcontroller with accelerometer, Featuring signal conditioning, 1 pole low pass filter, Temperature compensation, self test, e.g. detect which detects linear freefall, and g- select which allows for the selection between 2 senilities. Low current consumption: 400µA,Sleep mode: 3µA,Low voltage operation: 2.2v 3.6 v, Signal conditioning with low pass filter.	
IR sensor module This is the IR Transmitter and Receiver module used in our IR proximity, White Line or Micro mouse sensor. It consists of 5mm 940 nanometer wave length high power IR LED and photodiode having peak sensitivity at 940 nanometer wavelength	
PIR Sensor Module PIR is a pyroelectric sensor module which developed for human body detection. TTL output can be directly connected to micro controller or logic device High sensitivity	

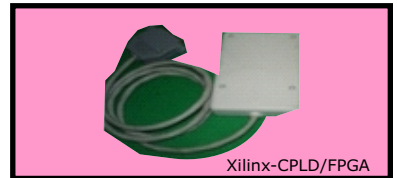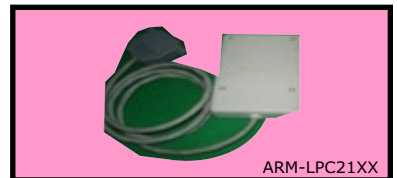| Special Chip Pragrammer	
PIC16F877A parallel ISP programmer for PIC16F877A Microcontroller	 PIC16F877A
AVR-ATMEGA8515/8515L parallel ISP programmer for ATMEGA8515L Microcontroller	 AVR-ATMEGA8515/8515L
Philiphs 89v /89c series serial ISP programmer for P89v51rd2bn/P89c51rd2bn Microcontrollers	 Philiphs 89v /89c
Xilinx-CPLD/FPGA parallel VLSI JTAG for XILINX devices e.g. CPLDs FPGAs	 Xilinx-CPLD/FPGA
ARM-LPC21XX series serial LPC21XX series serial port based ISP programmer.	 ARM-LPC21XX