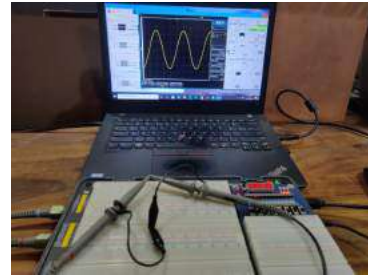
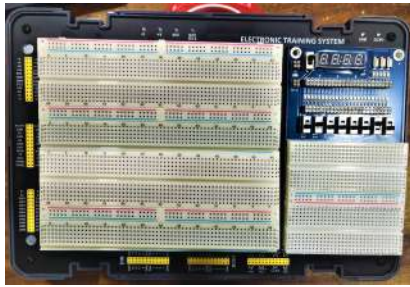







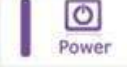




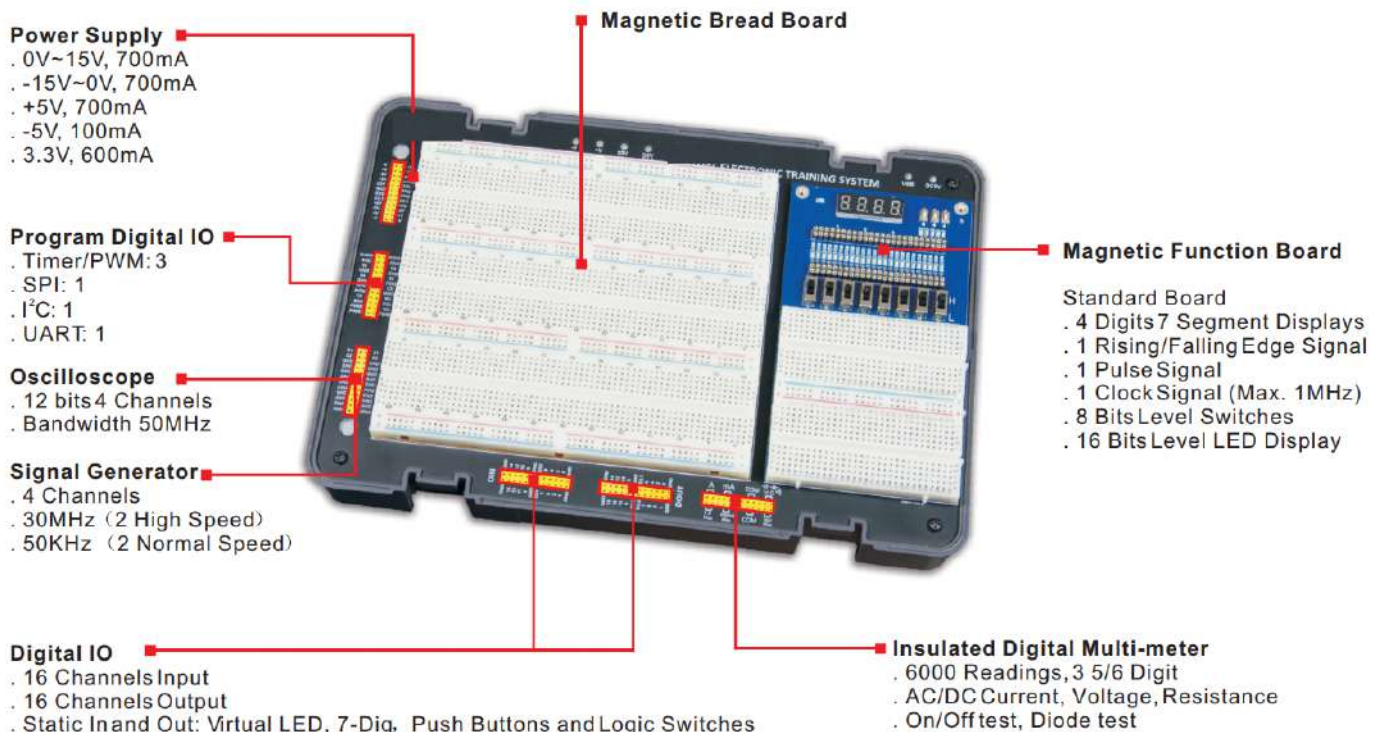


M31-1000 SERIES VIRTUAL ELECTRONIC TRAINING SYSTEM



12 Main Functions All in One

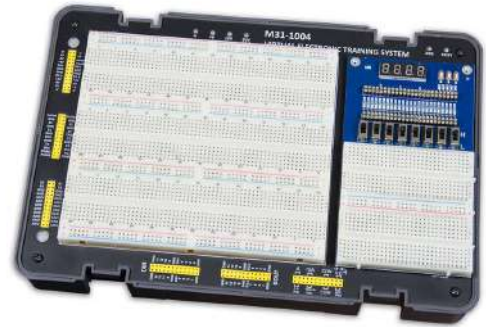
- | | | | |
|--|---|--|---|
|  | Insulated 3 5/6 Digit Multi-meter |  | Bode Analyzer |
|  | 4 Channels Oscilloscope |  | 16 Channels Logical Analyzer |
|  | 4 Channels Signal Generator |  | 16 Channels Pulse Signal Generator |
|  | Data Acquisition Card |  | $\pm 3V \sim \pm 15V, \pm 5V, 3.3V$ |
|  | Spectrum Analyzer |  | PI2All-USB to SPI, I ² C, UART, PWM & GPIO |
|  |  | Static In and Out: Virtual LED, 7-Dig, Push Buttons and Logic Switches | |



M31-1000 SERIES **NEW**

Features

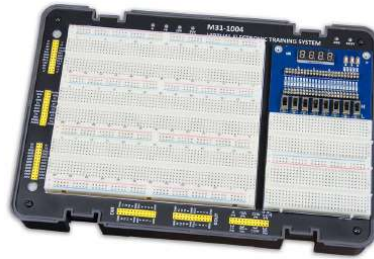
- .Max. 50MHz bandwidth, 100MSa/s sampling rate (Oscilloscope)
- .Max. 30MHz sine wave output (Signal generator)
- .Arbitrary waveform output
- .16 channel digital input output
- .Digital multimeter
- .Office report, source data save
- .USB2.0 interface, no external power source required,easy to use
- .Operating system: Windows XP or above
- .Easy to carry



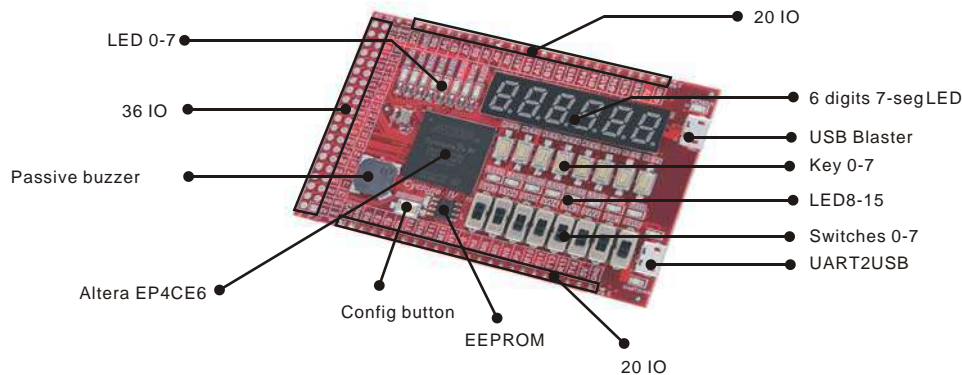
Technical Data

Oscilloscope	Channels	4		
	Sampling rate	100MSa/s@4CH		
	Bandwidth	50MHz		
	ADC resolution	12bit		
	Time base range	10ns~10s		
	Vertical resolution	10mV/div~5V/div		
	Input coupling	AC/DC		
	Max. input voltage	±25V		
	Vertical resolution(Accuracy)	10mV/div ~ 5V/div (±1%)		
	Trigger mode	Auto, normal and single		
	Trigger source:	CH1~CH4		
	Trigger level adjustable	Yes		
Math	+, -, ×, ÷, FFT			
Signal generator	Channels	4 (2 Main channel, 2 secondary channel)		
	DAC resolution	12bit		
	Max. frequency (sine)	30MHz (Main channel) 50KHz (Secondary channel)		
	Wave form	Sine, Triangle, Square, DC, Arbitrary		
	Output range	±0.5mV~±5V		
Spectrum analyzer	Channel	1		
	ADC resolution	12bit		
	Bandwidth	50MHz		
	Sampling rate	100MSa/s		
	Voltage range	±25V		
	Auto measuring	Frequency, SNR, THD, V-Peak		
Other measuring	Hanning, B-H, RMS, Peak Hold			
Logical analyzer	Channels	16		
	Max. Input voltage	5V		
	Max. Sampling rate	50MSa/s@4CH 20MSa/s@8CH 10MSa/s@16CH		
	Max. Sampling depth	1000 points / 500s		
Pulse generator	Channels	16		
	Refresh rage	10MSa/s		
	Output signal level	3.3V, 5V		
	Inner/Ext. Trigger select	Yes		
Digital multimeter	Voltage range / Accuracy	0.1mV~36V / 1%		
	Current range / Accuracy	0.1uA~600uA / 1% 0.1mA~400mA / 1% 100mA~3A / 1%		
	Resistance range / Accuracy	0.1Ω~40MΩ / 1%		
	Capacitor range / Accuracy	0.1nF~4mF / 2%~5%		
	On/Off test	Yes		
Power output	Output range	±1.8V~±15V, fixed ±5V, fixed 3.3V		
	Rated current	±700mA (±1.8V~±15V), 700mA (fixed+5V), -100mA (fixed-5V), 600mA (fixed 3.3V)		
	Protection	Shout cut / over current		

Interface:	USB 2.0
Power source:	USB
Dimensions (W×H×D):	290×40×195 mm
Weight:	1.5kg

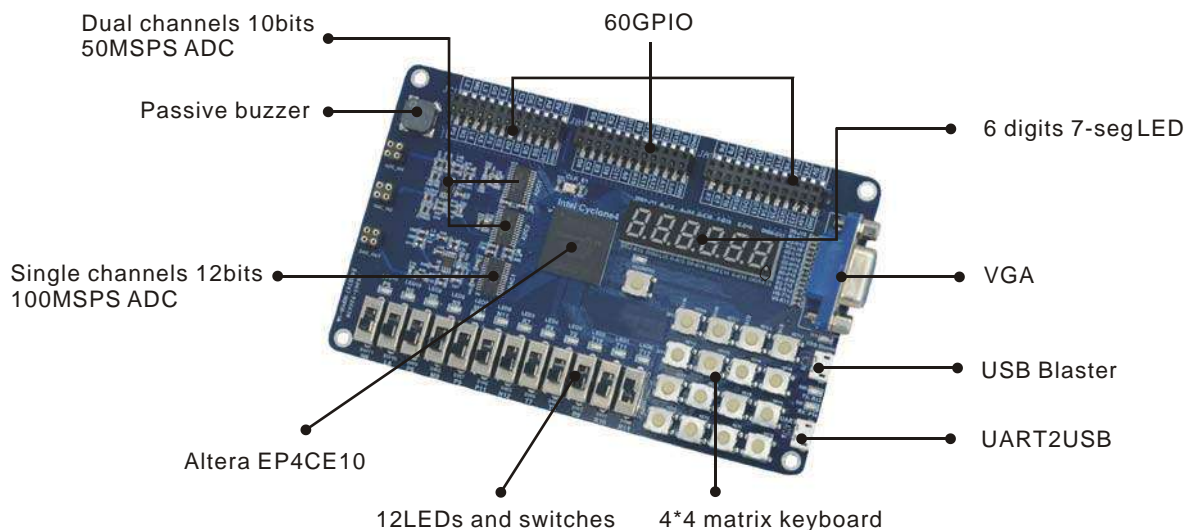


M31-0001 FPGA EXPERIMENT BOARD



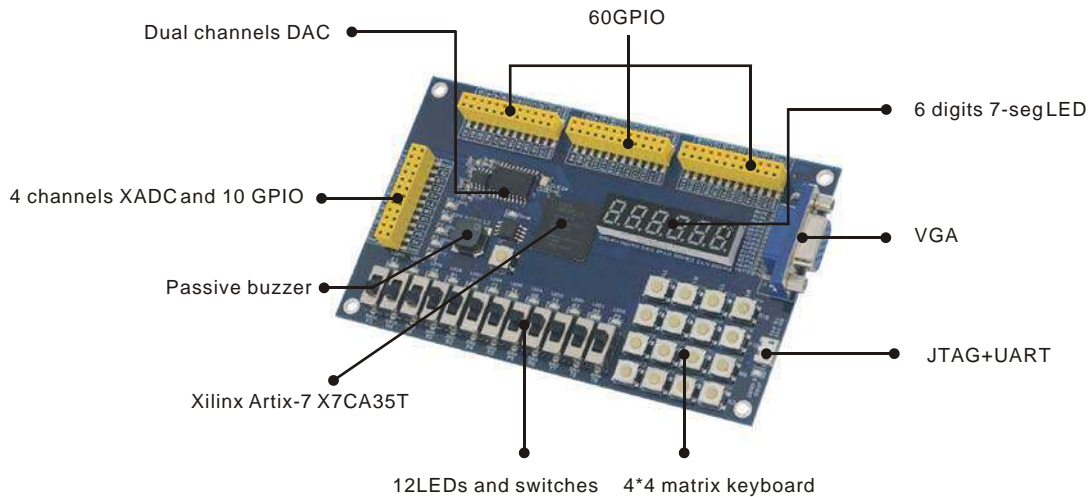
- .Altera EP4CE6 FPGA chip with EPCS16 configuration chip, 50MHz timer.
- .On board USB Blaster for downloading and power supply.
- .1 passive buzzer, 6 digits 7-segment display, 16 LEDs, 8 switches, 8 input keyboard and 76GPIO.

M31-0002 FPGA EXPERIMENT BOARD



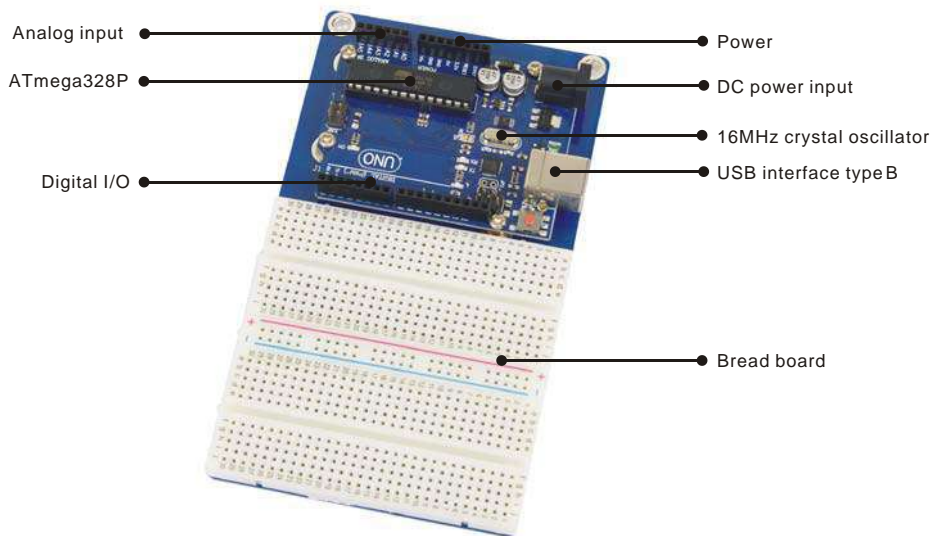
- .Altera EP4CE10 FPGA chip with EPCS16 configuration chip, 50MHz timer and 16Mbits input.
- .On board USB Blaster for downloading and power supply.
- .1 passive buzzer, 6 digits 7-segment display, 1 VGA output, 1 UAT2USB, 12 LEDs with 12 switches, 4*4 matrix keyboard, 60GPIO.
- .1 Dual channels 10bits 50MSPS ADC and 1 Single channel 12bits 100MSPS DAC for signal processing.

M31-0003 FPGA EXPERIMENT BOARD



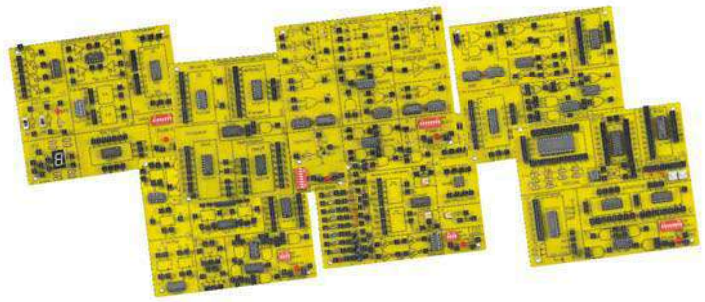
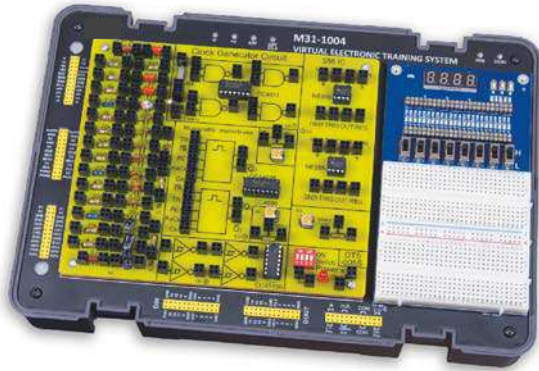
- .Xilinx Artix-7 X7CA35T FPGA chip with 50MHz timer input and 32Mbits configuration chip
- .VIVADO fully support
- .On board JTAG + UART combination USB circuit for downloading, UAT2USB and power supply.
- .1 passive buzzer, 6 digits 7-segment display, 1 VGA output, 12 LEDs with 12 switches, 4*4 matrix keyboard, 70GPIO.
- .1 Dual channels DAC and 4 channels XADC inputs

M31-0004 ARDUINO UNO EXPERIMENT BOARD

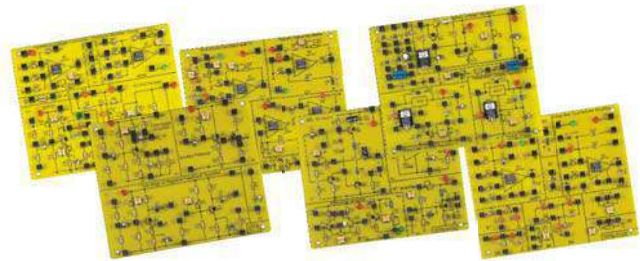


- .ATmega328P microcontroller.
- .5V operating voltage.
- .7-12V Input voltage (9V recommended).
- .14 digital I/O pins (of which 6 provide PWM output), 6 PWM digital I/O pins, 6 analog Input pins.
- .32 KB (ATmega328P) flash memory (0.5 KB used by bootloader)
- .2KB (ATmega328P) SRAM, 1KB (ATmega328P)EEPROM
- .16 Mhz clock speed
- .1 bread board

M31-1000 SERIES WITH ACL AND DCL EXPERIMENT BOARDS **NEW**



DCL-7000 EXPERIMENT BOARDS



ACL-7000 EXPERIMENT BOARDS

ACL-7000 SUPPORTED EXPERIMENT

- Experiment 1 Monopole Amplifying Circuit
- Experiment 2 Two Stage Amplifier Circuit
- Experiment 3 Negative Feedback Amplifier Circuit
- Experiment 4 Emitter Follower
- Experiment 5 Differential Amplifier
- Experiment 6 Scaling Summing Amplifier
- Experiment 7 Integrator and Differentiator Amplifier
- Experiment 8 Waveform Generator Circuit
- Experiment 9 Active Filter
- Experiment 10 Voltage Comparator
- Experiment 11 Wien Bridge Oscillator
- Experiment 12 Integrated Power Amplifier
- Experiment 13 Rectifier Filter and Parallel Regulation Circuit
- Experiment 14 Series Regulation Circuit
- Experiment 15 Integrated Voltage Regulator
- Experiment 16 RC Oscillator
- Experiment 17 LC Oscillator and Frequency-selective Amplifier
- Experiment 18 Current/voltage Conversion Circuit
- Experiment 19 Voltage/frequency Conversion Circuit
- Experiment 20 Complementary Symmetry Power Amplifier
- Experiment 21 Waveform Conversion Circuit
- Experiment 22 FET Amplifier

DCL-7000 SUPPORTED EXPERIMENT

- Experiment 1 Transistor Switching Characteristics
- Experiment 2 Logic Function and Parameter test of TTL Integrated Logic Gate
- Experiment 3 Logic Functions and Parameter Test of CMOS Logic Gate
- Experiment 4 Verify Function of Logic Gate
- Experiment 5 Integration Logic Circuit Connection and Drive
- Experiment 6 Applications of TTL Gates with Open-collector Outputs and Tri-state Outputs
- Experiment 7 Digital Comparator Circuit
- Experiment 8 Arithmetic Operation Circuit
- Experiment 9 Parity Generator
- Experiment 10 Encoder and Decoder
- Experiment 11 Data Selector and Distributor
- Experiment 12 Use Gate to Produce Pulse Signal (Multivibrator)
- Experiment 13 Monostable Trigger and Schmitt Trigger (Pulse Delay and Waveform Shaping Circuit)
- Experiment 14 555 Timer and Its Application
- Experiment 15 Trigger (flip-flop) and Its Application
- Experiment 16 Shift Register IC and Its Application
- Experiment 17 IC Counter and Its Application
- Experiment 18 Random Access Memory 2114A and Its Application
- Experiment 19 D/A and A/D converter