LEAP ELECTRONIC

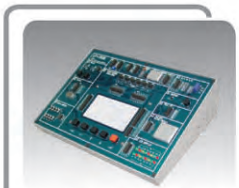
2009 PRODUCT SELECTION GUIDE

Sustaining Innovation Continual Improvement

Innovative Technology Leap Into the Future


T&M Instrument


Gang Programmer


Learning-kit


Auto Handler

Let's Leap! From Leap to Leaptronix

力浦電子實業股份有限公司
LEAP ELECTRONIC CO., LTD.

1980
General Purpose Instrument
DVM/Counter/Power Supply/
Function Generator

1982
ICT 1
Taiwan First Digital IC Tester
Leap-1200
Taiwan First Stand-Alone Gang Programmer

1985

1986
LP-1700
Taiwan First RAM Tester

1988
LEP-101A
PC Based Single Writer
ICT-7
Taiwan First Linear IC Tester

1989
PCFACE-1
World First PC Extend Interface Protector

1990
UP-1
MCU Learning Kit

1991
WICE-1
Asia First ROM Emulator

1993
WICE-PLD
PLD Emulator
WICE-66
MCU Emulator

1994
LEAPER-10
World First Handy Type Universal Writer
LEAPER-3
World First Handy Type EPROM Writer

1995

1997
SU-2000
First Modulized Stand-Alone Gang Programmer
WICE-8052
First Windows Based 8052 Emulator

1998
WICE-4MA/8MA
Windows Based ROM Emulator

1999
LP-2900
FPGA/CPLD Learning Kit

2000

2001
LS-2
Taiwan First ADSL Wireline Simulator

2002
LEAPER-48
Taiwan First USB Handy Type Writer

2003
WICE-M4
World First Mini USB ROM Emulator
LP-2600
World First VHDL Smart Logic Design
Experimental LAB

2004
PCFACE-V
PCI Extension PCI Interface Protector

Programmer Department

2005

Leaptronix®
INSTRUMENT

LA-100
World First Mini Stand-Alone Logic Analyzer

WICE-ME
World First Handy USB SPI Emulator

mPP-2505
Taiwan First Digital Mini Programmable DC
Power Supply

2006

2006

LA-100P/2025/2050
Stand-Alone Logic Analyzer

LEAPER-8
Oscillator
Programmer

mPP-3040D/3035T
Mini Programmable Power Supply Series

AH-200
Automated Programming System

AH-600
Automated Programming System

2007

LA-20XX Series
Stand-Alone Logic Analyzer

SU-6000
High Speed
Gang Programmer

LPP/mPP Series
Programmable Power Supply Series

IWT-5000
Impulse Winding
Tester

AH-200/400
Automated Programming System Series

2008

APE-3200A Series
Automated Programming System Series

MSO
Mixed Signal Oscilloscope

Table of Contents

Programmer Series

EPROM Eraser/Adaptor & Converter

IC Tester Series

Emulator Series

PCFACE Series

Learning Kits Series

Leaptronix®

Logic Analyzer Series

Power Supply Series

Automated System

Active and Passive Component Testers Series

Company Profile

Leap Electronic was established in 1980, located in TangChen Industrial Park, Sanchung city, Taipei. To help our customers establish completed development system has always been our priority. Due to our company involves in the field of IC test and programming equipments deeply, we have good long-term partner relationships with both foreign IC manufacturers such as ATMEL, INTEL, MICROCHIP, FREESCALE, NXP, SPANSION, ST, SST, RENESAS, etc and domestic IC manufacturers like UMC, WINBOND, MXIC, EON, ESMT, HOLTEK, AMIC, SYNCMOS, etc.

Because of our outstanding performances in R&D, Leap not only meets customer's ODM & OEM requests but also focuses on the promotion of our own brand. For example, we ourselves manufacture IC programmer, emulator, IC tester and interface protector in a name of Leap. The above merchandises we mentioned have good reliability and ISO-9001 certification. Leap's Gang programmer especially gets good reputations from our clients. Leap has been expanding its product line and devoting to the development of measuring instruments. We also produce the first Taiwan-made stand-alone logic analyzer in a name of Leaptronix.

Leap has lots of hands-on experiences in current products, semiconductor equipments and educational electronic goods, and also has many skilled R&D engineers. Our distributors spread all over the world and offer well-organized internet sales, rapid technical service. To promote Leap's products all over the world, Leap obtains ISO 9001 certification and absolutely guarantees customers the best quality. Leap devotes ourselves to keep training professional team, promoting the image of organization and increasing market share, so we have established four branches in Shanghai, Beijing, Tianjin and Dongguan to provide customers well-organized and professional services.

Current situation and future plan

Leap is always eager to cooperate with educational organizations and regularly seminars so we have enough abilities to combine the practical and theoretical. That also helps Leap promote our development abilities. Leap tries our best to carry out our belief "Preserving development technology and preventing brain drain".

Automation will replace manpower gradually because of its high efficiency and accuracy. While doing test & measurement, automation can also solve the following problems, such as 3D (dull, dangerous and dirty). Leap thinks automation will be the mainstream in this industry, and firmly believes that combining automation with test & measurement instrument will be the trend of the high tech industry in the future, hence we creative AH automation series equipped with unique "Robotic Arm" to effectively increase productivity.

Leap sets itself current growth goals of expanding brand awareness, firming company image and offering good consultant service. In order to maintain product quality and protect intellectual property right, we apply product certification and patent. Leap has been insisting a strong faith " things are made in Taiwan equals to reliability." while devoting to the development of test & measurement and we are pretty proud of it. Leaptronix, a manufacturing brand from Taiwan, always holds the spirit that instrument is the source of industry. We try our best to establish positive brand image diligently, and hope Leaptronix could be a leader in the field of digital test & measurement.

SU-6000/SU-6000S

Flash Gang 4 Programmer /The best solution for programming high-density Flash memory/

Introduction

SU-6000 is a newly-designed gang programmer for high-density NAND/NOR Flash memory. It provides the highest speed and stability. Furthermore, for the special application of NAND Flash, it provides Bad Block Skip programming, verifying, master reading and device analysis functions. In addition, the innovative adapter design which lets users change adaptors quickly and save the cost of consumptive materials for mass production. The transmission rate of SU-6000 is up to 480M bytes/minute and SU-6000 is able to support 4 sites NAND Flash Bad Block Skip programming, verifying and master reading at the same time. It is able to simplify the preparation and increase the work efficiency when mass production. With the outstanding characteristics, SU-6000 is undoubtedly suitable for engineers to overcome the next generation IC programming issue.

Standard Accessories

Main unit.....x1
CD.....x1
(Driver and user manual are included)
USB cable.....x1
AC power cord.....x1
Adaptor screw.....x18

Optional Accessories

TSOP, TSSOP, BGA, uBGA, VSOP, SOP, SSOP, PLCC, etc.

Features

- Support NAND Flash Bad Block Skip programming & verifying on 4 sites simultaneously.
- Ultra high NAND Flash programming speed: 32M bits/sec.
- Intelligent NAND FLASH master reading: Bad Block Skip or whole device reading.
- Auto-detect function: wrong insertion of device, bad connection of pins, etc.
- Innovative adapter design: Support different packages by changing adaptor.
- Independent socket circuit: Increase the security and stability.
- High speed data transmission: 480M Bytes/minute.
- Stand-alone industrial LED start button: Pass, Fail, Work LEDs on each site.
- Operating software for mass production: working by project, control programming quantity, yield rate statistics, etc.
- User-friendly: flexible for adjusting the operation angle, able to lay the unit horizontally or obliquely.
- Built in auto-switching power: Support 100V~240V AC input.

Specification

User RAM	64 MBytes
Button/Switch	START LED / ID Setting
User Interface	Power LED, Work / Pass / Fail LEDs on each site
Communication	USB 2.0
Power	100V AC~240V AC
Frequency Range	50/60Hz
Power Consumption	75W(Max)
Dimension	31.5cm x 24cm x 8cm (Socket and START Key are not included)
Weight	3.5Kg
Operating Altitude	up to 5000m
Operating Humidity	20%~70% (non-condensing)
Temperature	+5℃ ~ +45℃

File Type Supported

- Binary、Intel HEX、Tek HEX、Motorola HEX、ASCII HEX , etc.

PC System Requirement

Operating System	Windows XP-SP2/Vista32
Processor	Pentium 4 and above
Memory	512MB~1G RAM and above
Hard Disk	500M Byte and above
Communication	USB 2.0

SU-3000

Gang 8 Programmer

Introduction

SU-3000 is a high-speed and modular gang programmer for production. Quickly supporting new devices, particular for wireless, PDA and cell phone industries. SU-3000 supports stand-alone programming mode and PC-Based programming mode.

Standard Accessories

Main unit.....x1
CD.....x1
(Driver and user manual are included)
User manual.....x1
25-pin printer cable.....x1
AC power cord.....x1

Optional Accessories

TSOP, TSSOP, BGA, uBGA, VSOP, SOP, SSOP, PLCC, etc.

Features

- Program 64Mb FLASH Memory within 60 seconds.
- Modular design.
- Just change cartridges or adaptors to support different IC package types.
- Stand-alone mode with 18-key keypads and 20x4 LCD display.
- Auto-switching power: 100V~240V AC input.
- Each module has protection function for safe, stable and fast programming.
- Support low voltage 1.8 V~5V "green" ICs.
- Auto detect function：wrong device insertion, bad pin connection, etc.
- Auto search FLASH/EPROM brand and serial number, effective reduce programming time.

Specification

User RAM	4M bits
Button/Switch	18-Key
User Interface	20x4 character LCD
Input/Output	Parallel port (printer port)
Power	100V AC~240V AC
Frequency Range	50/60Hz
Power Consumption	65W(Max)
Dimension	39cm x 22.6cm x 10.9cm
Weight	4.0Kg
Module Dimension	26.5cm x 17.2cm x 2cm
Module Weight	1Kg
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃ ~ +45℃

File Type Supported

- Binary、intel HEX 、TEK HEX、Motorola HEX。

PC System Requirement

Operating System	Windows 98/ME/2000/XP
Processor	Pentium III and above
Memory	128MB RAM and above
Hard Disk	30MB and above
Communication	Printer Port

SU-2000

Gang 8 Programmer

Introduction

SU-2000 is another revolutionized product which is "stand-alone", "stable", "speedy" and modular designed. Users can program different types of IC through different cartridges. SU-2000 is able to work in stand-alone or PC-Based programming mode. Besides, users can add new device to SU-2000 via Printer Port.

Standard Accessories

Main unit.....x1
CD.....x1
(Driver and user manual are included)
User manual.....x1
25-pin printer cable.....x1
AC power cord.....x1

Optional Accessories

TSOP, TSSOP, BGA, uBGA, VSOP, SOP, SSOP, PLCC, etc.

Features

- Modular design.
- Stand-alone mode with 18 Key keypads and 20x4 LCD display.
- Auto-switch power 100V-240V AC input.
- Each module has protection function for sale, stable, and fast programming.
- Graphic design lets programming status clear.
- Support low voltage "green" ICs.
- Auto detect function ：wrong device insertion , bad pin connection, etc.
- With auto-search FLASH/EPROM brand and serial number functions.

Specification

User RAM	1M bits
Button/ Switch	18-Key
User Interface	20x4 character LCD
Input/Output	Parallel Port (Printer Port)
Power	100V AC~240V AC
Frequency Range	50/60Hz
Power Consumption	65W(Max)
Dimension	39cm x 19.5cm x 6cm
Weight	3.5Kg
Module Dimension	26.5cm x 17.2cm x 2cm
Module Weight	1Kg
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃ ~ +45℃

File Type Supported

- Binary、intel HEX 、TEK HEX、Motorola HEX。

PC System Requirement

Operating System	Windows 98/ME/2000/XP
Processor	Pentium III and above
Memory	128MB RAM and above
Hard Disk	30MB and above
Communication	Printer Port

SU-300

Stand-Alone IC Programmer

Introduction

SU-300 is a modular Universal programmer that works in stand-alone or PC-Based mode. Because of its modular design, SU-300 is able to work with different types of IC through various cartridges or adaptors. It's the best tool for QC and QA.

Standard Accessories

Main unit.....x1
CD.....x1
(Driver and user manual are included)
User manual.....x1
25-pin printer cable.....x1
AC Power Cord.....x1

Optional Accessories

TSOP, BGA, uBGA, VSOP, QFP, PLCC, etc.

Features

- Support different IC families and IC packages through various cartridges and adaptors.
- Each module has protection function for sale, stable, and fast programming.
- Graphic design lets programming status clear.
- Support low voltage "green" IC.
- User friendly and process programming by pressing ↑, ↓, Enter and ESC buttons.
- Auto detect function: wrong device insertion, bad pin connecting, etc.
- With auto-search FLASH/EPROM brand and serial number function.

Specification

User RAM	4M bits
Button/ Switch	18-Key
User Interface	20x4 character LCD
Input/Output	Parallel port (printer port)
Power	100V AC~240V AC
Frequency Range	50/60Hz
Power Consumption	45W(Max)
Dimension	23.5cm x 21.5cm x 10.9cm
Weight	2.2Kg
Module Weight	500g
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃ ~ +45℃

File Type Supported

●Binary、Intel HEX、Tek HEX、Motorola HEX、ASCII HEX, etc.

PC System Requirement

Operating System	Windows 98/ME/2000/XP
Processor	Pentium III and above
Memory	128MB RAM and above
Hard Disk	30MB and above
Communication	Printer Port

SU Series- Cartridge List

FLASH -8BIT CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

2000-FLASH-8BIT-DIP32
2000-FLASH-8BIT-PLCC32
2000-FLASH-8BIT-PLCC32A
2000-FLASH-8BIT-VSOP32
2000-FLASH-8BIT-TSOP32
SU-FLASH-8BIT-TSOP48F-R
SU3000-FLASH-8BIT-TSOP48S-R
SU-F8BIT-TSOP40SW-R
SU-F8BIT-TSOP48SST-R
SU-FLASH-8BIT-TSOP40F-R

FLASH-16BIT CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-F16BIT-TSOP56A-R
SU-F16BIT-TSOP56N-R
SU-F16BIT-TSOP56M-R
SU-F16BIT-TSOP56P-R (1.8V)
SU-F16BIT-TSOP56PN-R (3.3V)
SU-F16BIT-TSOP48S-Y
2000-FLASH-16BIT-PSOP44
2000-FLASH-16BIT-PLCC44
2000-FLASH-16BIT-DIP40
SU-F16BIT-DIP42

SU-3000 BGA CARTRIDGE (ONLY FOR SU-3000)

ADAPTOR

For more detail information, please contact sales department.

SU2000-F16BIT-BGA48W
SU2000-F16B-FBGA48 (0.75Pitch)
SU2000-F16BIT-FBGA48A
3000-BGA-FBGA85S
SU3000-BGA-TFBGA48
SU2000-F16BIT-VFBGA56
3000-BGA-MCP56-A
SU-BGA-EBGA64T
SU-BGA-EBGA64TP
SU-BGA-FBGA64-S
3000-BGA-MCP73
3000BGA-CSP88-4400L0ZDQ0 (MASTER)
3000BGA-CSP88-4400L0ZDQ0 (SLAVE)
SU3000-BGA-CSP88 MASTER
SU3000-BGA-CSP88 SLAVE
2000-F16B-CSP88 MASTER
2000-F16B-CSP88 SLAVE
SU-BGA-AA056H-J0H0-45W
SU-BGA-AA073H0-K0H0-40M
SU-BGA-AA073H0-L0I0-45T
SU-BGA-AA107H0-I0L0-46T
SU-BGA-BA048E0-F0D0-20T
SU-BGA-CA048H0-F0H0-40W
SU-BGA-LRS1828C
SU-BGA-AA069H0-K0H0-45T
SU-BGA-LRS-LFBGA72
SU-SST-WFBGA34
SU-BGA-SCSP72-L0H0
SU-BGA-FBGA72
SU-BGA-EB064J0-H0J0-43T
SU-BGA-CA048H0-I0H0-30W
SU-BGA-TFBGA47

SU3000 BGA-18 CARTRIDGE (ONLY FOR SU-3000)

ADAPTOR

For more detail information, please contact sales department.

BGA18-CSP88-R (11*8mm)
BGA18-CSP88-N (10*8mm)
BGA18-CSP88-M (12*8mm)
BGA18-DA107H8-K0H0-35Y
BGA18-FBGA84-KFH0
BGA18-TFBGA88(10*8mm)
BGA18-EBGA64
BGA18-VFBGA56-GGI0
BGA18-WFBGA48
BGA18-FA084H0-KFH0-40T

SU Series- Cartridge List

FWH CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

2000-FWH-PLCC 32N
2000-FWH-TSOP 40
2000-FWH-VSOP 32

MCS-51 CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU2000-MCS51-DIP-87C5X
SU2000-MCS51-PLCC-87C5X
SU2000-MCS51-DIP-89CX051
SU2000-MCS51-SOP20
SU-MCS51-TQFP44N
SU-MCS51-PQFP44PIN
MCS51-LQFP44
MCS51-VQFP64

FMCS-51 CARTRIDGE (ONLY FOR SU-3000)

ADAPTOR

For more detail information, please contact sales department.

SU-FMCS51-DIP20
SU-MCS51-DIP40
SU-FMCS51-SOP20
SU-MCS51-PLCC44
SU-MCS51-VQ44S
SU-MCS51-LQFP48
SU-MCS51-W79EXX-PQ100
SU-FMCS51-W79E8XX-SOP20

SEEPROM CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU2000-SEEPROM-DIP24
SU-SEEPROM248-SOP16
SU-SEEPROM-SOP8-207-2493XXX
SU-SEEPROM-SOP8-207-25XXX
SU2000-SEEPROM-SOT23
SU2000-SEEPROM-SOT23M
SU2000-SEEPROM-TSSOP16
SU-SEEPROM-SOP16-R (Rohm Only)
SU-SEEPROM-SOP16S (150mil)
SU-SEEPROM-MSOP8-2493
SU-SEEPROM-DFM8
SU-SEEPROM-MSOP-ROHM
SU-SEEPROM-BR9080-SOP16R
SU-SEEPROM-CAT64XXX-SOP16

SFLASH CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SFLASH-SOP-150S
SFLASH-SOP8-45DBXXX
SFLASH-TSOP28-45DBXXX
SFLASH-WSON8-6×8
SFLASH-45DBXXX-CASON8

SU Series- Cartridge List

SFLASH PLUS CARTRIDGE (ONLY FOR SU-3000)

ADAPTOR

For more detail information, please contact sales department.

SU-SflashPlus-BASE-Board
SU-SflashPlus-DIP24 Socket Board
SU-SflashPlus-SOP8-150 Socket Board (open top)
SU-SflashPlus-SOP8-207 Socket Board (open top)
SU-SflashPlus-SOP16-300 Socket Board (open top)
SU-SflashPlus-TSOP28 Socket Board
SU-SflashPlus-TSOP32 Socket Board
SU-SflashPlus-TSOP40 Socket Board
SU-SflashPlus-WSON-5×6 Socket Board
SU-SflashPlus-WSON-6×8 Socket Board

PIC CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU2000-PIC-DIP40
SU2000-PIC-SSOP28
SU2000-PIC-SOP28
LP-SOP-18PIN
LP-SOP-8PIN
SU-PIC-TQFP44
SU-PIC-TQFP64
SU-PIC-SSOP20
SU-PIC-PLCC44
SU-PIC-SOT23
SU-PIC-SOP28-N
SU-PIC-TQFP80

PICWRITER

For more detail information, please contact sales department.

ADAPTOR

SU2000-PIC-DIP40

AVR CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

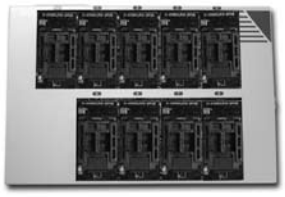
SU2000-AVR-DIP-20/40(40PIN)
SU2000-AVR-DIP-28(28PIN)

NOVATEK CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

2000-NT68FXXX-PLCC44
2000-NT68FXXX-SDIP42
SU-NT68XXX-QFP128
SU-NT686X5/670-QFP128
SU-NT68F6XX-PLCC44



SU Series- Cartridge List

ST6/7/9 CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

2000-ST62-DIP16
2000-ST62-SOP16N
2000-ST7-SDIP 32
2000-ST7-SDIP 32-7263
2000-ST7-SDIP 56/42
2000-ST7-SOP 28
2000-ST7-SOP 34-7263
2000-ST7-SOP 34-72141
2000-ST7-TQFP 44
2000-ST7-TQFP 64
2000-ST9-SDIP 56-92163
2000-ST9-TQFP 64-92163
2000-ST9-TQFP 80-90158

ST7F CARTRIDGE (ONLY FOR SU-3000)

ADAPTOR

For more detail information, please contact sales department.

2000-7FLCD1-SOP28
2000-ST7F-72F62X-SO34
2000-ST7F-72F63B-SD32
ST7F-72F321-VQ64
ST7F-72F324-TQ32
ST7F-72F324-TQ44
ST7F-72F324-SD32
ST7F-72F651-TQ64
ST7F-SCR1-SO24

MTV CARTRIDGE(X8)

For more detail information, please contact sales department.

ADAPTOR

2000-MTV212M-PLCC44
2000-MTV212M-SDIP42
SU2000-MTV212M-SD40/SD42
2000-MTV312M-PLCC44
2000-MTV312M-SDIP42
SU-MTV312M-DIP40

MTV CARTRIDGE(X9)

For more detail information, please contact sales department.

ADAPTOR

2000-MTV230M-PLCC44
2000-MTV230M-SDIP42
2000-MTV412M-PLCC44
2000-MTV412M-SDIP42
SU-MTV415/416-PLCC44 (ONLY FOR SU-3000)
SU-MTV415/416-LQFP48 (ONLY FOR SU-3000)
SU-MTV416GMF-QFP44
SU-MTV512MV-DIP40
SU-MTV512MV-PLCC44 (open top)
SU-MTV512MV-PLCC44 (clamshell)
SU-MTV512MV-QFP44
SU-MTV512MG-LQFP48
SU-MTV332-TQFP64
SU-MTV515/8955-PLCC44
SU-MTV515/8955-LQFP48

SU Series- Cartridge List

CYPRESS CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-CYPRESS-63XXX-SSOP48
SU-CYPRESS-CY8XXX-SSOP28
SU-CYPRESS-CY8XXX-1 (SSOP48)
SU-CYPRESS-CY8XXX-SOP16(open top)
SU-CYPRESS-CY8XXX-DIP40
SU-CYPRESS-638XX-DIP18
SU-CYPRESS-638XX-SOP18
SU-CYPRESS-638XX-SOP16
SU-CYPRESS-63XXX-DIP28
SU-CYPRESS-63XXX-DIP24
SU-CYPRESS-63XXX-SOP18
SU-CYPRESS-63XXX-SOP24
SU-CYPRESS-63XXX-SOP28
SU-CY7C638(9)XX-QSOP24
SU-CY7C638(9)XX-SOP24
SU-CY7C638(9)XX-SSOP48
SU-CY8XXX-MLF48
SU-CY8XXX-MLF56
SU-CY8XXX-TQFP100
SU-CYPRESS-223XXX-SOP8
SU-CYPRESS-223XXX-TSSOP16
SU-CYPRESS-CY8XXX-SOP28
SU-CYPRESS-CY8XXX-SSOP48
SU-CY8C24XX-QFN68
SU-CYPRESS-SSOP28
SU-CY8XXX-QFN32
SU-CY7C637XX-QSOP24
SU-CYPRESS-221XX-TSSOP16
SU-CY7C66013-SSOP48
SU-CY7C60XXX-SOP24
SU-CYRF69XXX-QFN40
SU-CY8C20XXX-QFN32
SU-CYPRESS-638XX-SXC-SOP24

LATTICE CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

Lattice-LC40XX-TQ44
Lattice-LC40XX-TQ48
Lattice-LC4XXX-TQ100
Lattice-LC4XXX-TQ144
Lattice-LC4XXX-TQ176
Lattice-LC4XXX-CBGA56
Lattice-ISP2XXX-TQ44

CPLD CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

2000-CPLD-X9536VQ44
SU3000-CPLD-X9536-VQ44S
2000-CPLD-X9536VQ64
CPLD-XC9572XL-VQ44
CPLD-XC9572XL-VQ64
CPLD-XC9536XL-VQ64
SU2000-CPLD-X9572TQ100
CPLD-X95144XL-TQ100

XC17/18 CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU3000-XC17V0X-VQFP44S
SU3000-XC18V0X-VQFP44S
SU-XC18V0X-VQFP44S

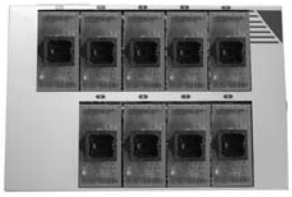
SU Series- Cartridge List

RENESAS CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-H8S223X-FP100
SU-H8S214X-TQFP100
SU-H8S306X-TQ100
SU-H8S2398F-TQ128
2000-HITACHI-H8S2505-TQ144
2000-HITACHI-H8S2161-TQ144
2000-HITACHI-H8S211X-TQ144
SU-M3062XX-QFP100
SU-H8S211X-BGA176
SU-H8S246X-TQ144
SU-M3026X-LQFP48
SU-R5FX-LQFP48
SU-R5FX-LQFP52
SU-R5FX-SSOP20
SU-M3029X-LQFP80
SU-R4FX-LQFP144
SU-H8S/2215-TQFP120
SU-HD64F36XXX-LQFP48
SU-RENESAS-368X-TQ64

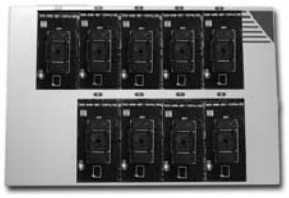


NAND CARTRIDGE (ONLY FOR SU-3000)

ADAPTOR

For more detail information, please contact sales department.

SU3000-NAND-8BIT-WSOP48S
SU3000-NAND-8BIT-TSOP48S
SU3000-NAND-8BIT-TSOP44S
SU3000-NAND-8BIT-FBGA63S
SU3000-NAND-8BIT-FBGA48



ATMEGA CARTRIDGE (ONLY FOR SU-3000)

ADAPTOR

For more detail information, please contact sales department.

3000-ATMEGA-DIP8/28/40
SU-ATtiny26-DIP20
SU-ATtiny26-SOP20
ATTINY2XXX-DIP20
ATTINY2XXX-SOP20
ATTINY1X-SOP8-150
ATMEGA-MLF44
ATMEGA-TQFP32
ATMEGA-TQFP44
ATMEGA-TQFP64
ATMEGA-MLF32
ATMEGA-AT90USB-QFN64
ATMEGA-ATA66XX-QFN48

STK CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU2000-STK6012-PLCC44
SU-STK6031-PLCC44

SU Series- Cartridge List

FPHS CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-PHILIPS-P89LPC9XX (SSOP28)
SU-PHILIPS-P89LPC9XX-TSSOP20
SU-PHILIPS-LPC210X-LQFP48
SU-PHILIPS-LPC210X-LQFP64
SU-PHILIPS-2104-TQFP48

SU-LRS BGA CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-SHARP-LRS140X

FUJITSU CARTRIDGE (ONLY FOR SU-3000)

ADAPTOR

For more detail information, please contact sales department.

SU-MB8920X-SD32

NS CARTRIDGE(ONLY FOR SU-3000)

ADAPTOR

For more detail information, please contact sales department.

SU-PC8375S-PQFP128E
SU-PC8375S-TFBGA128
SU-WPC8763L-LQFP128

Weltrend CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-WT61P4-PLCC44
SU-WT61P6/7/8-PLCC44
SU-WT61P6/7/8-LQFP48
SU-WT61P6/7/8-TQFP44

SIMTEK CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-STK14CA8-SOP32

REALTEK CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-RTD2120-PLCC44
SU-RTD2120-LQFP48

SU Series- Cartridge List

W83LXXX CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

3000-W83L950D-QFP80
SU3000-W83L951-TQFP128
3000-W83L951F-PQFP128

SAA4849 CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

PHILIPS SAA4849 SDIP56

Z86 CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-Z86E0X-DIP18

SMSC CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-SMSC-47NXXX-TQFP128
SU-SMSC-MEC5004L-TQFP128
SU-SMSC-MEC5025-TQFP128

FREESCALE CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-FREESCALE-DIP20

TI CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-TI-QFN32 (MASTER，No Socket)
SU-TI-QFN32 (SLAVE)
SU-TI-MSP430-TQ64
SU-TI-MSP430-SOP20
SU-TI-MSP430-QFN24

SU Series- Cartridge List

SIRF CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-SIRF-BGA140

NEC CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-NEC-UPD17P10X-SOP16
SU-NEC-UPD78-TQFP64
SU-NEC-UPD78-TQFP80

SILABS CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-SILABS-QFN11
SU-SILABS-QFN28
SU-SILABS-QFN8

ADM CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-ADM-LQFP32

MCU CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-TMP86-QFP64
SU-PD78-LQFP64
SU-MB91-TQFP100

COYOTE CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-COYOTE-FBGA96

SINO WEALTH CARTRIDGE

For more detail information, please contact sales department.

ADAPTOR

SU-SH93P423-QFP128

LEAPER-48

USB Handy Universal IC Writer

Introduction

Leap particularly designs LEAPER-48, the USB Handy Universal IC Writer to work with diversified components for R&D. It automatically detects the device pin insertion, empty connecting, and opposite putting, etc. Therefore, it avoids making mistakes while programming. In addition, the graphic operational interface helps user process programming more easily.

Standard Accessories

Main unit x1
DC 12V/2A
power adaptor x1
USB cable.....x1
CD.....x1
(Driver and user manual are included)

Optional Accessories

PLCC, SOP, TSOP, SSOP, TQFP, uBGA, etc.

Features

- Support low voltage components. Provide +/- 5%, +/- 10% Vcc checking function.
- Provide fast programming FLASH/EPROM function. It only takes 20 seconds to process a 16M bits FLASH memory. (C+P+V)
- Graphic operation software: All programming procedures are simplified into few automatic processes.
- Provide auto-programming function.
- System self-test function.
- Device processing interface: 48-pin ZIF socket and directly support DIP package device under 600mil .

Specification

DC/AC Characteristics	Signal Voltage: : 2.5V- 5.0V
	Vcc Voltage : 1.0V-10.0V 500mA
	Vhh,Vpp Voltage : 1.0V-25V 500mA (Max.)
	Clock Frequency : 0Hz - 32MHz
Communication	USB 1.1
Power	DC 12V/2A (Auto-Switching)
Frequency Range	50/60Hz
Power Consumption	24W(Max)
Dimension	16cm x 11cm x 4.5cm
Weight	500g
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃ ~ +45℃

PC System Requirement

Operating System	Windows 98/ME/2000/XP
Processor	Pentium III and above
Memory	128MB RAM and above
Hard Disk	30MB and above
Communication	USB 1.1

EMC Standards

- (per 89/336/EEC), EN55022 Class A, EN50082-1 IEC801-3, IEC801-2 IEC801-4。

Device Supported

- EPROMs, EEPROMs, FLASH, Serial EEPROM, NV-RAMs, Microcontrollers, DSP, PLDs...

File Type Supported

- Binary 、 intel HEX 、 TEK HEX 、 Motorola HEX 。

LEAPER-3C

Stand-Alone Handy Flash IC Writer

Introduction

LEAPER-3C, a compact, user friendly handy stand-alone writer that is specially designed for FLASH EPROM series. It can be powered by power adaptor or batteries. Together with the slave ZIF socket, LEAPER-3C is able to process programming without PC connection. It's an economic tool for programming FLASH memory.

Standard Accessories

Main unit.....x1
DC 12V/500mA
power adaptor.....x1
USB cable.....x1
CD.....x1
(Driver and user manual are included)

Optional Accessories

PLCC-32/TSOP-32/VSOP-32 adaptors

Features

- Stand-alone Flash programmer.
- Light, short, thin, tiny, portable and usable with batteries.
- Copy master IC in stand-alone mode.
- Two operation modes: Stand-alone and PC-link mode.
- User friendly graphic operational interface.
- Able to set programming parameters, such as program algorithm, Vpp, pulse width, etc.

File Type Supported

- Binary / Machine Code、intel HEX、Motorola HEX。

Specification

User Interface	16 x 2 character LCD
Power	DC 12V/500mA
Dimension	16cm x 11cm x 4.5cm
Weight	500g
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃ ~ +45℃
Communication	USB 1.1

PC System Requirement

Operating System	Windows 98/ME/2000/XP	Memory	128MB RAM and above
Processor	Pentium III and above	Hard Disk	30MB and above

Device Supported

27CXX
27C64 27C128 27C256 27C512 27C010 27C020 27C040 27C080
AMD
AM29F010 AM29F010A AM29F010B AM29F002B AM29F002T
AM29F002NB AM29F002NT AM29F002BB AM29F002BT AM29F002NBB
AM29F002NBT AM29F040 AM29F040B AM29LV010B AM29LV001BB
AM29LV001BT
AMIC
A29001U A29001T A290011U A290011T A290010 A29002U A29002T
A290021U A290021T A29040 A29040A
ATMEL
AT49F512 AT49F010 AT49F001 AT49F001N
AT49F001T AT49F001NT AT49F020 AT49F002
AT49F002N AT49F002T AT49F002NT AT49F040
AT49F040T AT49LV512 AT49LV010 AT49LV001
AT49LV001N AT49LV001T AT49LV001NT AT49LV020
AT49LV002 AT49LV002N AT49LV002T AT49LV002NT
AT49LV040 AT49LV040T AT49BV512 AT49BV010
AT49BV001 AT49BV001N AT49BV001T AT49BV001NT
AT49BV020 AT49BV002 AT49BV002N AT49BV002T
AT49BV002NT AT49BV040 AT49BV040T AT29C256
AT29C512 AT29C010 AT29C010A AT29C020
AT29C040 AT29C040A AT29LV512 AT29LV010A
AT29LV020 AT29LV040A AT29BV010A AT29BV020
AT29BV040A AT28C256 AT28C010 AT28C040
BRIGHT
BM29F040
EON
EN29F002B EN29F002NB EN29F002T EN29F002NT
EN29F040
FUJITSU
MBM29F010 MBM29F002B MBM29F002T MBM29F040
MBM29F040A MBM29F040C
HYUNDAI
HY29F002B HY29F002T HY29F040 HY29F040A
IMT
IM29F001T IM29F002T
MEGAWIN
MM29F040E MM29LF040E
MOSEL
V29C51001B V29C51001T V29C51002B V29C51002T
V29C51004B V29C51004T V29C31004B V29C31004T
MXIC
MX29F001B MX29F001T MX29F002B MX29F002NB
MX29F002T MX29F002NT MX29F022NT MX29F040
MX29F004B MX29F004T MX29LV040 MX29LV004B
MX29LV004B MX26C1000B MX26C2000 MX26C2000B
PERFECT
PDT29F010 PE29F002N
PMC
PM29F002B PM29F002T PM29F004B PM29F004T
PM29LV002B PM29LV002T PM29LV004B PM29LV004T
ST
M29F010B M29F002B M29F002T M29F002NT
M29F002BB M29F002BT M29F002NBT M29F040
M29F040B M29W010B M29W022BB M29W022BT
M29W040 M29W040B M28F101 M28F201
M28W101 M28W201
SST
SST39SF512 SST39SF010 SST39SF010A SST39SF020
SST39SF020A SST39SF040 SST39LF512 SST39LF010
SST39LF020 SST39LF040 SST39VF512 SST39VF010
SST39VF020 SST39VF040 SST29EE512 SST29EE512A
SST29EE010 SST29EE010A SST29EE011 SST29EE020
SST29EE020A SST29LE512 SST29LE512A SST29LE010
SST29LE010A SST29LE020 SST29LE020A SST29VE512
SST29VE512A SST29VE010 SST29VE010A SST29VE020
SST29VE020A SST28SF040 SST28SF040A SST28LF040
SST28VF040 SST28VF040A SST27SF256 SST27SF512
SST27SF010 SST27SF020 SST27VF256 SST27VF512
SST27VF010 SST27VF020 SST27VF040 SST37VF512
SST37VF010 SST37VF020 SST37VF040
SYNCMOS
F29C51001B F29C51001T F29C51002B F29C51002T
F29C51004B F29C51004T F29C31004B F29C31004T
WINBOND
W49F020 W49F002A W49F002U W49V020 W49V002A W49V002U
W29C010 W29C011A W29C020 W29C020C W29C040 W29EE512
W29EE010 W29EE011 W29EE020 W29EE040 W27C256 W27C257
W27C512 W27C010 W27C020 W27E256 W27E257 W27E512
W27E010 W27E020 W27E040 W27F257 W27F512 W27F5010

LEAPER-3D

USB Handy Flash IC Writer

Introduction

LEAPER-3D is a compact and light PC-Based programmer which is very suitable for the development servicing or the hobby environment. Combining EPROM and FLASH memory devices programming, LEAPER-3D FLASH IC WRITER supports various 8-Bit and low voltage devices by its 32-pin ZIF socket. It is equipped with the most advanced technology, also uses USB interface for PC communication.

Standard Accessories

Main Unit.....x1
DC 12V/500mA power adaptor.....x1
USB cable.....x1
CD.....x1
(Driver and user manual are included)

Optional Accessories

PLCC-32/TSOP-32/VSOP-32 adaptors

Features

- Light, thin, short, tiny and protable.
- Program 8-bit FLASH serial ICs via USB cable under Windows 98/ME/2000/XP
- User friendly graphic operational interface.
- High performance when programming FLASH Memory. For example: it only takes 22 seconds to program MXIC MX29F040. [Blank Check +Program +Verify]

Specification

Dimension	16cm x 11cm x 4.5cm
Power	DC 12V/500mA
Weight	500g
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃ ~ +45℃
Communication	USB 1.1

PC System Requirement

Operating System	Windows 98/ME/2000/XP	Memory	128MB RAM and above
Processor	Pentium III and above	Hard Disk	30MB and above

Device Supported

27CXXX
27C64 27C128 27C256 27C512 27C010 27C020 27C040 27C080
27C010-Q100-12.0V 27C010-Q100-12.5V 27C010-Q100-13.0V
27C020-Q100-12.0V 27C020-Q100-12.5V 27C020-Q100-13.0V
27C040-Q100-12.0V 27C040-Q100-12.5V 27C040-Q100-13.0V
27C080-Q100-12.0V 27C080-Q100-12.5V 27C080-Q100-13.0V
27C64-Q100-12.0V 27C64-Q100-12.5V 27C64-Q100-13.0V
27C128-Q100-12.0V 27C128-Q100-12.5V 27C128-Q100-13.0V
27C256-Q100-12.0V 27C256-Q100-12.5V 27C256-Q100-13.0V
27C512-Q100-12.0V 27C512-Q100-12.5V 27C512-Q100-13.0V
27C010-N100-12.0V 27C010-N100-12.5V 27C010-N100-12.7V
27C010-N100-13.0V 27C020-N100-12.0V 27C020-N100-12.5V
27C020-N100-12.7V 27C020-N100-13.0V 27C040-N100-12.0V
27C040-N100-12.5V 27C040-N100-12.7V 27C040-N100-13.0V
27C080-N100-12.0V 27C080-N100-12.5V 27C080-N100-12.7V
27C080-N100-13.0V 27C64-N100-12.0V 27C64-N100-12.5V
27C64-N100-12.7V 27C64-N100-13.0V 27C128-N100-12.0V
27C128-N100-12.5V 27C128-N100-12.7V 27C128-N100-13.0V
27C256-N100-12.0V 27C256-N100-12.5V 27C256-N100-12.7V
27C256-N100-13.0V 27C512-N100-12.0V 27C512-N100-12.5V
27C512-N100-12.7V 27C512-N100-13.0V
AMD
AM29F010 AM29F010A AM29F010B AM29F002B
AM29F002NB AM29F002NT AM29F002T AM29F002BB
AM29F002NBB AM29F002NBT AM29F002BT AM29F040
AM29F040B AM29LV010B AM29LV001BB AM29LV001BT
AM28F256 AM28F256A AM28F512 AM28F512A
AM28F010 AM28F010A AM28F020 AM28F020A
AMIC
A29010 A29001U A29001T A290011U
A290011T A29002U A29002T A290021U
A290021T A29040 A29040A
BRIGHT
BM29F040
CATALYST
CAT28F512 CAT28F010 CAT28F020
ATMEL
AT49F512 AT49F010 AT49F001 AT49F001N AT49F001T
AT49F001NT AT49F020 AT49F002 AT49F002N AT49F002T
AT49F002NT AT49F040 AT49F040T AT49LV512 AT49LV010
AT49LV001 AT49LV001N AT49LV001T AT49LV001NT AT49LV020
AT49LV002 AT49LV002N AT49LV002T AT49LV002NT AT49LV040
AT49LV040T AT49BV512 AT49BV010 AT49BV001 AT49BV001N
AT49BV001T AT49BV001NT AT49BV020 AT49BV002 AT49BV002N
AT49BV002T AT49BV002NT AT49BV040 AT49BV040T AT29C256
AT29C512 AT29C010 AT29C010A AT29C020 AT29C040
AT29C040A AT29LV512 AT29LV010A AT29LV020 AT29LV040A
AT29BV010A AT29BV020 AT29BV040A AT28C04 AT28C04E
AT28C16 AT28C16E AT28C17 AT28C17E AT28C64
AT28C64B AT28C64E AT28HC64B AT28C256 AT28C256E
AT28C256F AT28HC256 AT28HC256E AT28HC256F AT28C010
AT28C010E AT28C040
EON
EN29F002B EN29F002NB EN29F002NT EN29F002T EN29F040
EXEL
XL28F010 XL28F020
FUJITSU
MBM28F010 MBM29F010 MBM29F002B MBM29F002T MBM29F040
MBM29F040A MBM29F040C
HYUNDAI
HY29F002B HY29F002T HY29F040 HY29F040A
IMT
IM29F001T IM29F002T
INTEL
28F256A 28F512 28F010 28F020
MEGAWIN
MM29F040E MM29LF040E
MOSEL-VITELIC
V29C51000B V29C51000T V29C51001B V29C51001T V29C51002B
V29C51002T V29C51004B V29C51004T V29LC51000 V29LC51001
V29LC51002 V29C31004B V29C31004T
MXIC
MX29F001B MX29F001T MX29F002B MX29F002NB MX29F002NT
MX29F002T MX29F022B MX29F022NB MX29F022NT MX29F022T
MX29F040 MX29F004B MX29F004T MX29LV040 MX29LV004B
MX29LV004T
PERFECT
PDT29F010 PE29F002N
PMC
PM29F002B PM29F002T PM29F004B PM29F004T PM29LV002B
PM29LV002T PM29LV004B PM29LV004T
PSS
PS29FS001 PS29LP001
SST
SST39SF512 SST39SF010 SST39SF010A SST39SF020 SST39SF020A
SST39SF040 SST39LF512 SST39LF010 SST39LF020 SST39LF040
SST39VF512 SST39VF010 SST39VF020 SST39VF040 SST29EE512
SST29EE512A SST29EE010 SST29EE010A SST29EE011 SST29EE020
SST29EE020A SST29LE512 SST29LE512A SST29LE010 SST29LE010A
SST29LE020 SST29LE020A SST29VE512 SST29VE512A SST29VE010
SST29VE010A SST29VE020 SST29VE020A SST28SF040 SST28SF040A
SST28LF040 SST28VF040 SST28VF040A SST27SF256 SST27SF512
SST27SF010 SST27SF020 SST27VF256 SST27VF512 SST27VF010
SST27VF020 SST27VF040 SST37VF512 SST37VF010 SST37VF020
SST37VF040
ST
M29F010B M29F002B M29F002BB M29F002BT M29F002NB
M29F002NT M29F002T M29F040 M29F040B M29W010B
M29W022BB M29W022BT M29W040 M29W040B M28F256
M28F256A M28F512 M28F101 M28F201 M28W101
M28W201
SYNCMOS
F29C51001B F29C51001T F29C51002B F29C51002T F29C51004B
F29C51004T F29C31004B F29C31004T
TI
TMS28F010A TMS28F010B TMS28F020
Winbond
W49F020 W49F002A W49F002U W29C010 W29C011A
W29C020 W29C020C W29C040 W29EE512 W29EE010
W29EE011 W29EE020 W29EE040 W27C256 W27C257
W27C512 W27C010 W27C020 W27E256 W27E257
W27E512 W27E010 W27E020 W27E040 W27F257
W27F512 W27F010

File Type Supported

- Binary / Machine Code、 intel HEX、 Motorola HEX。

LEAPER-5E

USB Handy MCS-51 IC Writer

Introduction

LEAPER-5E is a single-site programmer especially for 8-Bit microcontroller. It is able to support One-Chip programming and various kinds of file type. As that, LEAPER-5E reaches the programming demands in an effective way. LEAPER-5E is the prior choice for R&D engineers or students while programming diversified components.

Standard Accessories

Main unit.....x1
DC 12V/500mA
power adaptor.....x1
USB cable.....x1
CD.....x1
(Driver and user manual are included)

Optional Accessories

PLCC-44 adaptor

Features

- Light, thin, short, tiny and portable.
- User friendly graphic operation interface.
- High performance while programming 8 bit microcontrollers. For example: It merely takes 4 seconds to program Atmel AT89S52. [Erase + Blank Check +Program + Verify]

Specification

Dimension	16cm x 11cm x 4.5cm
Communication	USB 1.1
Power	DC 12V/500mA
Weight	500g
Operating Altitude	up to 5000m
Operating Humidity	90%(non-condensing)
Temperature	+5℃ ~ +45℃

PC System Requirement

Operating System	Windows 98/ME/2000/XP
Processor	Pentium III and above
Memory	128MB RAM and above
Hard Disk	30MB and above

File Type Supported

- Binary and Machine Code, Intel HEX, Motorola HEX。

Device Supported

ATMEL
AT89C51 AT89C52 AT89LV51 AT89LV52 AT89C55
AT89LV55 AT89C51RC AT89C55WD
AT89S51 AT89S52 AT89S53 AT89LS51
AT89LS52 AT89LS53 AT89S8252 AT89LS8252

HYUNDAI
GMS97C51 GMS97C52 GMS97C54 GMS97C56 GMS97C58 GMS97L51
GMS97L52 GMS97L54 GMS97L56 GMS97L58

INTEL
87C51FA 87C51FB 87C51FC 87C51RA 87C51RB 87C51RC 87C52
87C54 87C58

ISSI
IS89C51 IS89C52 IS89C54 IS89C58 IS89C64 IS89E54
IS89E58 IS89E64 IS89LV51 IS89LV52 IS89C51A IS89C52A
IS89LV51A IS89LV52A

WINBOND
W77E58 W77LE58 W78E51 W78E51B W78E52 W78E52B
W78E54 W78E54B W78E58 W78LE51 W78LE52 W78LE54
W78E516 W78E516B W78E62 W78E62B W78LE516 W78LE58

PHILIPS
P89C51UB P89C52UB P89C54UB
P89C58UB P89C51RA+ P89C51RB+
P89C51RC+ P89C51RD+ P89C51RB2H
P89C51RC2H P89C51RD2H P89C51RA2
P89C51RB2 P89C51RC2 P89C51RD2
P89C51X2 P89C52X2 P89C54X2
P89C58X2 P89C51B P89C52B
P89C54B P89C58B P89C660
P89C662 P89C664 P89C668
P89C138MB P89C238MB P89C838MB

SST
SST89C54 SST89C58 SST89F54 SST89F58

TEMIC
TSC87C51 TSC87C52

PSTART

Handy PIC IC Writer

Introduction

LEAP PSTART is a PIC device programmer manufacturered under lience from Microchip Technology. LEAP PSTART provides product development engineers with a highly-flexible and low-cost tool to design microcontrollers, such as PIC16C5X, PIC16CXX and PIC17CXX 8-bit one-time-programmable(OTP).LEAP PSTART development system works on any PC-compatible machine running under the Windows 2000/XP operating system. LEAP PSTART is easy to use, also features Microchip acclaimed MPLAB Integrated Development Environment with its built-in editor, assembler and Windows based MPLAB-SIM simulator. Sample software programs help the developer quickly get familiar with the LEAP PSTART development system and Microchip microcontroller families.

Standard Accessories

Main unit.....x1
RS-232 cable.....x1
DC 9V/500mA
power adaptor.....x1
CD.....x1
(Driver and user manual are included)

Optional Accessories

SOP/SSOP/TSSOP/TQFP, etc.

Features

- Support PIC 10/12/16/17/18 MCU.
- PSTART is manufactured under license from Microchip.
- Easy to program IC under MPLAB environment. Include built-in editor, assembler and simulator.
- All softwares work under Windows 2000/ XP environment.
- Read, program, verify program code, data memory and parameter setting functions.
- Translate MPASM assembler language sources code to object code.
- MPLAB project can automatically download object file to PIC devices.
- MPLAB-SIM simulator can stimulate the design of all PIC 12/16/17/18 devices.

Specification

Dimension	16cm x 11cm x 4.5cm
Communication	RS-232
Power	DC 9V/500mA
Weight	500g
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Operating Temperature	+5℃ ~ +45℃

PC System Requirement

Operating System	Windows 98/ME/2000/XP	Memory	128MB RAM and above
Processor	Pentium III and above	Hard Disk	30MB and above

Device Supported

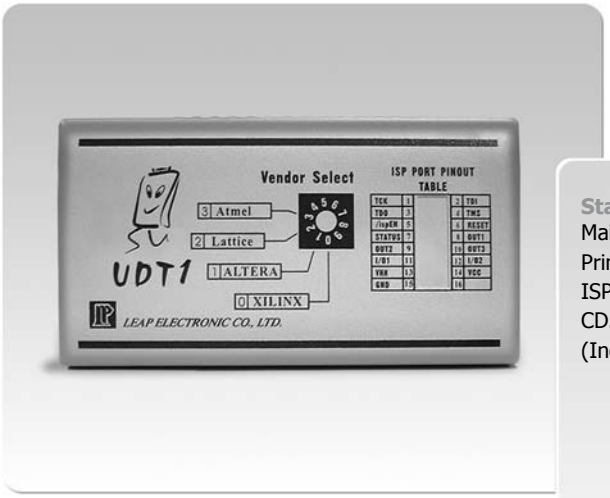
MCV08A		PIC16C65A	PIC16F737	PIC18C442	PIC18F2685
MCV14A		PIC16C65B	PIC16F74	PIC18C452	PIC18F4220
MCV18A		PIC16C66	PIC16F747	PIC18C658	PIC18F4221
MCV28A		PIC16C662	PIC16F76	PIC18C858	PIC18F4320
		PIC16C67	PIC16F767	PIC18F1220	PIC18F4321
PIC10F200	PIC10F206	PIC16C71	PIC16F77	PIC18F1230	PIC18F4331
PIC10F202	PIC10F220	PIC16C710	PIC16F777	PIC18F1320	PIC18F4410
PIC10F204	PIC10F222	PIC16C711	PIC16F785	PIC18F1330	PIC18F442
		PIC16C712	PIC16F818	PIC18F2220	PIC18F4420
PIC12C508	PIC12F510	PIC16C715	PIC16F819	PIC18F2221	PIC18F4423
PIC12C508A	PIC12F519	PIC16C716	PIC16F83	PIC18F2320	PIC18F4431
PIC12C509	PIC12F609	PIC16C717	PIC16F84	PIC18F2321	PIC18F4450
PIC12C509A	PIC12F615	PIC16C72	PIC16F84A	PIC18F2331	PIC18F4455
PIC12C671	PIC12F629	PIC16C72A	PIC16F87	PIC18F2410	PIC18F448
PIC12C672	PIC12F635	PIC16C73A	PIC16F870	PIC18F242	PIC18F4480
PIC12CE518	PIC12F675	PIC16C73B	PIC16F871	PIC18F2420	PIC18F4510
PIC12CE519	PIC12F683	PIC16C745	PIC16F872	PIC18F2423	PIC18F4515
PIC12CE673	PIC12HV609	PIC16C74A	PIC16F873	PIC18F2431	PIC18F452
PIC12CE674	PIC12HV615	PIC16C74B	PIC16F873A	PIC18F2450	PIC18F4520
PIC12F508	rfPIC12C509AF	PIC16C76	PIC16F874	PIC18F2455	PIC18F4523
PIC12F509	rfPIC12C509AG	PIC16C765	PIC16F874A	PIC18F248	PIC18F4525
		PIC16C77	PIC16F876	PIC18F2480	PIC18F4550
PIC16C505	PIC16F54	PIC16C770	PIC16F876A	PIC18F2510	PIC18F458
PIC16C54	PIC16F57	PIC16C771	PIC16F877	PIC18F2515	PIC18F4580
PIC16C54C	PIC16F610	PIC16C773	PIC16F877A	PIC18F252	PIC18F4585
PIC16C55	PIC16F616	PIC16C774	PIC16F88	PIC18F2520	PIC18F4610
PIC16C554	PIC16F627	PIC16C781	PIC16F883	PIC18F2523	PIC18F4620
PIC16C558	PIC16F627A	PIC16C782	PIC16F884	PIC18F2525	PIC18F4680
PIC16C55A	PIC16F628	PIC16C923	PIC16F886	PIC18F2550	PIC18F4682
PIC16C56	PIC16F628A	PIC16C924	PIC16F887	PIC18F258	PIC18F4685
PIC16C56A	PIC16F630	PIC16C925	PIC16F913	PIC18F2580	PIC18F6620
PIC16C57	PIC16F631	PIC16C926	PIC16F914	PIC18F2585	PIC18F6720
PIC16C57C	PIC16F636	PIC16CE623	PIC16F916	PIC18F2610	PIC18F8620
PIC16C58A	PIC16F639	PIC16CE624	PIC16F917	PIC18F2620	PIC18F8720
PIC16C58B	PIC16F639	PIC16CE625	PIC16HV540		
PIC16C620	PIC16F648A	PIC16F505	PIC16HV610		
PIC16C620A	PIC16F676	PIC16F506	PIC16HV616		
PIC16C621	PIC16F677	PIC16F526	PIC16HV785		
PIC16C621A	PIC16F684				
PIC16C622	PIC16F685	PIC17C42	PIC17C756		
PIC16C622A	PIC16F687	PIC17C42A	PIC17C756A		
PIC16C62A	PIC16F688	PIC17C43	PIC17C762		
PIC16C62B	PIC16F689	PIC17C44	PIC17C766		
PIC16C63	PIC16F690	PIC17C752			
PIC16C63A	PIC16F716				
PIC16C642	PIC16F72	PIC18C242	PIC18F2680		
PIC16C64A	PIC16F73	PIC18C252	PIC18F2682		

UDT-1

Universal JTAG/ISP Programmer

Introduction

PLD (Programming Logic Device) is the most common and easy used logic device. It has lots of advantages, such as high performance, low cost, flexible design and easy field configuration or customization. Each CPLD supplier has its own "download kit" so we develop UDT-1, the universal IN SYSTEM PROGRAMMER. Users can use UDT-1 to program different branded CPLD / FPGA devices.



Standard Accessories

Main unit.....x1
Printer cable.....x1
ISP cable.....x1
CD.....x1
(Including driver)

Features

- Support JTAG and ISP specification, on board program function for CPLD and FPGA devices.
- Use vendor's developing system to process design, compile, simulate, debug, on board program and data download.
- Support JTAG /ISP function of FPGA and CPLD manufacturered by ALTERA, Atmel, Lattice, XILINX, etc.
- Excellent circuit structure, best programming quality, high yield rate and protection design to give the best service for users' valuable device.
- Use Printer port to connect with PC & Notebook, easy operating.
- Light, thin, short, tiny and portable.

Specification

Input / Output	Parallel Port (Printer Port)
Power	DC 12V/500mA
Frequency Range	50/60Hz
Power Consumption	6W(Max)
Operating voltage	+1.8V～+6.0V
Output programming voltage	Vhh+12.0V 200mA
Dimension	15cm x 8cm x 3cm
Weight	200g
Operating Humidity	90% (non-condensing)
Operating Temperature	+5℃~ +45℃

PC System Requirement

Operating System	Same as the PC system requirments and parallel port setting when installing IC vendor's design software.

Other Specifications

- 6 standard JTAG and ISP Cables.
- Selective switch for different vendors.
- Red Power LED.

LER-121A/123A

EPROM Eraser

Introduction

Combining well performance and low cost, LEAP produces EPROM ERASER. LER-121A/123A that accommodates 12/64 devices (24-Pin x 0.6), and suits for small developing environment.

Features

- Equipped with electronic starter, extend the product life.
- The timer can be set from 0 to 60 minutes.
- Powerful UV tube, all ICs are ensured for maximum UV exposure.
- Protect users from UV exposure by equipped with automatic UV shut off switch when opening the device drawer.
- LED on the top panel to indicate the status of UV tube.
- Provide almost completely erase area.
- Light, rugged metal construction.
- The erase time is approximately 15 minutes.

Standard Accessories

Main unit.....x1
User manual.....x1
DC power adaptor
9V/500mA (LER-121A).....x1
AC power cord (LER-123A)
.....x1

Optional Accessories

LER-121A : 4W UV tube.
LER-123A : 10W UV tube.

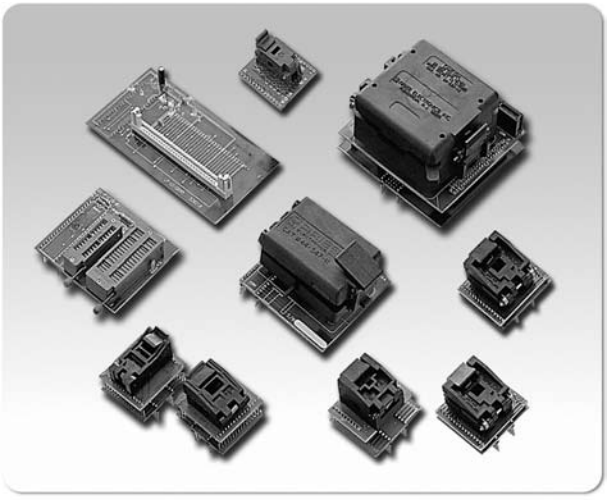
Specification

Model	LER-121A	LER-123A
Erase Quantity	12 pcs (24 PIN)	64 pcs (24 PIN)
Dimension	24cm x 8.5cm x 9.5cm	37cm x 18cm x 10cm
Weight	1.2Kg	3.1Kg
Operating Altitude	up to 5000m	up to 5000m
Operating Humidity	90% (non-condensing)	90% (non-condensing)
Temperature	+5℃ ~ +45℃	+5℃ ~ +45℃

ADAPTOR

Adaptor & Converter

PLCC Package	SOP Package
SSOP Package	SOJ Package
TSOP Package	PQFP Package
PSOP Package	QFP Package
TQFP Package	SDIP Package
DIP Package	TSSOP Package
FPGA Package	µBGA Package



LEAPER-1

Handy Digital IC Tester

Introduction

LEAPER-1 is a protable IC Tester that is especially designed for digital ICs. It has 24-PIN ZIF socket to suit different digital ICs. No PC is required to operate LEAPER-1, it works complete in stand-alone mode through power adaptor or batteries.

Standard Accessories
Main unit.....x1
User manual.....x1

Optional Accessories
DC 9V/500mA
power adaptor.....x1
SOP-16/20/28 adaptor.....x1

Features

- Easy-operating, particularly designed for the digital ICs.
- Supported Device： 74 / 40 / 45 / 41 / 44 Serial.
- Small, portable, light and power-saving, usable with batteries.
- Average test time: 0.8 second.
- Display:16 characters in 1 line LCD.

Device Type

- 74 Series
- 40 Series
- 41 Series
- 44 Series
- 45 Series

Specification

Display	16 x 1 character LCD
Test Pins	14~24 pin
Power	DC 9V/500mA
Dimension	16cm x 11cm x 4.5cm
Weight	340g
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃~+45℃

Device Supported

74 Serial
7400 7401 7402 7403 7404 7405 7406
7407 7408 7409 7410 7411 7412 7413
7414 7415 7416 7417 7418 7419 7420
7421 7422 7423 7424 7425 7426 7427
7428 7430 7432 7433 7434 7435 7436
7437 7438 7439 7440 7441 7442 7443
7445 7446 7447 7448 7449 7450 7451
74H52 7453 7454 74H54 7455 7460 74H61
7463 7464 7465 7470 7472 7473 7474
7475 7477 7478 74H78 7480 7481 7482
7483 7484 7485 7486 7487 7489 7490
7491 7492 7493 7494 7495 7496 74105
74107 74109 74110 74111 74112 74113 74114
74116 74125 74126 74128 74132 74134 74135
74136 74137 74138 74139 74140 74141 74142
74143 74144 74145 74147 74148 74150 74151
74152 74153 74154 74155 74156 74157 74158
74159 74160 74161 74162 74163 74164 74165
74166 74168 74169 74170 74173 74174 74175
74176 74177 74178 74179 74180 74181 74182
74183 74184 74185 74189 74190 74191 74192
74193 74194 74195 74196 74197 74198 74199
74230 74231 74240 74241 74242 74243 74244
74245 74246 74247 74248 74249 74251 74253
74257 74258 74259 74260 74265 74266 74273
74274 74276 74279 74280 74283 74289 74290
74293 74295 74298 74299 74322 74323 74347
74348 74350 74351 74352 74353 74363 74364
74365 74366 74367 74368 74373 74374 74375
74377 74378 74379 74382 74386 74390 74393
74395 74399 74412 74425 74426 74445 74447
74465 74466 74467 74468 74490 74518 74519
74520 74521 74522 74533 74534 74539 74540
74541 74563 74564 74573 74574 74576 74580
74597 74620 74621 74622 74623 74638 74639
74640 74641 74642 74643 74644 74645 74646
74647 74652 74654 74668 74669 74670 74682
74683 74684 74685 74688 74689 74795 74796
74797 74798 74804 74805 74808 74810 74811
74821 74827 74832 74841 74874 741000 741002
741003 741004 741005 741008 741010 741011
741020 741034 741035 741036 741244 741245

40 Serial
4000 4001 4002 4007 4008 4009 4010
4011 4012 4013 4014 4015 4016 4017
4018 4019 4020 4021 4022 4023 4024
4025 4026 4027 4028 4029 4030 4031
4032 4033 4035 4038 4040 4041 4042
4043 4044 4048 4049 4050 4051 4052
4053 4054 4055 4056 4060 4063 4066
4067 4068 4069 4070 4071 4072 4073
4075 4076 4077 4078 40H78 4081 4082
4085 4086 4093 4094 4095 4096 4097
4099 40100 40101 40102 40103 40104 40106
40109 40110 40147 40160 40161 40162 40163
40174 40175 40181 40182 40192 40193 40194
40257
45 Serial
4501 4502 4503 4504 4506 4508 4510
4511 4512 4513 4514 4515 4516 4517
4518 4519 4520 4522 4526 4527 4529
4532 4539 4543 4551 4553 4555 4556
4560 4561 4566 4572 4581 4584 4585
41 Serial
4164 41256 411000 414000(DRAM 1-bit)
44 Serial
4464 44256 441000 (DRAM 4-bit)
※74564 74574 need to be selected manually.

LEAPER-2

Handy Linear IC Tester

Introduction

LEAPER-2 is a portable, small and light Linear IC Tester that provides auto-detection function. Featured for quick search and easy-operating, LEAPER-2 is the best tool to test Linear ICs.

Standard Accessories

Main unit.....x1
User manual.....x1
DC 9V/500mA
power adaptor.....x1

Features

- Easy-operating, particularly designed for the linear IC. (OP, COMPARATTORS, OPTO, REG., Special Function Device, Transistor Array)
- Small, portable, light and power-saving, usable with batteries.
- Average test time: 0.8 second.
- Equipped with empty-load test, and Auto Power Off function.
- Auto identify the unknown ICs and list the P/N of the IC which has same function.

Specification

Display	16 x 1 character LCD
Tester voltage	5V
Test Pins	14~24Pin
Power	DC 9V/500mA
Dimension	16cm x 11cm x 4.5cm
Weight	340g
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃~+45℃

Device Supported

OP(OPERATIONAL AMPLIFIERS, COMPARATORS)

LM101	LM310	TL022	LF347	UA741	LM107
LM318	TL061	LF351	UA747	LM108	LM324
TL062	LF353	UA748	LM118	LM348	TL064
LF355	OP07	LM124	LM358	TL071	LF356
OP27	LM148	LM1458	TL072	LF357	OP37
LM158	LM2900	TI074	LF411	OP42	LM201
LM2902	TL081	LF412	OP90	LM207	LM2904
TL082	ICL7611	OP97	LM208	LM3900	TL084
ICL7621	OP290	LM218	LMC660	TL094	ICL7641
Op490	LM224	CA358	MC3303	ICL7642	TLC252
LM248	CA3130	MC3403	AD648	TLC272	LM258
CA3140	MC3503	AD711	LP124	LM301	CA3160
MC34004	D712	LP324	LW307	CA3240	NE5532
LT1013	HA17324	LM308	CA3260	NE5534	LT1014
UPC451	RC4558	C4082			

COMPARATTORS

LM139	LM193	LM239	LM293	LM339	LM393
LM2901	LM2903	LM3302	LP239	LP339	LP2901
TLC339	TLC393				

OPTO(OPTOCOUPLERS)

4N25	4N26	4N27	4N28	4N29	4N32
4N33	4N35	4N36	4N37	4N38	4N45
4N46	TIL111	TIL116	H11A1	H11B1	H11D1
H11D2	H11D3	H11D4	CNY75	MCT2	PC817
PC827	PC837	PC847	K827P	K847P	

REG.(VOL TAGE REGULATORS)

UA7805...(LM2930-5.0, LM2931 - 5.0, LM2940CT - 5.0)
UA7806...(need to use DC adaptor)

UA7905	LM217	LM317

SPECIAL FUNCTIONS DEVICE

NE555	NE556	TLC555	TLC556	4016	4066
LM723					

TRANSISTOR ARRAY

ULN2001	ULN2003	ULN2004	ULN2005

Device Type

- Operational Amplifiers
- Optocoupliers
- Comparattors
- VOL Tage Regulators
- N555 Series, Transistor Array

ICT-6C

Digital IC Tester

Introduction

ICT-6C is a desktop digital IC Tester which helps user diagnose the quality of digital ICs. Through its auto-search and auto-detection function, ICT-6C is able to continuously test different digital ICs without pressing any function key.

Standard Accessories

Main unit.....x1
User manual.....x1
AC power cord.....x1

Optional Accessories

SOP-16/20/28 adaptor.....x1

Features

- Reliable desktop design.
- User friendly.
- 16x1 character 9x7 dot matrix LCD backlight display.
- Built in 6 function keys and 10 numerical keys.
- Identify over 1800 CMOS / TTL digital ICs(up to 28 pins).
- High-test speed: generally test an IC in 0.8 second.
- The following IC series can be tested under 5 volt.
  1. 54/74 XXXX TTL series.
  2. 40/45 CMOS series.
  3. Other compatible ICs with the above mentioned devices.
- Automatically identify the unknown ICs and list the part number of the IC that has same function.
- "LOOP function": continuously test different ICs of the same part number.
- Various "BUZZER" sounds to present the test result "FAIL" or "PASS".

Specification

Button/ Switch	6 Function Keys : TTL / CMOS, BUZZER, LOOP, SEARCH, GO, ←
	10 Numeric Keys : 0-9
Display	16 x 1 character dot matrix LCD Display
Power	110V AC~220V AC
Frequency Range	50/60 Hz
Test Voltage	5.0 VDC
Alarm	Various tones for the test result
Dimension	33.5cm x 30cm x 10.5cm
Weight	1.5Kg
Operating Humidity	90% (non-condensing)
Temperature	+10℃ ~ +40℃

Device Supported

74 Serial

7400	7401	7402	7403	7404	7405	7406	7407	7408
7409	7410	7411	7412	7413	7414	7415	7416	7417
7418	7419	7420	7421	7422	7423	7424	7425	7426
7427	7428	7430	7432	7433	7434	7435	7436	7437
7438	7439	7440	7441	7442	7443	7444	7445	7446
7447	7448	7449	7450	7451	74H52	7453	7454	7455
7460	74H61	7463	7464	7465	7470	7472	7473	7474
7475	7477	74H78	7480	7481	7482	7483	7484	7485
7486	7487	7489	7490	7491	7492	7493	7494	7495
7496	74105	74107	74109	74110	74111	74112	74113	74114
74116	74125	74126	74128	74132	74134	74135	74136	74137
74138	74139	74140	74141	74142	74143	74144	74145	74147
74148	74150	74151	74152	74153	74154	74155	74156	74157
74158	74159	74160	74161	74162	74163	74164	74165	74166
74168	74169	74170	74173	74174	74175	74176	74177	74178
74179	74180	74181	74182	74183	74184	74185	74189	74190
74191	74192	74193	74194	74195	74196	74197	74198	74199
74230	74231	74238	74240	74241	74242	74243	74244	74245
74246	74247	74248	74249	74251	74253	74257	74258	74259
74260	74265	74266	74273	74274	74276	74279	74280	74283
74289	74290	74293	74295	74298	74299	74322	74323	74347
74348	74350	74351	74352	74353	74363	74364	74365	74366
74367	74368	74373	74374	74375	74377	74378	74379	74382
74386	74390	74393	74395	74399	74412	74425	74426	74445
74447	74465	74466	74467	74468	74490	74518	74519	74520
74521	74522	74533	74534	74539	74540	74541	74563	74573
74576	74580	74597	74620	74621	74622	74623	74638	74639
74640	74641	74642	74643	74644	74645	74646	74647	74652
74654	74668	74669	74670	74682	74683	74684	74685	74688
74689	74795	74796	74797	74798	74804	74805	74808	74810
74811	74821	74827	74832	74841	74874	741000	741002	741003
741004	741005	741008	741010	741011	741020	741034	741035	741036
741244	741245							

40 Serial

4000	4001	4002	4007	4008	4009	4010
4011	4012	4013	4014	4015	4016	4017
4018	4019	4020	4021	4022	4023	4024
4025	4026	4027	4028	4029	4030	4031
4032	4033	4035	4038	4040	4041	4042
4043	4044	4048	4049	4050	4051	4052
4053	4054	4055	4056	4060	4063	4066
4067	4068	4069	4070	4071	4072	4073
4075	4076	4077	4078	40H78	4081	4082
4085	4086	4093	4094	4095	4096	4097
4099	40100	40101	40102	40103	40104	40106
40109	40110	40147	40160	40161	40162	40163
40174	40175	40181	40182	40192	40193	40194
40257						

45 Serial

4501	4502	4503	4504	4506	4508	4510
4511	4512	4513	4514	4515	4516	4517
4518	4519	4520	4522	4526	4527	4529
4532	4539	4543	4551	4553	4555	4556
4560	4561	4566	4572	4581	4584	4585

ICT-7A

Linear IC Tester

Introduction

The new ICT-7A is a desktop IC Tester to determine the quality of linear ICs. It automatically tests IC without keying in IC part number. Built in a 3-PIN regulated socket for user to test Regulator ICs.

Standard Accessories

Main unit.....x1
User manual.....x1
AC power cord.....x1

Features

- Reliable desktop design.
- User friendly.
- 16x1 character 9x7 dot matrix LCD display.
- Built in 6 function keys and 10 numerical keys.
- The following IC series can be tested under +/-5 ~ +/-24V. TIMEER, OP AMP, COMPARATOR, REGULATORS, ZENER, PHOTO COUPLER, COMMUNICATIONS IC, DIRVER, SWITCHING POWER SUPPLY IC.
- Automatically identify the unknown ICs and list the part number of the IC that has same function.
- Various "BUZZER" sounds to present the test result "FAIL" or "PASS".

Specification

Button/ Switch	6 Function Keys : TYPE, AUTO, BEEP, TEST, SEARCH, ↵
	10 Numeric Keys : 0-9
	Test Socket, Double binding posts
Display	16 x 1 character dot matrix LCD display
Test Socket	One position for 24-pin IC socket
Power	110V AC~220V AC
Frequency Range	50/60 Hz
Buzzer	Various tones for the test result
Dimension	33.5cm x 30cm x 10.5cm
Weight	1.5Kg
Operating Humidity	90% (non-condensing)
Temperature	+10℃ ~ +40℃

Device Supported

OP(OPERATIONAL AMPLIFIERS, COMPARATORS)

LM101	LM107	LM108	LM113	LM124	LM148	LM158	LM201	LM207	LM208	LM218	LM224
LM248	LM258	LM307	LM308	LM310	LM318	LM324	LM348	LM358	LM1458	LM2900	LM2902
LM2904	LM3900	LMC660	CA358	CA3130	CA3140	CA3160	CA3240	CA3260	CA3401	TL022	TL061
TL062	TL064	TL071	TL072	TL074	TL081	TL082	TL084	TL094	MC3303	MC3403	MC3503
MC34004	NE5532	NE5534	LF347	LF351	LF353	LF355	LF356	LF357	LF411	LF412	ICL7611
ICL7621	ICL7641	ICL7642	AD648	AD711	AD712	LT1013	LT1014	RC4558	uA741	uA747	uA748
OP07	OP27	OP37	OP42	OP90	OP97	OP290	OP490	TLC252	TLC272	LP124	LP324
HA17324	uPC451	C4082									

COMPARATTORS

LM139	LM193	LM239	LM293	LM339	LM393	LM2901	LM2903	LM3302	LP239	LP339	LP2901
TLC339	TLC393										

OPTO(OPTOCOUPLERS)

4N25	4N26	4N27	4N28	4N29	4N32	4N33	4N35	4N36	4N37	4N38	4N45
4N46	CNY75	H11A1	H11B1	H11D1	H11D2	H11D3	H11D4	K827P	K847P	MCT2	PC817
PC827	PC837	PC847	TIL111	TIL116							

VOLTAGE REGULATORS

uA7805. . (LM2930-5. 0, LM2931-5. 0, LM2940CT-5. 0)

uA7806	uA7808	uA7809	uA7810	uA7812	uA7815	uA7818	uA7824	uA7905	uA7908	uA7912	uA7915
uA7924	LM217	LM317	Zener								

REG. (VOL TAGE REGULATORS)

NE555	NE556	TLC555	TLC556	4016	4066	LM723

TRANSISTOR ARRAY

ULN2001	ULN2003	ULN2004	ULN2005

LS-2 Plus

Wireline Simulator

Introduction

ADSL2 PLUS has been more popularly applied because of the increasing application of High-Bandwidth Multi-Media which contains video, data and voice. ADSL2 PLUS is much advanced and popular than traditional copper network , hence it is necessary to have a simulator that can precisely simulate transmission lines. LS-2 Plus is the best solution for the wireline and noise test.

Standard Accessories

Main unit.....x1
AC power adaptor.....x1
RS-232 cable.....x1
CD.....x1
(Driver and user manual are included)

Features

- Simulate 26 AWG up to 23.5kft with 0.25kft minimum resolution.
- Support ADLS2+, ADSL2, XDSL HDSL, T1 and E1 Modems/Transceivers.
- 7-segment LED display to indicate simulating cable length.
- Able to work without PC or the control software. Quickly simulate and test different lengths of cable through switching from different 4 memory keys.
- Utilize an addition and deduction button to progressively divert the simulating cable lengths, for the convenience of under testing the circuit characteristics from the changes and turning points.
- Through a computer user can remotely control via RS-232 interface providing the user with speedy simulation of different cable line lengths.
- Form attached containing program language templates, providing users to develop control programs by themselves.
- Use 19" standard instrument case suitable for users to construct their own testing system.

Specification

Button/ Switch	Power Switch x1	Line Length Button x2
	Fast Memory Key.....x4	Fuse.....x2
Display	4 digit red 7 segment LED display	
	Remote control indicate light input	
Communication	RS-232	
Power	110V AC~220V AC	
Dimension	13.2cm x 43cm x 38.6cm	
Weight	4.8Kg	
Operating Altitude	up to 5000m	
Operating Humidity	90% (non-condensing)	
Temperature	+5℃ ~ +45℃	

Cable Features

Cable Type	26 AWG
Individual Line Distance	23,500ft (Max) / 250ft (Min)
DC Characteristics	100mA(Max), 300V DC
Frequency	Max 2.5 MHz

Connection Features

Front control board : 8 way RJ-45 connection.....x2
Back control board : 8 way RJ-45 connection.....x2
Ground connection.....x2
Terminal.....x1

WICE-ME-SPI/FWH

Flash Emulator

Introduction

With the trend evolving, the change of FLASH ROM nowadays have begun utilizing SPI methods. Therefore, Leap has developed an emulator suitable in correcting errors happening inside the embedded systems of SPI or FWH; furthermore our emulator uses an external connection with the system. No matter if it's Motherboard, CD-ROM Driver, or High performance display card's IC can be emulated, providing the engineers a convenient tool.

Standard Accessories

Main unit.....x1
USB cable.....x1
40-Pin single connector flat cable.....x2
Signal line hook.....x2
CD (Including driver).....x1
DC 12V/2A power adaptor.....x1

Optional Accessories

SPI POD
FWH POD
PLCC32 hard adaptor
PLCC32 flat cable adaptor

Features

- Special design for detecting wrong insertions, also protects the system from recieving over 5V input.
- Portable, stable, speedy download, saving space and mini volume.
- Support 1.8V～3.3V devices.
- Offer two optional accessories (SPI / FWH POD) to simulate different devices.
- Able to offer a reset output signal, therefore no need to use the reset button.
- Support various file translation formats.
- Unnecessary in programming the IC, a direct simulation can reduce the total time of development speed.

Specification

Communication	USB1.1
Power	DC 12V/2A
Dimension	14cm x 11cm x 4.6cm
Weight	380g
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃ ~ +45℃

PC System Requirement

Operating System	Windows 98/ME/2000/XP
Processor	Pentium III and above
Memory	128MB RAM and above
Hard Disk	30MB and above

Optional Adapter

WICE-ME-FWH

PLCC32 flat cable adaptor

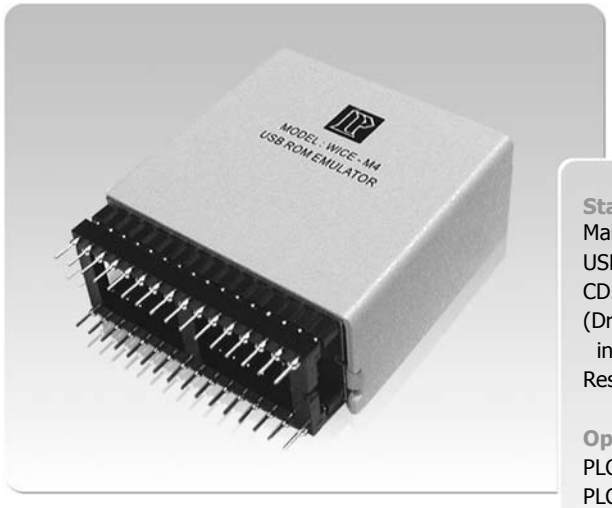
PLCC32 hard adaptor

WICE-M4

4MB ROM Emulator

Introduction

WICE-M4 is an economic ROM emulator for engineers. Utilizing the characteristic of rapid USB downloading to save time waiting for information to download. It is convenient for the engineers to debug rapidly via the software of program simulation and helps the product to enter the market as soon as possible.



Standard Accessories

Main unit.....x1
USB cable.....x1
CD.....x1
(Driver and user manual are included)
Reset signal line.....x1

Optional Accessories

PLCC32 hard adaptor
PLCC32 flat cable adaptor

Features

- Tiny, portable, speedy download, also pertains strong stability.
- Provide USB port interface.
- Able to plug directly into IC sockets. Preventing common problems such as extra noise, FAN OUT and time delay problems that may occur while using cable.
- Special design for detecting wrong insertions, also protect the system from receiving over 5V input.
- Able to offer a reset output signal, therefore no need to use the reset button, also able to set logic status ACTIVE High or Low.
- Powered by USB port, no need for extra power.
- Support 6 file translation formats.
- Support 3.3V~5V devices.
- Work under Windows 98/ME/2000/XP.
- Speed of Emulation SRAM access time up to 10ns.

Specification

Communication	USB1.1
Dimension	4.5cm x 4cm x 2cm
Weight	30g
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃ ~ +45℃

PC System Requirement

Operating System	Windows 98/ME/2000/XP
Processor	Pentium III and above
Memory	128MB RAM and above
Hard Disk	30MB and above

Other Specifications

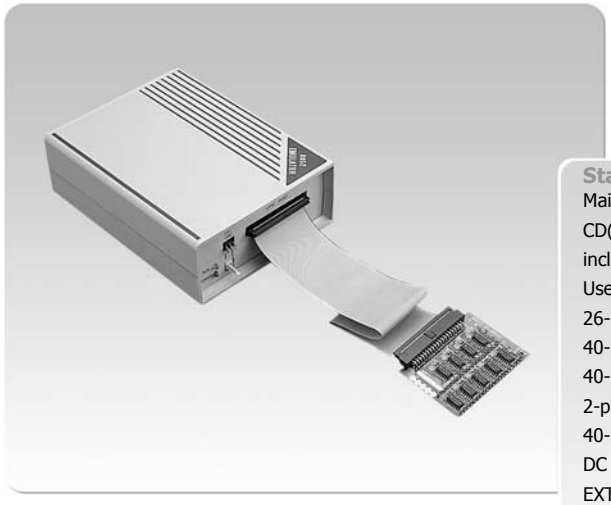
Capacity	Device	Low Voltage Device
2K	2716	-
4K	2732	-
8k	2764	-
16k	27128	27LV128
32k	27256	27LV256
64k	27512	27LV512
128k	27010	27LV010
256k	27020	27LV020
512k	27040	27LV040

WICE-8052

8052 In-Circuit Emulator

Introduction

The WICE-8052, In-circuit Emulator for 8052 microcontrollers, is a well-developed product by LEAP ELECTRONIC. The WICE-8052 is designed specifically for todays engineers who need an excellent tool for their projects. It combines real-time emulation up to 40 MHz with multi-windows, point-and-click, menu-driven function and on-line help. WICE-8052 assists users' designs quickly and efficiently.



Standard Accessories

Main unit.....x1
CD(Driver and user manual are included).....x1
User manual.....x1
26-pin cable.....x1
40-pin module+flat cable.....x1
40-pin cable.....x1
2-pin signal line hook.....x1
40-pin IC socket.....x1
DC 5V/1A power adaptor.....x1
EXT crystal adaptor.....x1

Optional Accessories

PLCC44 adaptor.....x1

Features

- Support 64K hardware full range execution breakpoints, allow for a pause at any point to avoid any other unnecessary procedures.
- Real time to record 32K frame*16 bit address.
- Real time record start and end address, observed program and distribution map.
- Simulate microcontroller family: 80(C)31/32, 80(C)51/52, 87(C)51/52, 89(C)51/52.
- Provide 128K Byte simulation memory (program 64K, data 64K).
- Provide synchronous output signal with RESET for ICE.
- Speedy download via printer port interface.
- Able to disassemble on-line.
- Functional register with categorical displays: directly perform bit-setting on each special functional register. The flag values will assist auxiliary function details.
- Special design for detecting wrong insertions, also protects the system from recieving over 5V input.
- Able to switch internal and external frequencies.
- Speed of emulation up to 40MHz clock.
- Support 3.3V~5V devices.

Specification

Communication	USB1.1
Power	100V AC~240V AC
Dimension	14cm x 11cm x 4.6cm
Weight	380g
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃ ~ +45℃

PC System Requirement

Operating System	Windows 98/ME/2000/XP
Processor	Pentium III and above
Memory	128MB RAM and above
Hard Disk	30MB and above

Supported Device

intel	8031 8032 80C31 80C32 8xC51 8xC52 8xC54 8xC58 8xL52 8xL54
ATMEL	89C51 89C52 89C55 89LV51 89LV52
PHILIP	8031 8051 80C31 80C32 8xC51 8xC52 8xCL31 8xCL51 8xC851
SIEMENS	8031 8032 8051 8052 C501 C502
WINDBOND	W78C31B W78C32B

Execution Function

- Full Speed Running Stop, Step Into, Slow Run Into, Slow Run Over, Step Over & Run Until.

File Type Supported

- Binary / Machine code、intel HEX.

PCFACE Series

Learning Kits Series

PCFACE Technical Information

Applications in Industrial Field

PC Extension Interface Protector has the extensive applications of industrial field. Usually, it can be used in three occasions as following.

- Research and Development department: For I/O designing or experimenting.
- Maintenance: To maintain all kinds of Interface Card.

  There are a few problems which can disturb users' work or damage PC by using interface slot on PC:

  1. Short circuits caused by poor soldering within designs or experiment interfaces.
  2. For unknown reasons, by using the ruined Interface Card will damage the main unit.
- Interface Card manufacturer: Using interface protector perform quality control upon interface cards to detect inferior goods.

LEAP ELECTRONIC presents PCFACE series which can prevent problems all of above.

PCFACE Series Features

- Avoid damaging PC during experiment.
- Prevent damages during Interface Card mending.
- Test on PCI- EXPRESS slots, users can rapidly find the inferior goods to prevent the damages that might threaten PCs.
- PCFACE series which is a protector of different motherboard types. Users can turn on/off PCFACE series instead of turning on/off the whole PC system. It is convenient and time saving, especially in testing.
- Prevent malfunctioning from short circuits occurring on the slot by the power protection in PCFACE series.
- The Extension Interface protector protects all signals that are sent to the motherboard, therefore it will not damage the PC or interface card.
- No need for turning off PC, Interface Card can be removed or inserted anytime.
- All signal cables and power have isolation function.
- Built in signal extension system, all signals can be tested on extension slot.
- Four layer designed, low noise and with high stability.
- LED Overload indication.

Application in Education Field

PC plays an important role in industrial fields in terms of its high-speed development, reliable, low price, and various functions. Hardware interface circuit and controlled software complement each other in Microcontroller system. Engineers in this field must fully understand the skills of hardware interface and software designs that function efficiently in microcontroller system.

Laboratories relating to either educational or academic fields, most tutors aren't willing to teach this section for the following reasons:

- It will damage the PC when poor soldering occurs in experiments on circuit boards.
- Loosing component parts or causing damages from dismantling PC cases.
- It is a waste of time to restart if there are mistakes happening during experiments, due to the necessary load and save process.

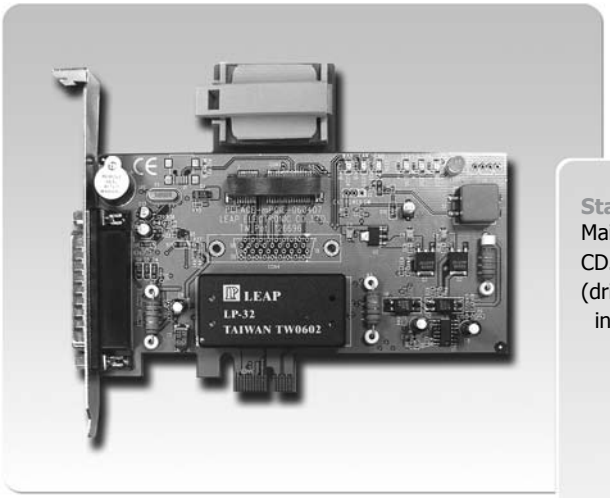
For solving above problems, simply plug in PCFACE series.

PCFACE-mPCIE

Mini PCI-Express Extension Interface Protector

Introduction

The application of Mini PCI-EXPRESS Interface has been getting popular, in that matter Leap Electronic have launched the Mini PCI-Express Extension Protector. According to experimental needs of Mini PCI-EXPRESS Interface product, PCFACE-mPCIE pertains the extended protection to provide a convenient and safety hardware environment. Meanwhile, with the combination of shielding box, it can be built into an ATS system for auto-production.



Standard Accessories

Main unit.....x1
CD.....x1
(driver and user manual are included)

Features

- Providing a convenient and safety Mini PCI-EXPRESS interface for an experimental and a design environment, increasing the work efficiency by 2~5 times.
- Offer hot swap function.
- Auto overload and short circuit protections.
- Overload circuit current will be notified, making trouble shoot easy.
- Designed with an ASIC system to achieve excellent stability and easy maintenance.
- By using Mini PCI-Express protection slot it will be able to increase PC's lifetime.
- The Extension Interface protector protects all signals that are sent to the motherboard, therefore it will not damage the PC or interface card.
- All signal cables and power have isolation function.
- The Extension Interface protector protects all signals that are sent to the motherboard, therefore it will not damage the PC or interface card.
- Through the built in power switch controlling software, users will be able to operate the production process at ease.

Specification

Power Supply Specifications	+3.3V : 1.3Amp
	+3.3VAUX : 400mA
	+1.5V : 650mA
Dimension	13.5cm x 1.6cm x 11cm
Weight	180g
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃ ~ +45℃

Other Specifications

Hardware Standard	For PCI-Express Version 1.1
Compatibility Test	Mini PCI-Express network interface card

Applications

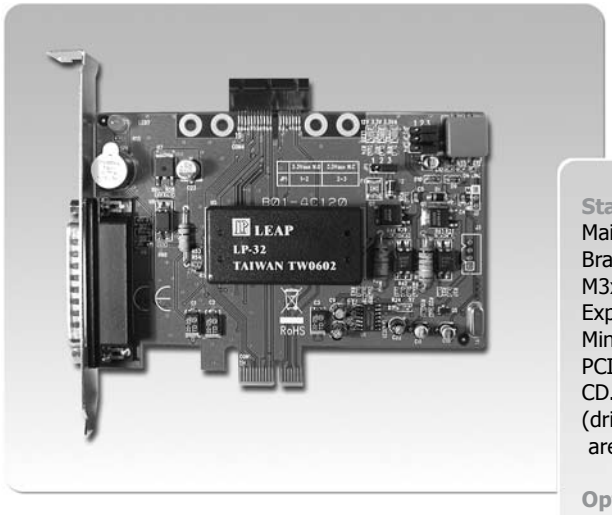
- Applicable in both industrial and academic field.
- R&D Dept and educational institute：for I/O designing or experiments.
- Maintenance Dept：Maintain PCI-Express interface card.
- Interface card manufacturer：to do QC for their products.

PCFACE-PCIE1

PCI-Express x1 Extension Interface Protector

Introduction

Pinpointing the PCI-Express x 1 trend of experimenting, our company Leap Electronic has developed a new innovation which is called the PCFACE-PCIE1. Able to experiment with 1934 interface cards, USB cards, internet cards, and SATA cards, etc. According to the test needs of PCI-EXPRESS Interface products, PCFACE-PCIE1 has the extended protection slot which provides a convenient and safety hardware environment. Under PCFACE-PCIE1's protection, users can avoid mistakes from a careless operation and/or inferior devices under test.



Standard Accessories

Main unit.....x1
Bracket.....x2
M3x4 screw.....x8
Express Card x1
Mini PCIE card.....x1
PCI Express x1 card.....x1
CD.....x1
(driver and user manual are included)

Optional Accessories

PCIE1 Cable

Features

- Over current and short circuit protection functions: PCFACE-PCIE1 will make a beep and then turn power off when it receives over current.
- Hot swap function: Built a power switch on PCFACE-PCIE1 so it's not necessary to turn off the power on motherboard when testing cards.
- Offer 3 sets of LED indicator.
- Able to work under DOS or Windows system: Offers 2 softwares; one for DOS system, the other for Windows system.
- Able to work under DOS or Windows system: Designed under ASIC system with stability.

Applications

- Applicable in both industrial and academic field.
- R&D Dept and educational institute : for PCI-Express x1 designing or experiments.
- Maintenance Dept : Maintain PCI-Express x1 interface card.

Specification

Power Supply Specifications	+3.3V : 1.3Amp
	+3.3VAUX : 400mA
	+1.5V : 650mA
Dimension	13.5cm x 1.6cm x 11cm
Weight	180g
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃ ~ +45℃

Standard Accessories

PCI Express x1 Card

Express Card

Mini PCIE Card

Optional Accessories

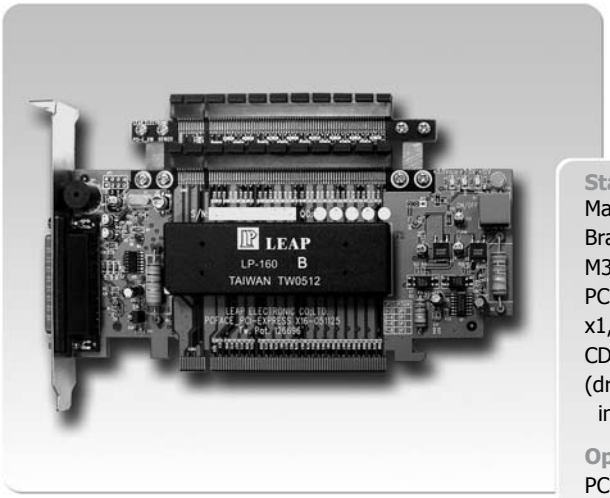
PCIE1 Cable

PCFACE-PCIE16

PCFACE PCI-Express Extension Interface Protector

Introduction

The application of the PCI-EXPRESS Interface products have been getting popular so Leap Electronic develops the PCFACE-PCIE16 Extension Protector. According to experimental needs of PCI-EXPRESS Interface product, PCFACE-PCIE16 pertains the extended protection to provide a convenient and safety hardware environment. Also, it is able to be built into an ATS system for auto-production through the combination of shielding box.



Standard Accessories

Main unit.....x1
Bracket.....x2
M3x4 screw.....x8
PCI-Express protection slot x1, x4, x8, x16.....x1
CD.....x1
(driver and user manual are included)

Optional Accessories

PCI-Express protection slot x1, x4, x8, x16

Features

- Extend / Protect PC motherboard's PCI-EXPRESS slot to reduce the tooling cost.
- Provide convenient and safety PCI-EXPRESS interface in experiment, testing and design environment, increasing the efficiency by 2~5 times.
- Offer hot swap function.
- Auto overload and short circuit protect.
- Over current can be supervised through the indicator, make trouble shoot easily.
- Provide extend a power switch and indicator for automation usage.
- Available to purchase PCI-Express protection slot for increase lifetime.
- ASIC designed with excellent stability and easy maintenance.
- Real signal extension system, all messages can be tested on extension slot.
- Through a power switch controlling software user will be able to operate the production process with ease.

Specification

Power Supply Specifications	+3.3V ： 3.5Amp±5%
	+3.3VAUX：740mA±5%
	+12V：3Amp/5Amp±5%
Dimension	18cm x 2.5cm x 9cm
Weight	100g
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃ ~ +45℃

Other Specifications

Hardware standard	For PCI-Express Version 1.1
Compatibility Test	PCI-Express x 1 Network Interface Card
	PCI-Express x 4 Interface Card
	PCI-Express x 8 Interface Card
	PCI-Express x 16 Display Interface Card

Applications

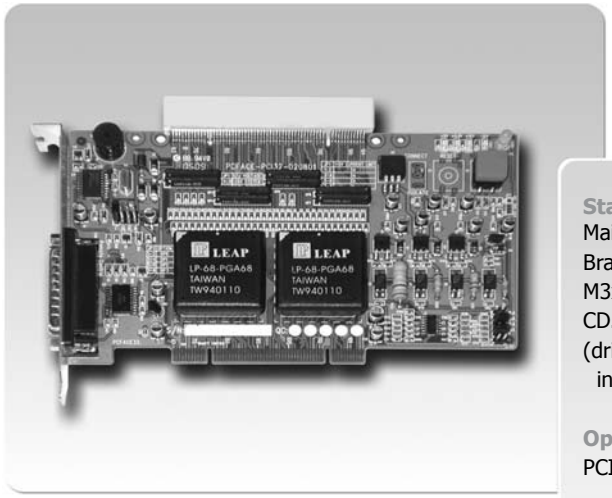
- Applicable in both industrial and academic field.
- R&D Dept and educational institute：for I/O designing or experiments.
- Maintenance Dept：Maintain PCI-Express interface card.
- Interface card manufacturer: to do QC for their products.

PCFACE-PCI32

PCI Extension Interface Protector

Introduction

Now PCI interface is a standard specification of computer. One of the advantages of PCI is protecting all signals of PCI BUS. The PCFACE-PCI32 is a high-speed 32-bit PCI bus extension interface protector. Because of PCFACE-PCI32's extraordinary compatibility with various PCI cards, it is a suitable product for the manufacturers who produce PCI cards.



Standard Accessories

Main unit.....x1
Bracket.....x2
M3x 4 screw.....x2
CD.....x1
(driver and user manual are included)

Optional Accessories

PCI Slot

Features

- Offer hot swap function.
- Protect all signals of PCI BUS.
- Provide convenient and safety PCI Extension Interface in experiment, testing and design environment, also increase the efficiency by 2~5 times.
- Compatible with an external power witch for automation, also equipped with LED indicator.
- Support 3.3V/5V PCI Interface Cards.
- Overload alarm.
- Designed under ASIC system with stability.
- All signal cables and power have isolation function.
- Real signal extension system, all signals on the extension slot can be measured.

Specification

Power Supply	+5V/3A
	+12V/500mA
	−12V/100mA
	+3.3V/3A
Interface Card	Moden card, ADSL card, VGA card, I/O card, NET card, Sound card,
	SCSI card, Game card, MPEG card, Capture card, USB, 1394 card
Dimension	18.3cm x 10cm x 2.5cm
Weight	180g

Other Specifications

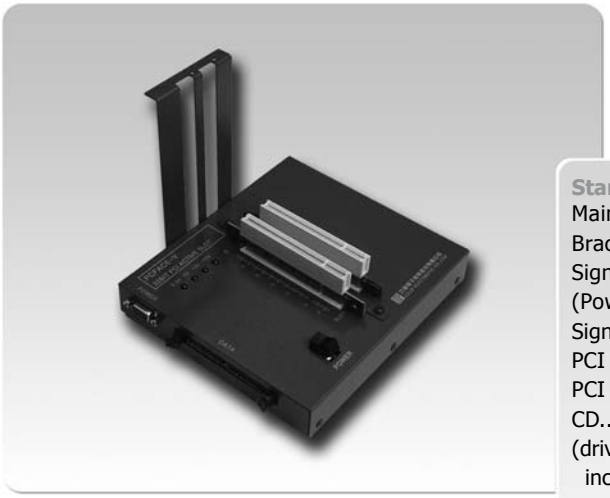
Compatibility Test	Moden card, ADSL card, VGA card, I/O card, NET card,
	Sound card, SCSI card, Game card, MPEG card, Capture card,
	USB, 1394 card

PCFACE-V

32-bit PCI Extension Interface Protector

Introduction

PCFACE-V can not only support PLX903X/905X chips but also protect all signals of PCI BUS. It is fitting for educational units to perform experiments. By way of PCFACE-V, users can verify a PCI card which was designed under CPLD or FPGA system, also combines the practical and the theoretical.



Standard Accessories

Main unit.....x1
Bracket.....x1
Signal flat cable.....x2
(Power cable.....x1
Signal cable.....x1)
PCI signal card.....x1
PCI power card.....x1
CD.....x1
(driver and user manual are included)
M3x 4 screw.....x2

Features

- Extend the PCI slot of PC and expands 1 slot to 2 slots.
- Offer hot swap function.
- Auto overload and short circuit protection functions.
- Overload circuit current will be notified through 4 LED indicators, make trouble shoot easily.
- Designed under ASIC system with stability.
- Support 3.3V/5V PCI Interface Cards.
- Avoid damaging motherboard or interface cards.
- All signal cables and power have isolation function.
- Real signal extension system, all signals on the extension slot can be measured.
- Through a power switch controlling software, users will be able to operate the production process with ease.

Specification

Power Supply Specifications	+3.3V/1.5Amp±5%
	+5V/5Amp±5%
	+12V/600mA±5%
	-12V/100mA±5%
Dimension	18cm x 2.7cm x 16cm
Weight	500g
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃ ~ +45℃

Other Specifications

Hardware Standard	For PCI-Express Version 2.2
Compatibility Test	PLX903 X Series I/O Card
	PLX905 X Series I/O Card
	CPLD/FPGA Series PCI Card
Compatibility Interface Card	33MHz/32 bit PCI Interface Card

Applications

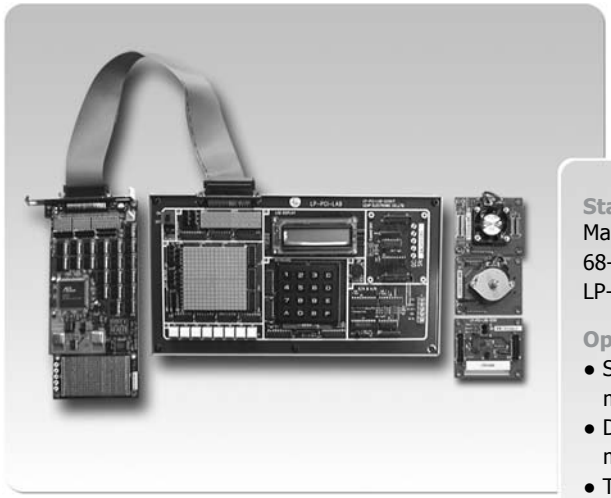
- R&D：For I/O designing and experiments
- Manufacturer : As test equipments for mass production
- Maintenance : For maintain the interface card

LP-PCI-LAB

Universal PCI Development System

Introduction

Because of the widely used PCI application, high speed data acquisition on systems can be acquired. It has replaced ISA interface entirely. In order to meet the trend of PCI interface development, PCI-LAB especially is designed universally for PCI system, which supports engineers and education field usages to understand PCI within the shortest period. The PCI-LAB includes the external platform structure which is able to combine several learning units. Furthermore, there are many suitable teaching materials written by knowledgeable professors, for users to learn how to control I/O with PCI interface within the shortest period.



Standard Accessories

Main unit.....x1
68-pin cable x1
LP-PCI-IO interface card..x1

Optional Accessories

- Step Motor extension module
- Direct Fan extension module
- Temperature Induction extension module

Features

- External platform structure: From the practice of textbooks and tools, users are able to learn quickly in controlling I/O under Windows/DOS through PCI interface card. Users can develop and learn PCI I/O control, furthermore experimenting with C or VB language.
- Outstanding expansionary: External modules include motor, fan, and temperature sensor. Each module can be experimented separately.
- The system contains two main units: One is LP-PCI-IO interface card and the other is LP-PCI-LAB experiment platform.
- Platform design: Provide all experimental units and doesn't require for welding or soldering any extra wires. Strong and durable structure fits for educational and professional training institutes.
- LP-PCI-IO is a standard PCI interface card: It's a formal industrial control card meticulously designed by LEAP. It can be used to develop special subjects or researches. And can be applied to experiments on various PCI peripherals.

Specification

Dimension	28cm x 17cm x 10cm
Weight	1.5Kg
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃ ~ +45℃

Other Specifications

Hardware Standard	Compatible with PCI version 2.1 Interface
Logic Input Unit	Logical input keypad x 8
	4 x 4 numeral matrix keypad x 1
Output Unit	16 x 16 dot-matrix LED display x 1
	6 digitals 7 segments display x 1
	16 x 2 character LCD display x 1
	Buzzer output x 1
Linear Unit	1 set 8bits A/D input
	2 sets 8bits D/A output
Extend Unit	10 x 2 pin 2.0mm connector x1
	12 x 2 pin 2.0mm connector x1

Optional Adapter

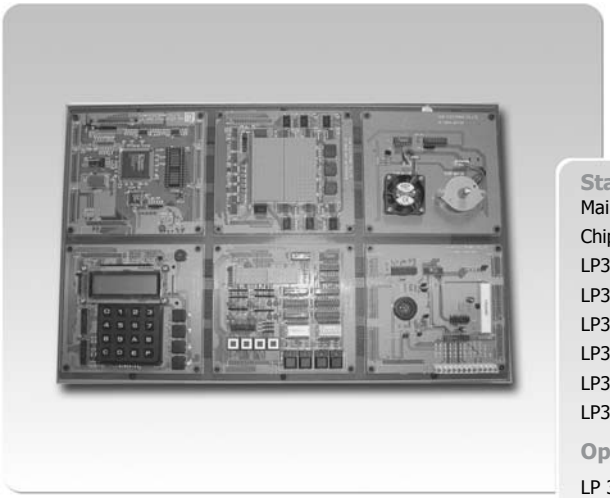
- **Step Motor extension module**
  1.Quar-phases 12V step motor
  2.Step motor position control
  3.Step motor speed control
- **Direct Fan extension module**
  1.12V direct fan
  2.Fan motor increase/decrease speed control
- **Temperature Induction extension module**
  Temperature induction circuit x 1

LP-3900

Universal Digital Logic Development System

Introduction

The LP-3900 designs the digital logical circuit by using XILINX XCS-20-208 FPGA chip to simulate and design several logical circuits. The LP-3900 is able to help designers to handle with the FPGA design requirements. Different kinds of experiment modules and experimental units grant users the ability to develop large-scale projects along with enhancing product development routines.



Standard Accessories

Main unit.....x1
Chip series module:
LP3900-FPGA-XCS20-208.....x1
LP3900-LCD-KEY20.....x1
LP3900-DOT-MATRIX16X1.....x1
LP3900-LED-KEY16.....x1
LP3900-AD9-DA2.....x1
LP3900-MOTOR.....x1

Optional Accessories

LP 3900-UNIVERSARY-BOARD
DSP module
MPU module

Features

- Industrial modulized design: It's capable to perform with FPGA, DSP, MPU System, User Interface, I/O Extension Interface, Mechanical Interface, Sensor, and Universal board, etc.
- Suitable for educational and commercial applications.
- Capable in using Circuit Graphic and VHDL to develop circuits.
- Use a FPGA which is over 20,000 gates. LP-3900 is capable to develop complicated applications, such as telecommunication, commercial, transportation, and industrial products.
- Brick structured: Able to be placed vertically and horizontally, therefore users can efficiently establish industrial designs and/or circuit designs.
- Able to program FPGA software into EPROM, thus developed system can operate in stand-alone mode.

Specification

Communication	Parallerl Port (Printer Port)
Power	100V AC~240V AC
Frequency Range	50/60 Hz
Dimension	45.5cm x 29cm x 11cm
Weight	5 Kg
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃ ~ +45℃

Other Specifications

Module Specification

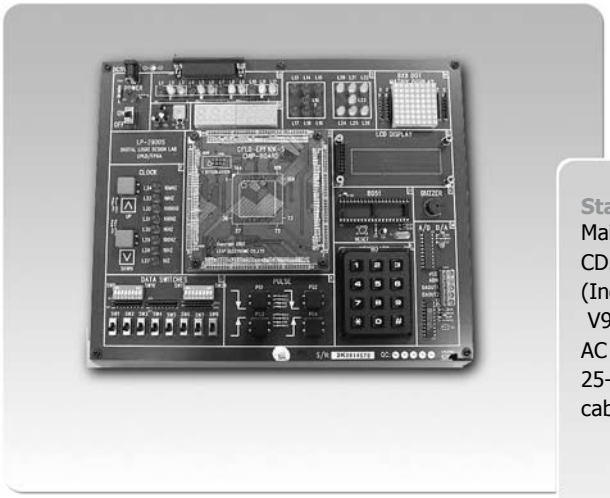
LP3900-FPGA-XCS20-208	· Use XILINX XCS-20-208	
System Board	· Standard frequency 40M/20M/10M/5MHz	
LP3900-LCD-KEY20	· Use 16 x 2 word type LCD (changeable with drawing type LCD)	
Experimental Module	· 4 x 4 array keyboard	
	· Logic input bottom.....x4	
	· Buzzer.....x1	
LP3900-DOT-MATRIX 16X16	· Use 16 x 16 dual color point matrix LCD display	
Experimental Module	· Logic input bottom.....x3	
LP3900-LED-KEY16	· 6 digits 7 nodes monitor.....x1	
Experimental Module	· 5mm LED (red, yellow, green) output.....x16	
	· Logic input light bottom.....x4	· Logic impulse input bottom.....x4
I/O Extention Interface	· 12 bits A/D input.....x8 set	· 8 bits A/D input.....x1 set
LP3900-AD9-DA2	· 12 bits D/A output.....x2 set	· Temperature sensor input.....x1 set
Experimental Module	· Speaker output(500Hz~6kHz).....x1set	
Mechanical Interface	· 12V Motor.....x1 set	
LP3900-MOTOR	Step motor position control / Step motor speed control /	
Experimental Module	Step motor up and down speed control	
	· 12V DC Fan.....x1 set	
	Fan motor position control / Fan motor speed control /	
	Fan motor up and down speed control	
System Station	· Has flat, spread structural, and suitable for basic teaching and topic	
LP3900-POWER-STATION	applications	
	· Output +5V 3A, +12V 2.0A, 12V 0.3A	

LP-2900S

CPLD/FPGA Simple Digital Logic Circuit Design Experiment Board

Introduction

Nowadays, CPLD and FPGA have been the first-choice components for the designers. It is suitable for the designers on application for communication, industrial automation, intelligent instrument, image processing, extensive engine control, etc. In order to allow users have excellent experimental platforms, LEAP series has provided platforms based on Altera or XILINX. Enabling engineers to realize the designs of logical circuit from experimental units.



Standard Accessories

Main unit.....x1
CD.....x1
(Including Altera Baseline V9.23 driver)
AC power cord.....x1
25-pin printer cable or USB cable.....x1

Test Content
Combined logic design, simulation and test

1. Basic logic
2. Deducter
3. Decoder
4. Combined logic
5. Comparator
6. Multiplexer
7. Adder
8. Compiler
9. Demultiplexer

Sequential logic circuit design, simulation and test

1. Flip-flop device
2. Shift register
3. Shift counter register
4. Synchronized counter
5. Non- Synchronized counter

Analog logic circuit design, simulation and test

1. A/D converter
2. D/A converter

Thematic Application Test

1. 8 × 8 dual color spot array LED control test.
2. Digital clock
3. Counter
4. Electronic alarm clock
5. Traffic light control
6. Electronic dice
7. Keyboard scan
8. LCD display control test
9. A/D, D/A converter test
10. Easy CPU design
11. VHDL/AHDL voice design
12. Matching 8051 thematic test

Specification

Communication	USB or Printer Port	Weight	2Kg
Power	100V AC~240V AC	Operating Altitude	up to 5000m
Frequency Range	50/60 Hz	Operating Humidity	90% (non-condensing)
Dimension	32cm x 22.6cm x 3.0/8.5cm	Temperature	+5℃ ~ +45℃

Other Specifications

Chip Supported	ALTERA FLEX10K 10A (TQFP-144)	
Signal Generation Unit	1. Programmable frequency generator	
	2. Standard frequency 1K/10K/ 100K/1M/10MHz	
Logic Input Switch	1. 8 × 1 logic input original press point with light	
	2. 8 × 2 logic input Dip switch	
	3. 4 impulse press button generator (2 positive pulse; 2 negative pulse)	
	4. 3 × 4 array keyboard	
Output Unit	1. 8 × 8 dual color point array LCD display.	
	2. LCD 16 × 2 monitor	3. 6 digits 7 nodes monitor
	4. 3 × 4 LED output	5. Buzzer output x 1 set
Linear Unit	1. 8bit D/A converter x 2 sets	2. 8bit A/D converter x 1 set
MPU unit	8051 and CPLD/FPGA match circuit test	

PC System Requirement

Operating System	Windows 98/2000/XP

Application Program Range

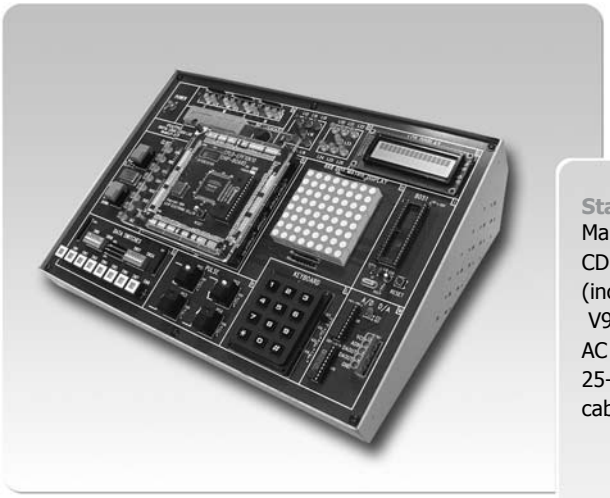
1. Fundamental logic program
2. Digital circuit design program
3. Digital system design circuit program
4. Micro processor principle program
5. VLSI design program
6. OPLD/FPGA chip design program
7. 8051 single chip program
8. Thematic preparation

LP-2900

CPLD/FPGA Digital Logic Circuit Design Experiment Kit

Introduction

Nowadays, CPLD and FPGA have been the first-choice components for the designers. It is suitable for the designers on application for communication, industrial automation, intelligent instrument, image processing, extensive engine control, etc. In order to allow users have excellent experimental platforms, LEAP series has provided platforms based on Altera or XILINX. Enabling engineers to realize the designs of logical circuit from experimental units.



Standard Accessories

Main unit.....x1
CD.....x1
(included Altera Baseline V9.23 driver)
AC power cord.....x1
25-pin printer cable or USB cable.....x1

Test Content
Combined logic design, simulation and test

1. Basic logic
2. Deducter
3. Decoder
4. Combined logic
5. Comparator
6. Multiplexer
7. Adder
8. Compiler
9. Demultiplexer

Sequential logic circuit design, simulation and test

1. Flip-flop device
2. Shift register
3. Shift counter register
4. Synchronized counter
5. Non- Synchronized counter

Analog logic circuit design, simulation and test

1. A/D converter
2. D/A converter

Thematic Application Test

1. 8 × 8 dual color spot array LED control test.
2. Digital clock
3. Counter
4. Electronic alarm clock
5. Traffic light control
6. Electronic dice
7. Keyboard scan
8. LCD display control test
9. A/D, D/A converter test
10. Easy CPU design
11. VHDL/AHDL voice design
12. Matching 8051 thematic test

Application Program Range

1. Fundamental logic program
2. Digital circuit design program
3. Digital system design circuit program
4. Micro processor principle program
5. VLSI design program
6. OPLD/FPGA chip design program
7. 8051 single chip program
8. Thematic preparation

Specification

Communication	USB or Printer Port	Weight	3.5Kg
Power	100V AC~240V AC	Operating Altitude	up to 5000m
Frequency Range	50/60 Hz	Operating Humidity	90% (non-condensing)
Dimension	32cm x 22.6cm x 3.0/8.5cm	Temperature	+5℃ ~ +45℃

Other Specifications

Chip Supported	ALTERA	FLEX10K10TC144 (TQFP-144) / FLEX10K30ATC144 (TQFP-144)
	XILINX	XCS10TQ144 (TQFP-144) / XC2S30PQ208 (PQFP-208)
		XC2S100PQ208 (PQFP-208) / XC2S300EPQ208 (PQFP-208)
Signal Generation Unit	1. Programmable frequency generator	
	2. Standard frequency 1K/10K/ 100K/1M/10MHz	
Logic Input Switch	1. 8 × 1 logic input original press point with light	
	2. 8 × 2 logic input Dip switch	
	3. 4 impulse press button generator (2 positive pulse; 2 negative pulse)	
	4. 3 × 4 array keyboard	
Output Unit	1. 8 × 8 dual color point array LCD display	
	2. LCD 16 × 2 monitor	3. 6 digits 7 nodes monitor
	4. 3 × 4 LED output	5. Buzzer output x 1 set
Linear Unit	1. 8bit D/A converter x 2 sets	2. 8bit A/D converter x 1 set
MPU unit	8051 and CPLD/FPGA match circuit test	

PC System Requirement

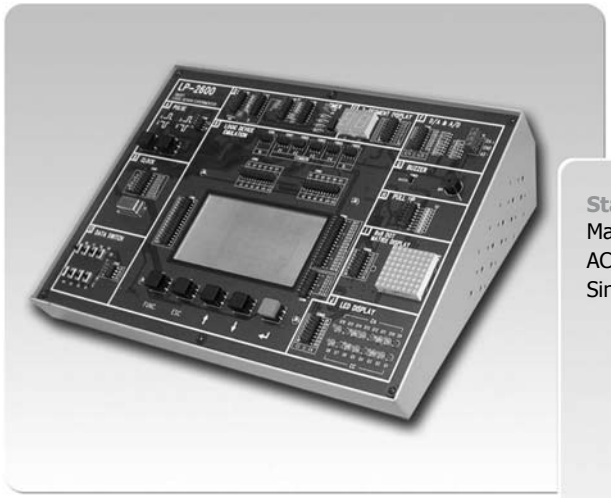
Operating System	Windows 98/2000/XP

LP-2600

Smart Logic Design Experimental Kit

Introduction

The LP-2600, a Smart Logic Design Experimental Kit, which helps beginners to comprehend the general design functions of digital circuit, and offers multiple experimental units. The LP-2600 simplifies the process of welding ICs. As long as we load the entire circuit program into the Smart Logic Design Experimental Kit through USB or printer port, the LP-2600 will simulate the circuit.



Standard Accessories

Main unit.....x1
AC power cord.....x1
Single-core cable.....x52

Features

- Don't require TTL and CMOS devices to do experimental circuits. Saving materials and time.
- Help users learn about practical experiments and basic logic programs quickly without soldering IC components.
- Offer smart INPUT and OUTPUT circuit linkage function.
- Offer practical input control settings. Reveal each gate, IC gate and output linkage results on output circuit.
- Offer the pin of measurement point for convenience to measure various test point virtually.
- Fit for standard digital logic experiment programs.
- System built-in various experimental units of basic logic gate, assembled logic and digital logic.

Experimental Content

1. Basic Logic gates experiment
2. Assembled logic gates experiment
3. Adder experiment
4. Subtracter experiment
5. Assembled logic application
6. Digital logic application
7. Sequential logic experiment
8. Sequential logic application
9. D/A converter experiment
10. A/D converter experiment
11. 555 multi-vibrates circuit experiment
12. PULL UP circuit experiment

Specification

Communication	USB1.1
Power	90V AC~260V AC
Frequency Range	50/60 Hz
Dimension	32cm x 22.6cm x 3.0/8.5cm
Weight	2.8Kg
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃ ~ +45℃

Other Specifications

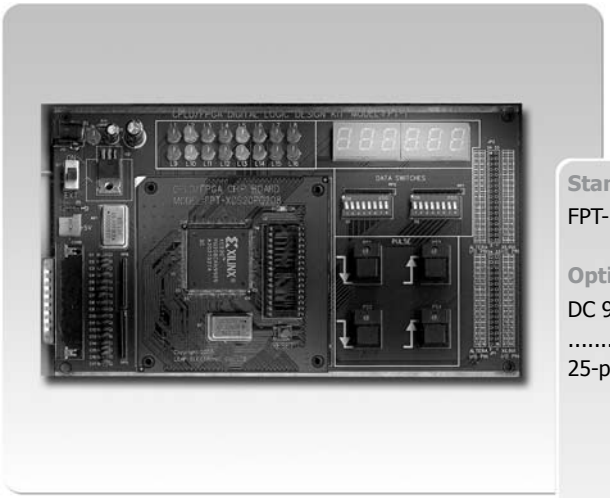
Devices Emulating Module	Display : 240 x 128 LCD
	Emulating : 1. TTL IN (x28) Pin 2. TTL OUT (x28) Pin 3. O.C. OUT (x6) Pin
	Control keypad : FUNC, ESC, ↑, ↓, ↵
Input Unit	Logic Switch : S1~S8
	Signal Generator :
	1. A, /A →100 ms Pulse 2. B, /B →100 ms Pulse
	3. Clock : 1 Hz/10 Hz/100 Hz/1 KHz/10 KHz/100 KHz/1MHz
	4. CLK/2, CLK/4, CLK/8, CLK/16, CLK/32, CLK/64, CLKIN
Output Unit	Standard Circuit Module :
	1. Common anode LED display x 8 2. Common cathode LED display x 8
	3. Isolated common anode 7 segment display x 2
	4. 8 x 8 monochrome dot matrix LED 5. BUZZER unit 6. VH, VL, common point x 4
	Advanced Circuit Module :
	1. 555 Circuit unit (a. Mono-stable oscillator / b. Non-stable oscillator)
	2. D/A unit 4bit 3. A/D unit 7bit 4. PULL UP circuit experiment
	Advanced Software Module :
	Allow users to edit and revise experimental circuits.
	1. To download experimental circuits to experimental lab
	2. To create experimental circuits for various certificated levels

FPT-1

CPLD/FPGA Logic Circuit Design Experimental Kit

Introduction

In the past, each engineers themselves need to design their own circuit board, which then need a certain amount of universal bread boards and logic components to do trials and errors, all this not only wastes time, also expenses would increase. Now an electronic engineer can finish circuit designs easily by using CPLD / FPGA, only by a few reformation of the software it can be ready for operations. Leap Electronic have considered for the beginners' needs, therefore we have invented FPT-1 combining the CPLD or FPGA for educational purposes. The FPT-1 avoids the soldering issues between the circuits and cable lines.



Standard Accessories

FPT-1 Main board.....x1

Optional Accessories

DC 9V/500mA power adaptor x1

25-pin printer cable.....x1

Features

- Use CPLD/FPGA software and hardware to design Logic IC, in order to replace complicated hardware design of TTL/ CMOS.
- Capable in using Circuit Graphic and digital hardware descriptive syntax (VHDL, ABEL, and AHDL) to develop circuits, and directly download from original manufacturer's software via printer port.
- Modulized design: user can choose ALTERA or XILINX chipboard module.
- Avoid the soldering issues between the circuits and cable lines.

Chip board sepcification

Device supported	**ALTERA** EPF10K10TC144 (TQFP144 pin)	**XILINX** XCS10TQ144(TQFP144 pin)
Chip board model	**ALTERA** FPT-EPF10K10TC144	**XILINX** FPT-XCS10TQ144

1. 8 x 2 LED shown output.
2. 8 x 2 Logical input toggle.
3. 4 pulse keystrokes producer (two positive pulses:two negative pulses).
4. 6 digits and 7 nodes monitor.
5. Own red main power guiding lights.
6. Within 10MHz oscillator.
7. Own main power switch to exchange adaptor with Extend Power Pin.
8. 25pin D Type Connector (Printer Port Download FPGA).
9. Use DC 9V adaptor or Extend Power Pin provided for user. Specification: DC 5V.
10. Support ALTERA MAX +Plus II Baseline and XILINX Foundation's development system.
11. Not use expanded area I/O Pin, provided user definition use.

PC System Requirement

Operating System	Windows 98/2000/XP/Vista32

Application Program Range

1. Fundamental logic
2. Digital circuit design
3. Digital system design
4. Microprocessor principle
5. CPLD/FPGA chip design

Test Content

Combined logic design, simulation and test

1. Basic logic
2. Deducter
3. Decoder
4. Combined logic
5. Comparator
6. Multiplexer
7. Adder
8. Compiler
9. Demultiplexer

Sequential logic circuit design simulation and test

1. Flip-Flop
2. Shift register
3. Shift counter register
4. Synchronized counter
5. Non-Synchronized counter

Thematic Application Test

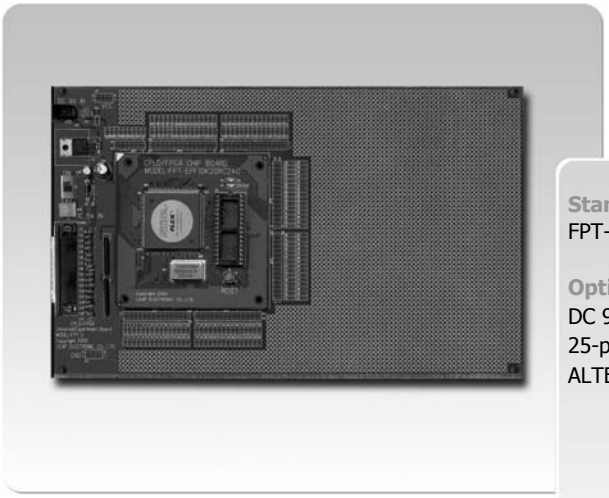
1. Digital clock
2. Counter
3. Electronic alarm clock
4. Traffic light control
5. Electronic dice
6. VHDL/AHDL design
7. Random design of expanded I/O Pin

FPT-2

CPLD / FPGA Logic Circuit Universal Board / Chip Board

Introduction

Leap Electronic designs a whole set omnipotent bread board to support ALTERA and XILINX; therefore users can easily assemble the desired circuit designs. FPT-2 is most apt in assisting towards researches and experiments, also projects.



Standard Accessories

FPT-2 Main board.....x1

Optional Accessories

DC 9V/500mA power adaptor
25-pin printer cable
ALTERA/XILINX chipboard

Features

- After programming a finished file into EPROM (FLASH), it can operate independently.
- Support ALTERA and XILNX development system.
- Capable in using Circuit Graphic and digital hardware descriptive syntax (VHDL, ABEL, and AHDL) to develop circuits.
- Users can choose ALTERA or XILINX chipboard modules.
- Avoid the soldering issues between the circuits and cable lines.

Specification

Communication	Printer Port
Power	DC 9V/500mA
Dimension	20.5cm x 12.8cm x 2.5cm
Weight	500g
Operating Altitude	up to 5000m
Operating Humidity	90% (non-condensing)
Temperature	+5℃ ~ +45℃

Chip board sepcification

Device Supported		Chip board model	
ALTERA	1. EPF10K10TC144 (TQFP144 Pin)	**ALTERA**	1. FPT-EPF10K10TC144
	2. EPF10K20RC240 (PQFP240 Pin)		2. FPT-EPF10K20RC240
XILINX	1. XCS10TQ144 (TQFP144 Pin)	**XILINX**	1. FPT-XCS10TQ144
	2. XCS30TQ144 (TQFP144 Pin)		2. FPT-XCS30TQ144
	3. XCS20PQ208 (PQFP208 Pin)		3. FPT-XCS20PQ208

PC System Requirement

Operating System	Windows 98/2000/XP/Vista32

FPT-2 Universal Board Specifications

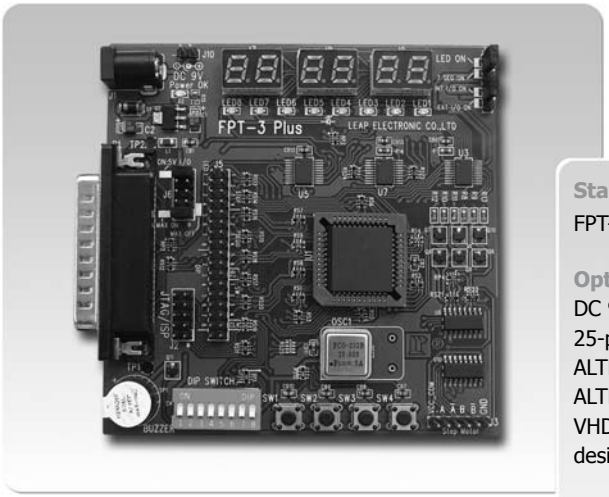
- Provide DC 9V/500mA adaptor or Extend power Pin for user, and the specification is DC 5V.
- Attached with a power switch or Extend power indicator.
- 25pin D Type Connector (Download FPGA by printer port).
- Equipped with Breadboard and provide soldering circuits experiment.
- Support ALTERA MAX + Plus II Baseline and XILINX Foundation's development system.
- Use Graphic, VHDL, ABEL or AHDL to develop circuits.
- All I/O can be expanded by connector.
- Download circuit by printer port from IC vendor's software.

FPT-3 Plus

CPLD/FPGA Simple Logic Circuit Design Board

Introduction

The FPT-3 Plus offers a complete interface to study CPLD circuit interface. It lets the users load the logical circuits to the FPT-3 Plus easily. Utilizing the characteristics of this product, users can examine if the designed circuits are problematic. The FPT-3 Plus comes with a manual containing several units for studying.



Standard Accessories

FPT-3 Plus Main board.....x1

Optional Accessories

DC 9V/500mA power adaptor
25-pin printer cable
ALTERA EPM7064SLC44-10
ALTERA EPM7032SLC44-10
VHDL and Graphic circuit design the teaching material

Features

- Utilize CPLD/FPGA hardware/software development system to learn the newest design of logical IC instead of the complex hardware designs of TTL/CMOS.
- Capable in using Circuit Graphic and digital hardware descriptive syntax (VHDL, ABEL, and AHDL) to develop circuits, and directly download from original IC vendor's software via printer port.
- Able to download the designed software to the CPLD, thus FPT-3 Plus can operate in stand-alone mode.

Specification

Support Altera CPLD MAX7000S	EPM7064/32SLC44-10 (alternative)
Devices series	PLD on EEPROM structure
	5V working voltage
	Support 1,250 logic gates and 64 LCs
System clock	32 I/O availably
Programming interface	4.000MHz
	JTAG/ISP
Power	DC 9V/500mA
Dimension	10cm x 11.5cm x 2.2cm
Weight	500g

Other Specification

Input Unit	1. Logic DIP switch 8 x 1
	2. Negative pulse press button x 4 sets
Output Unit	1. 8 LED (low voltage drove) x 1 set
	2. 6 digits 7 segment display (Common cathode: low voltage drove)
	3. Buzzer x 1 set

PC System Requirement

Operating System	Windows 98/2000/XP/Vista32

Experiment Content

Basic logic

1. Logic experiment (DIP SW + LED)
2. Relationship experiment (DIP SW + LED)
3. Complier/Decoder

Arithmetic logic circuit

1. Adder
2. Subtracter
3. Multiplexer

Frequency divide and count

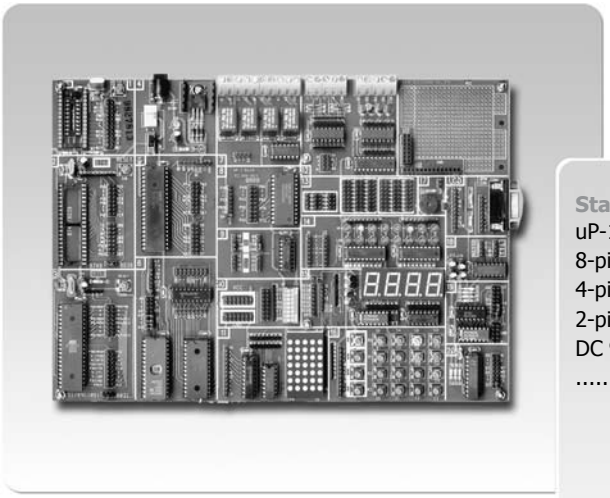
1. 7 segment display (Binary to Decimalism)
2. 8 LED (Binary to Decimalism)
3. Frequency divide test (LED)
4. All I/O test
5. Upward counter
6. Traffic light display
7. Simple electric piano
8. Hour, minute and second timer control
9. Step motor control

uP-1

MCS-51/PIC MCU Experimental Board

Introduction

Taking the microcontroller as the main system platform is necessary for engineers when learning, designing, assembling, and practicing C languages. uP-1 is powerful enough to provide the 51 series along with PIC series units to boost users' researches.



Standard Accessories

uP-1 Main board.....x1
8-pin cable.....x4
4-pin cable.....x4
2-pin cable.....x8
DC 9V/500mA power adaptor x1

Features

- Application may be applied towards experimenting MCS51 / PIC/ AVR series.
- Compatible with any other manufacturer's emulation systems.
- Designed with individual CPU and separate interface.
- Users can use serial cables to develop different circuits.
- 429 holes on universal testing board to develop various applications and experiments.
- Soldering not required.
- Power supply: DC 9V/500mA adaptor or DC power supply in 5V.
- Attached with a manual explaining how to experiment with MCS-51 and PIC series, in addition providing over 20 circuit experiments.

Specification

Communication	Printer Port
Power	9V DC Adaptor / 5V DC Extend Power Pin
Dimension	28cm x 20cm x 2.1cm
Weight	600g

Other Specification

uP-1 Circuit Test

- PIC 16 series IC socket
- 8751/8752 series IC socket
- Power supply
- 8255 IC circuit
- Extended EPROM and SRAM circuit
- Relay circuit
- 8243 IC circuit
- 74139 decoder IC circuit
- DIP switches circuit
- Dot matrix LEDs display
- OPTO device circuit
- Expanded area
- 8 LEDs output.
- 4 digits 7 segment display circuit
- DIP switches circuit
- Buzzer output circuit
- RS-232 serial port circuit
- D/A circuit
- A/D circuit
- LCD connector
- 9 pin D-type connector
- 429 holes universal testing board

uP-1 applications

- Simple LEDs output and touch switch
- Single or double unit traffic light control
- LEDs display
- Extended EPROM
- Extended SDRAM
- 8243 I/O Extended IC socket
- 7 segment displays
- Relay control
- 4 x 4 array keyboard
- Timer
- Counter
- Serial I/O
- LCD display control
- OPTO input and output device
- Analog-to digital conversion
- DIP switches setup
- A/D and D/A converter
- 8255 I/O Extended IC
- LCD output application (LCD for optional accessory)
- RS-232 connection
- Multi I/O decoder
- 5 x 7 dot matrix display application

Leaptronix®

LA-2025/2050

Stand-Alone Logic Analyzer Series / Provide the best measurement solution/

Introduction

The LA-20 Series helps minimize users' project risk by providing the most reliable, accurate data capture and a complete view of system behavior. These products are ideally suited for users on hardware/ software debugging, parametric, mixed signal testing, and complex debugging. Moreover, their compact size and ability to connect with a PC makes them an ideal solution at remote sites.

Standard Accessories

Main unit x1
Data pod x4
Lead set.....x4
Testing probe (testing hook) x36
AC power cord x1
User manual x1
CD.....x1
(Driver and user manual are included)
USB cable.....x1

Features

- External (synchronous) and internal (asynchronous) capture：Offer a more convenient environment for engineers.
- Provide three sets of searching data functions and six cursor marks. The timing of each trigger point can be shown by the cursor mark.
- Binary code and hexadecimal List mode (State) display.
- Able to save measuring data and waveform results in stand-alone mode.
- Offer I2C, SPI, UART and CAN signal decoding function on PC.
- Provide various signal trigger and capture ：Total of four kinds of trigger modes including Pattern/Edge/AND/OR.
- Pre-trigger, post-trigger, 3 level trigger, and continued-trigger functions allow users to operate easily.
- Bus analysis and glitch capture functions: 2M Bytes~4M Bytes long memory depth ；each CH memory depth is up to 512Kbits~1Mbits.
- The adjustable sample rate size can be set by users, which avoids long capturing time.
- Provide "Trigger Counter" and "Pulse Wide Trigger" function.
- High-speed Zoom In / Zoom Out techniques.
- Smart software provides text file for saving the Binary Code of waveform results.
- Compact, portable for engineers to perform debugging.
- 5.6 inch TFT color LCD display.
- USB 2.0 interface for PC link function, which can connect with PC for user to save, analyze, view and printout.

Specification

Model	LA-2025	LA-2050
Timing Analysis	250MHz	500MHz
State Analysis	200MHz	200MHz
Bandwidth	200MHz	200MHz
Channels	32CH	32CH
RAM Size	2M Bytes	4M Bytes
Storage Depth per Channel	512K bits x 32CH	1M bits x 32CH
Maximum Input Voltage	±15V	±15V
Threshold Range	-4V～+4V	-4V～+4V
Data Skew (Channel to Channel)	4ns typical (±4ns Max)	2ns typical (±2ns Max)
Trigger Condition	Pattern / Edge / AND / OR	Pattern / Edge / AND / OR
Trigger Counter	1~255次	1~255次
Pulse Width Trigger	YES	YES
Glitch Capture	4ns	2ns
Communication	USB 2.0	USB 2.0
Power Source	110V AC～240V AC	110V AC～240V AC
Frequency Range	50～60Hz	50～60Hz
Power Consumption	18W (20W Max)	18W (20W Max)
Operating Temperature	0℃～45℃	0℃～45℃
Dimension	31cm x 15cm x 9cm	31cm x 15cm x 9cm
Weight	3.8Ｋg	3.8Ｋg

PC System Requirement

Operating System	Windows 98/2000/XP/Vista32

PLA-1016/2532

PC-Based Logic Analyzer / Provide the most economical measurement solution /

Introduction

The PLA Series (PC-Based logic analyzers), provides digital software and hardware designers the ability to quickly capture the complex signals in a digital environment that requires analysis and/or debugging. Furthermore, its compact size and USB connectivity to a laptop makes PLA an ideal solution for field applications.

Standard Accessories

Main unit.....x1
Lead Set
16CH.....x1
32CH.....x2
CD.....x1
(Driver and user manual are included)
USB cable.....x1

Optional Accessories

Testing probe (testing hook)

Features

- Internal (asynchronous) and External (synchronous) capture：Offer a more convenient environment for engineers.
- The timing of each trigger point can be shown by the cursor mark.
- Binary code and hexadecimal List mode (State) display.
- Able to save measuring data and waveform results.
- Provide various signal trigger and capture：Pattern/Edge/AND/OR, 4 kinds of trigger modes.
- Provide various signal trigger and capture：Total of four kinds of trigger modes including Pattern/Edge/AND/OR.
- Provide Bus analysis and glitch capture functions.
- 256K Bytes ~ 2M Bytes long memory depth；each CH memory depth is up to 128Kbits ~ 512Kbits.
- The adjustable sample rate size can be set by users, which avoids long capturing time.
- "Trigger Counter" and "Pulse Width Trigger" function.
- High-speed Zoom In/Zoom Out function.
- Smart software provides text file for saving the Binary Code of waveform.
- USB 2.0 interface for PC link function, which can connect with PC for user to save, analyze, view and printout.
- Powered by USB.

Specification

Model	PLA-1016	PLA-2532
Timing Analysis	100MHz	250MHz
State Analysis	100MHz	100MHz
Bandwidth	100MHz	100MHz
Channels	16CH	32CH
RAM Size	256K Bytes	2M Bytes
Storage Depth per Channel	128K bits x 16CH	512K bits x 32CH
Maximum Input Voltage	±5V	±5V
Threshold Range	-4V～+4V	-4V～+4V
Data Skew (Channel to Channel)	10ns typical	4ns typical
PC Link Interface	USB 2.0	USB 2.0
Temperature	0℃～45℃	0℃～45℃
Dimension	15cm x 8cm x 3cm	15cm x 8cm x 3cm
Weight	230g	240g

PC System Requirement

Operating System	Windows 98/2000/XP/Vista32

LPP-3025T

Programmable DC Power Supply Series / Provide two completely separate power output /

Introduction

LPP-3025T provides a higher stability in terms of traditional Programmable DC Power Supply. LPP-3025T, linear programmable DC Power Supply Series support USB PC-Link and two completely separate power outputs. With the various characteristics, LPP-3025T is the best choice of power supplies for engineers. With the functions of the power supply of LPP-3025T, it provides two completely separate power output which is able for series or parallel connection; other than the common power supplies on the market of positive/ground/ negative output. In addition, LPP-3025T supports low-voltage digital circuits, also it is able to switch voltage among 1.8V~5.0V. With its characteristics of stability and high-speed twinkling reaction, LPP-3025T provides high quality at a very economical price.

Standard Accessories

Main unit.....x1
AC power cord.....x1
USB cable.....x1
DC output cable.....x3
CD.....x1
(Driver and user manual are included)

Optional Accessories

DC output cable set

Features

- Provide two completely separate power outputs. Users can obtain higher voltage, current, and positive & negative voltage applications by using series or parallel connection.
- Support low-voltage digital circuits：Provides fixed power output also it is able to switch voltage among 1.8V~5.0V.
- OVP (Over voltage protection)/OCP (Over current protection) functions: For each programmable output, users can set desired protective voltage or current value.
- V.Set Limit function：Sets the limit of the maximum voltage.
- When keypad is loked, user can not change the setting of voltage and current. The LPP will be locked even if user restarts the LPP.
- Supply high resolution of V (voltage)/ I (current) for measurement: The resolution of V (voltage)/I (current) can raised up to 10mV/1mA.
- Memory storage：Memorizes up to 10 formats setting of OCP, OVP and V.Set Limit.
- USB Interface: Use USB interface to offer PC-Link function to be able to write the control programs, save data and PC-Remote with simple command text format.

Specification

Operating Temperature	0℃～45℃
Power	AC 110V/220V；50Hz/60Hz
Communication	USB
Dimension	22.5cm x 31cm x 10cm
Weight	6.5Kg
Programmable DC Output Ratings	
Voltage	0.1V～30V(Max:30.99V)
Current	0.01A～2.5A(Max:3.000A)
Fixed Output Ratings	
Voltage	OFF/1.8V/2.5V/3.0V/3.3V/5.0V
Current	~3A
Ripple and Noise (20Hz~20MHz)	
Voltage	≤ 1mVrms/8mVp-p
Current	≤ 2mArms/10mAp-p

mPP Series

Mini Programmable DC Power Supply Series

Introduction

mPP series (Mini Programmable DC Power Supply) is the most compact linear power supply. The mPP series operates in high performances and pertains reliability. Moreover, it offers high stability for applications that need precise output control and low noise.

Features

- Support low-voltage digital circuits : Provide fixed power output also it is able to switch voltage among 1.5V~5.0V. (mPP - xxxT and mPP - xxxxD series)
- Provide two completely separate power outputs. Users can obtain higher voltage, current, and positive & negative voltage applications by using series or parallel connection. (mPP - xxxT and mPP - xxxxD series)
- OVP (Over voltage protection)/OCP (Over current protection) functions: For each programmable output, users can set desired protective voltage or current value.
- V.Set Limit function : Set the limit of the maximum voltage.
- When keypad is loked, user can not change the setting of voltage and current. The mPP will be locked even if user restarts the mPP.
- PC control software can display the waveform of voltage/current : It can record 2~4 datas in one second which allows users to view and analyze long period variations of voltage & current.
- Compact and high power output : Although it is only one-third of size compared to the traditional power supply, it can output 225Watts; which provides a better working space for the engineers and production line.
- Supply high resolution V, I for measurement : The resolution of V (voltage) / I (current) supports up to 1mV/1mA, which provides more accurate measurements in circuit designs, verifications, and quality tests.
- Memory Storage : Memorizes up to 100 formats setting of OCP, OVP and V.Set Limit.
- Remote control with PC interface : Using USB interface to offer PC-Link function (some models uses RS-232) able to write control programs, save data, and PC-Remote.

Standard Accessories

Main unit.....x1
CD.....x1
(Driver and user manual are included)
AC power cord.....x1
USB cable.....x1
(Part of model is RS-232 cable)
DC output cable
(It is according to the model 1~3 set)

Optional Accessories

TUSB to RS-232 cable
DC output cable set

Specification

Model	mPP-3040D	mPP-3035T	mPP-6020T
Interface Standard	RS-232	USB	USB
Operating Temperature		0℃～45℃	
Power		110V/220V ; 50Hz/60Hz	
Dimension	10.7cm x 28cm x 14.8cm	22.5cm x 31cm x 10cm	22.5cm x 31cm x 10cm
Weight	5.2 kg	6.5 kg	7.2 kg
Output Range			
Voltage	0.1V~30V(Max:30.999V)	0.1V~30V(Max:30.999V)	0.02V～60V(Max:61.000V)
Current	0.01A～4.000A	0.01A～3.500A	0.01A～3.000A
Fixed Output Range			
Voltage		OFF / 1.5V/ 1.8V / 2.5V / 3.0V / 3.3V / 5.0V	
Current		~3A	
Ripple & Noise (20Hz~20MHz)			
Voltage	≤ 1mVrms / 5mVp-p	≤ 1mVrms / 5mVp-p	≤ 2mVrms / 10mVp-p
Current	≤ 2mArms / 6mAp-p	≤ 2mArms / 6mAp-p	≤ 2mArms / 10mAp-p

Series Model

Model	Output Range	Resolution	Fixed Output Range	Output Watt
mPP-3040D	30V,4.0A (Single)	1mV, 1mA	1.5V~5.0V,3A	135W
mPP-3035T	30V,3.5A (Dual)	1mV, 1mA	1.5V~5.0V,3A	225W
mPP-6020T	60V,2.0A (Dual)	2mV, 1mA	1.5V~5.0V,3A	255W

mPB-3040Q

Multi-Channel Programmable Power Supply Series

Introduction

The mPB Series(Multi Programmable Power Supply) provides the functions of easy to control the voltage and current of each output and able to read the current consumption at anytime via USB and PC connection. In the meanwhile, it is the best choice for establishing the testing station in the production line or collocating with other precision instruments or precision burn-in system associating with the standard 19" cabinets.

Standard Accessories

Main unit.....x1
AC power cord.....x1
DC output cable.....x4
USB cable.....x1

Features

- **Supply high resolution V, I for measurement:** The resolution of V (voltage)/ I (current) supports up to 1m V/1mA, which provides more accurate measurement in circuit design, verification and quality test.
- **Provide quadruple programmable power output:** Let users obtain higher voltage & current and positive & negative voltage applications by using series & parallel connection.
- **Remote control with USB interface:** Provide USB interface to offer PC-Link function to let users be convenient to control program writing, data saving and PC-Remote.
- **Completely extending function:** Single PC can connect to multi mPB series to extend more sets of power supply via USB interface.
- **Use easy command text format to write control programs:** Provide multi functions for on/off, limit of output voltage and current, and the current consumption for voltage and current.
- **Adopt standard 19" cabinet & the 3U height:** Users can combine testing equipments according to the demands.

Specification

Output DC Power Range	Voltage : 0.01V~30V (up to 30.999V)
	Current : 0.01A~4A
High Resolution Current	Voltage : 1mV
	Current : 1mA
Ripple and Noise (20Hz~20MHz)	C.V Voltage : <1mArms/5m Vp-p
	C.V Current : <2mArms/6m Ap-p
4 Independent programmable output	Series connection (Output voltage up to 30V x 4)
model able to provide series connection	Parallel connection (Output current up to 4A x 4)
AC-IN	220V/50Hz
Communication	USB
Dimension	43cm x 56cm x 13cm
Weight	17.5 Kg
Operating Temperature	0℃～45℃

AH-400

High-Speed Automated Programming System

Introduction

AH-400 is an expeditious automated programming system, which offers a special design for programming tiny devices packaged in Tube/Tape. Its unique technology design has a rotary robotic arm to pick up and position devices. The AH-400 contains a high-speed programmer that can bring AH-400 into its fullest potential, furthermore its original UPH has been upgraded with the efficient programming system – SU-6000.

Standard Accessories

Main unit.....x1
SU-6000 Gang-4 Programmer x2sets
User manual.....x1
CD.....x1
(Windows XP OS: IPC driver and operating software are included)
Fail box
PU colling box

Features

- **High-performance** : Not only meet a variety of input and output options with tube and tape, also perform programming, marking and packaging.
- **Intelligent Operation** : Automatic loading, positioning, programming, marking and sorting through system control.
- **High-speed programming system**: Built-in SU-6000 Gang 4 programmer to ensure high quality and stability of the programming system.
- **Marking machine**: System offers dots, number or character marking for the ICs packaged in tube or tape.
- **Convenient maintenance** : The special modulized design grants an easy access to exchange the packaging method from tube to tape or vice versa.
- **Powerful operation software** : User-friendly and powerful operation software, which can record all of the production details. The saved results will be used for the next reboot, as well as tracking qualities and productivities.

Optional Accessories

Tube In	Tube Loader STI-4-xxxkit (xxx:IC size)about 3.5kg
Tube Out	Tube unloader STO-4-xxxkit (xxx:IC size)about 4.5kg
Tape In	Power Feeder ATF-1-xxxkit (xxx:IC tape width) , about 2kg
Tape Out	Taping Machine ATM-100, about 30kg
Mark Machine	Mark Tube out / Tape out devices (MK-1)
Socket Press Block and Nozzle	In accordance with IC size to choose.
Test Socket	We strongly recommend it is better to prepare consumables for replacement.
Precissor	AH-400-08-xxx (xxx : IC size)
Programming Adaptor	Depend on customer's request.

＊Please contact Leap sales for a correct P/N when users need to purchase accessories.

The innovative design of AH-400 obtains Patent certificate of Improvement in picking & positioning system of IC programming instrument.

Patent certificate No.: M 306360 in Taiwan

Patent certificate No.: ZL2006-2-0137588.6 in China

APE-3200A

Universal Automated Programming System

Introduction

The APE-3200A is the most effective automated system for high-density device programming in the market. It is an unique design and technology of the dual axle parallel and synchronous driving for fast and reliable picking and positioning devices, which maximizes the total throughput.

Standard Accessories

Main unit.....x1
SU-6000 Gang programmer x2
User manual.....x1
CD.....x1
(Windows XP OS: IPC driver and operating software are included)
Fail box
PU colling box

Features

- **High-speed programming system**：Built-in SU-6000 Gang 4 programmer to ensure high quality and stability of the programming system.
- **Excellent performance**: Support tray packaging, tape packaging, etc. It completely reaches the goal of automatic production.
- **High-efficiency throughput**: the UPH can be raised up to 1000.
- **Multi-programming interface**：Depend on the timing of IC programming, the APE-3200A is able to set up 1-8 sets of SU-6000 programming module, each module has 4 device modules to shorten the waiting time of programming. It can contain 32 devices each time.
- **Convenient for switching the adaptor**：Universal pin driver design, it is able to utilize the same module for the same package. In case of changing sockets, users can simply plug the sample in/out.
- **Intelligent Operation**：The result of data setting and testing are able to be saved automatically, it will be used for the next reboot, as well as tracking qualities and productivities. All-in-one control system, which includes automatic loading, positioning, pin detection, testing, programming, pass / fail discrimination, and unloading.
- **Built-in SU-6000 Gang programmer**：Offer high speed and stable programming system.
- **Interface supporting**：It is flexible for selecting tube or tape, also loading and unloading equipments.
- Unique structure of GANTRY and TWIN DRIVER, together they are in conjunction with high-speed programming system to offer the most effective IC programming solution.
- Offer a departure revising "IC Devise Precissor" function.

Optional Accessories

Tube In	Tube Loader STI-4-xxxkit (xxx:IC size)about 3.5kg
Tube Out	Tube unloader STO-4-xxxkit (xxx:IC size)about 4.5kg
Tape In	Power Feeder ATF-1-xxxkit(xxx:IC tape width) , about 2kg
Tape Out	Taping Machine ATM-100, about 30kg
Tray In	Auto tray move in ATL-10 (JEDEC), about 30kg.
Tray Out	Auto tray move out ATU-10 (JEDEC), about 30kg.
Mark Machine	Mark Tube out / Tape out devices (MK-1)
Socket Press Block & Nozzle	In accordance with IC size to choose.
Test Socket	We strongly recommend it is better to prepare consumables for replacement.
Other Loading and Unloading Devices	Depend on customer's request.
Programming Adaptor	Depend on customer's request.

＊Please contact Leap sales for a correct P/N when users need to purchase accessories.

AH-600

Automated Device Testing / Programming System

Introduction

The programmable new type of Oscillator with high performance was created, it simplifies the production flow, also shortens the lead time for the customized products. Moreover, the oscillator distributors do not need to suffer the pressure piling up from the costs of storehouses. AH-600 is the first automated system for SMD parameter testing and frequency programming in the market. It's a unique design and technology for the rotary robotic arm to pick up the devices, with the affiliation of the high-speed programmer, granting AH-600 maximizing the throughput and yield rate.

Standard Accessories

Main unit.....x1
Oscillator programming module.....x3
ADF-600 automated device feeder.....x1
Anti-Static Fan.....x1
SMT class Nozzle.....x12
UPS x1
User manual.....x1
CD.....x1
(Windows XP OS: IPC driver and operating software are included)
PU colling box

Features

- **Exchange component packaging fast :** AH-600 is able to depend on the diversity of SMD packages to exchange the feeder, component holder, and the probe module rapidly. AH-600 can always maximize the throughput.
- **Intelligent Operation** : The result of data setting and testing are able to be saved automatically, it will be used for the next reboot, as well as tracking qualities and productivities. All-in-one control system, which includes automatic loading, positioning, pin detection, testing, programming, pass / fail discrimination, and unloading.
- **Stable programming system :** Built-in a high speed and stable Oscillator programming module to ensure high quality and production programming, which satisfies the customers.
- **Powerful operation software** : User-friendly and powerful operation software, which can record all of the production details. The saved results will be used for the next reboot, as well as tracking qualities and productivities.
- **Convenient maintenance** : Programming and loading systems can be replaced fast and are convenient to maintain. Moreover, because of the unique modular design, it is simple and convenient for maintenances and replacements.

Optional Accessories

Feeder Track	(3.2 x 2.5),(2.5 x 2.0)
	(7.0 x 5.0),(5.0 x 3.2)
SMT Class Nozzle	YV100 X 0805/0603
	YV100 X 2.2/1.5
Component Holder	(3.2 x 2.5 and 2.5 x 2.0 Commons)
	(7.0 x 5.0 and 5.0 x 3.2 Commons)
Probe Module	(3.2 x 2.5), (2.5 x 2.0)
	(7.0 x 5.0), (5.0 x 3.2)
Probe	Pin no.0 (3.2 x 2.5 and 2.5 x 2.0 Commons)
	Pin no.1 (7.0 x 5.0 and 5.0 x 3.2 Commons)

- **Application of the industry :** In the point of views of different SMD component industries (Crystal, Oscillator, MLCC, Fuse, the inductance, resistance and the voltage transformer), proceeding towards the customized automated production. For instance, parameter, frequency programming tests, and electric characteristic testing, etc. Meanwhile, it can save customers' valuable time and improve the output performance.
- **Provide Counter function :** Display the frequency of DUT when testing and programming. Allowing users to control the condition of DUT at any time.
- **High-efficiency throughput** : AH-600 UPH can be raised up to 2400~2600, monthly outputs can reach 1.2KK easily.

* UPH2400 x 20H / per day x 25 days/per month =1.2KK

LEAPER-8

Oscillator Programmer

Introduction

LEAPER-8 offers engineers to rapidly produce their own custom frequency oscillators. It's the best selection for engineers to do various experiments.

Standard Accessories

Main unit.....x1
USB cable.....x1
CD.....x1
(Driver and user manual are included)

Optional Accessories

Socket board
DC 12V power adaptor

Features

- Support Oscillator frequency test.
- Provide setting Oscillator programming frequency.
- High performance, low cost, portable and professional design.
- USB interface to link with PC.
- Provide clock adjustable function and auto calibration function.
- User-friendly operation software supports Windows 98/2000/XP.

Specification

Frequency Range	47~63Hz
Dimension	16cm x 11cm x 4.5cm
Weight	500g
Operating Altitude	up to 5000m
Operating Humidity	90%(non-condensing)
Temperature	+5℃ ~ +45℃
Socket Board	Socket Board（without sockets）
Communication	USB 2.0
Signal Sepcification	Vcc Voltage：1.0V~6.0V 100mA
	Vpp Voltage：1.0V~12.0V 50mA
Frequency Measurement Range	10Hz~200MHz
Program Options	Output Enable / Disable
	TTL/CMOS Output (3.3V , 1.8V)

PC System Requirement

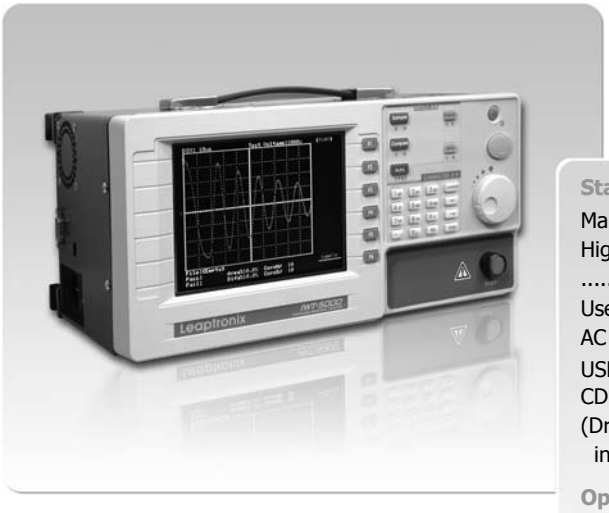
Operating System	Windows 98/2000/ME/XP
Memory	128MB
Hard Disk	up to 30MB
Communication	USB 2.0

IWT-5000

Impulse Winding Tester

Introduction

IWT-5000 winding tester is a coil (such as voltage transformer, inductance, motor) testing instrument that tests self-insulating property of the coil. The influences of winding materials, magnetic materials, and framework, also extra fabrication decreases the insulating property of coil layers along with the jumpers and jacks. The IWT-5000 adopts the technology of high-speed sampling rate to store the sample waveform of the standard (master) coil in the instrument. By comparing the waveform results of the test coil to the master, the defect in the DUT can be found easily. Moreover, the IWT-5000 judges the quality of the testing coil according to the parameter set by the user.



Standard Accessories

Main unit.....x1
High voltage test line.....
.....x1set
User manual.....x1
AC power cord.....x1
USB cable.....x1
CD.....x1
(Driver and user manual are include)

Optional Accessories

RS-232 Cable

Features

- With 500V~5000V programmable impulse voltage, it is capable of low-energy testing, without damaging the coil.
- Provide high-speed sampling rate of 100MHz, which enhances the testing ability for partial discharges.
- 320 x 240 color LCD display clearly for the user to view waveform and test results.
- Provide user-friendly operation interface.
- Low inductance during impulse testing, minimum to 20uH.
- Provide 4 kinds of detection modes: AreaSize Comparison, DiffZone Comparison, Corona Amount Comparison, and Corona Number Comparison.
- The comparative result shows Pass/Fail directly, informing operators the detect test result within a short period of time.
- Offer measurement functions for voltages, timing and frequencies, which provide user a carry-out analysis in detail.
- Able to save 100 sets of standard waveform result of the coil for users to download and implement into testing.
- To make analysis easier, IWT-5000 offers USB 2.0 interface to connect with PC for users to upload or download the parameters of waveforms results.

Specification

Testing Voltage	500V～5000V(100V Steps)
Output Energy	0.25J (Max)
Inductance Range Of Test Coil	20μH and above
Sampling Rate	8 bit /10 ns (100MHz)
Sampling Memory Depth	5000 Byte
Input Resistance	10MΩ
Display Measure	5.6 inch Colored LCD (320 x 234)
Comparison Measures	AreaSize Comparison, DiffZone Comparison, Corona Amount, Comparison Corona Number Comparison
Storage Waveforms	100 Sets of waveforms
Comparison Output	Pass/Fail, beeping
Communication	1. USB 2.0 2. RS-232 or I/O
Power	110V/220V AC
Frequency Range	50/60Hz
Dimension	31cm x 15cm x 18cm
Weight	5.3Kg
Temperature	25℃～40℃

PC System Requirement

Operating System	Windows 98/2000/XP/Vista32

- Provide the control function for external I/O, such as the Handler adopts standard D SUB 9-pin connector for connecting with automatic or semi-auto testing system.