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ICE Technology Ltd.  
Programmer accessories, Package adapters and Modules

effective from 1<sup>st</sup> March 2001

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#### ROM/RAM Emulators for LV48 programmers

The LVEC range of Emulator cards can be fitted to any of the LV48 Engineering programmers. Emulating EPROM and RAM devices only, from 128K by 8, to 512K by 16. All cables, headers and adapters are provided. Emulators run using WinLV development software, and have a 1 year warranty

**LVEC-EMUL16** : 128K by 16-bit Emulator card

**LVEC-EMUL16M** : 512K by 16-bit Emulator card

**LVEC-EMUL8** : 128K by 8-bit Emulator card

**LVEC-EMUL8M** : 512K by 8-bit Emulator card

#### UV Erasers

The Lawtronics series of Professional UV erasers. With built-in Universal Power supply

**ME5E** : Capacity: 5 EPROMs 24-40 pin. NO TIMER

**ME5** : Capacity: 5 EPROMs 24-40 pin, with timer

**ME15** : Capacity: 15 EPROMs 24-40 pin, with timer

**ME30** : Capacity: 30 EPROMs 24-40 pin, with timer

**ME90** : Capacity: 90 EPROMs 24-40 pin, with timer

**ME200** : Capacity: 250 EPROMs 24-40 pin, with timer

#### Accessories

**Vacuum Pick-Up Pen** - with a variety of heads & pads for different device sizes

#### Adapters – Standard

These are our most common adapters. Unless specifically stated, all standard adapters can be used across our whole programmer range

**AD-20PL-20DIP** : 20 PLCC to 8 DIP. Pin to pin convertor for standard 20-pin JEDEC logic parts

**AD-20PL-EPC1** : 20 PLCC to 8 DIP. For Altera format FPGA configuration serial PROMs

**AD-20PL-XIL17XX** : 20 PLCC to 8 DIP. For non-Altera FPGA configuration serial PROMs

**AD-28PL-24DIP** : 28 PLCC to 24 DIP. Converts 28 pin PLCC parts to 24 pin DIP

**AD-28PL-28DIP** : 28 PLCC to 28 DIP. Pin to pin convertor

**AD-28PL-EP6XX** : 28 PLCC to 24 DIP. Suitable for Altera's EP600 family of devices

**AD-32PL-28DIP** : 32 PLCC to 28 DIP. For 32 pin PLCC EPROMs, up to 27C512

**AD-32PL-32DIP** : 32 PLCC to 32 DIP. Pin to pin convertor

**AD-44PL-44DIP** : 44 PLCC to 44 DIP. Pin to pin convertor. **48-pin programmers only**

**AD-16SO-JEDEC** : 16 SOIC to 16 DIP. **Clam shell**. For 8 & 16-pin JEDEC SOIC parts (0.15" wide)

*To check which adapter is required, run WinLV, and select your device and package type. In the "Select Device" window, the required adapter/module code is displayed in the status line at the bottom of the window*

## Matrix Package Modules

<b>MOD-48DIP:</b> for all DIP devices up to 48-pins
<b>MOD-20PL:</b> for all devices in 20 PLCC
<b>MOD-20PL-HT:</b> for all devices in 20 PLCC. <i>Clam shell</i>
<b>MOD-28PL24:</b> for JEDEC PLD devices in 28 PLCC
<b>MOD-28PL24-HT:</b> for JEDEC PLD devices in 28 PLCC. <i>Clam shell</i>
<b>MOD-28PL28:</b> for all memory devices in 28 PLCC
<b>MOD-28PL28-HT:</b> for all memory devices in 28 PLCC. <i>Clam shell</i>
<b>MOD-32PL:</b> for all devices in 32 PLCC
<b>MOD-32PL-HT:</b> for all devices in 32 PLCC. <i>Clam shell</i>
<b>MOD-44PL:</b> for all devices in 44 PLCC
<b>MOD-44PL-HT:</b> for all devices in 44 PLCC. <i>Clam shell</i>
<b>MOD-52PL-711A/E:</b> for Motorola MC68HC711A/E devices in 52 PLCC
<b>MOD-52PL-908:</b> for Motorola MC68HC908 devices in 52 PLCC
<b>MOD-68PL-PIC75X:</b> for Microchip PIC17C75x devices in 68 PLCC
<b>MOD-68PL-PIC92X:</b> for Microchip PIC16C92x devices in 68 PLCC
<b>MOD-16SO-JEDEC:</b> for 8 & 16-pin JEDEC SOIC parts (0.15" wide)
<b>MOD-20SO-EIAJ:</b> for 8, 16 & 20pin EIAJ SOIC parts (0.2" wide)
<b>MOD-28SO:</b> for 18-28-pin JEDEC SOIC parts (0.3" wide)
<b>MOD-28TS:</b> for all devices in 28 TSOP
<b>MOD-32TS:</b> for all devices in 32 TSOP
<b>MOD-40TS:</b> for all devices in 40 TSOP
<b>MOD-40VS:</b> for all devices in 40 VSOP (TSOPI)
<b>MOD-44PS:</b> for all devices in 44 PSOP. <i>Clam shell</i>
<b>MOD-48TS:</b> for all devices in 48 TSOP
<b>MOD-56TS-0XX:</b> for 8-bit Flash memory devices in 56 TSOP
<b>MOD-56TS-X00:</b> for 16-bit Flash memory devices in 56 TSOP
<b>MOD-44QF:</b> for all devices in 44 QFP. <i>Clam shell</i>
<b>MOD-44TQ:</b> for all devices in 44 TQFP. <i>Clam shell</i>

To check which adapter is required, run WinLV, and select your device and package type. In the "Select Device" window, the required adapter/module code is displayed in the status line at the bottom of the window

## Adapters - for 48-pin programmers only

Specifically designed for use with the LV48 range of Engineering programmers. However, they can also be used in conjunction with the MOD-48DIP module on the Matrix Programming System

<b>AD-44PL-44DIP:</b> 44 PLCC to 44 DIP. Pin to pin convertor
<b>AD-44PL-44HT:</b> 44 PLCC to 44 DIP. Pin to pin convertor. <i>Clam shell</i>
<b>AD-44PS-44DIP:</b> 44 PSOP to 44 DIP. For Flash memory devices. <i>Clam shell</i>
<b>AD-48TS-48DIP:</b> 48 TSOP to 48 DIP. For Flash memory devices
<b>AD-54TS48-MT28S4 :</b> for Micron SyncFlash devices in TSOP54 package
<b>AD-56TS48-F0XX:</b> 56 TSOP to 48 DIP. for 8-bit Flash memory devices
<b>AD-56TS48-FX00:</b> 56 TSOP to 48 DIP. for 16-bit Flash memory devices
<b>AD-PA48BGA48D:</b> for SST32LHxxx devices in 48-BGA package
<b>AD-64EBGA-48DIP :</b> for Intel StrataFlash devices in 64-pin EBGA package
<b>AD-56SS48-CYUSB :</b> for Cypress CY63xxx USB micros in 48 and 56-pin SSOP
<b>AD-44QF-44DIP:</b> 44 QFP to 44 DIP. Pin to pin convertor. <i>Clam shell</i>
<b>AD-44TQ-44DIP:</b> 44 TQFP to 44 DIP. Pin to pin convertor. <i>Clam shell</i>
<b>AD-56SD-48DIP:</b> for ST micros ST7 micros in 56 SDIP

## Adapters – SOIC, PSOP, TSOP, BGA & SDIP packages

For use with the LV48 series, LV40 Portable and our old range of 40pin programmers. They can also be used in conjunction with the MOD-48DIP on the Matrix Programming System

<b>AD-16SO-JEDEC:</b> 16 SOIC to 16 DIP. <i>Clam shell.</i> For 8 & 16-pin JEDEC SOIC parts (0.15" wide)
<b>AD-20SO-EIAJ :</b> 20 SOIC to 20 DIP. <i>Clam shell.</i> For 8, 16 & 20-pin EIAJ SOIC parts (0.2" wide)
<b>AD-28SO-28DIP :</b> 28 SOIC to 28 DIP. <i>Clam shell.</i> For 18 to 28-pin JEDEC SOIC parts (0.3" wide)
<b>AD-28SO-WIDE :</b> 28 SOIC to 28 DIP. <i>Clam shell.</i> For 28-pin SOIC parts (0.33" wide)
<b>AD-28TS-28DIP:</b> 28 TSOP to 28 DIP. Pin to pin convertor
<b>AD-32TS-32DIP:</b> 32 TSOP to 32 DIP. Pin to pin convertor
<b>AD-32TS-32HT:</b> 32 TSOP to 32 DIP. Pin to pin convertor. <i>Clam shell</i>
<b>AD-32VS-32DIP:</b> 32 VSOP (TSOPI) to 32 DIP. Pin to pin convertor
<b>AD-40TS40-FLASH:</b> 40 TSOP to 40 DIP. For Flash memory devices
<b>AD-40VS-40DIP:</b> 40 VSOP (TSOPI) to 40 DIP. Pin to pin convertor
<b>AD-44TSII-40:</b> 44(40) TSOPII to 40 DIP. Pin to pin convertor
<b>AD-PA51CC-BD:</b> for Atmel W&M T89C51CC01 devices in BGA package
<b>AD-32SD-32DIP:</b> 32 SDIP to 32 DIP. For ST Micros ST7 devices
<b>AD-42SD-40DIP:</b> 42 SDIP to 40 DIP. For ST Micros ST6 & ST7 devices

To check which adapter is required, run WinLV, and select your device and package type. In the "Select Device" window, the required adapter/module code is displayed in the status line at the bottom of the window

## Adapters - Device Specific PLCC & QFP packages

For use with the LV48 series, LV40 Portable and our old range of 40pin programmers. They can also be used in conjunction with the MOD-48DIP on the Matrix Programming System

<b>AD-52PL-711A/E</b> : 52 PLCC to 40 DIP. For Motorola MC68HC711A/E devices
<b>AD-52PL-908</b> : 52 PLCC to 40 DIP. For Motorola MC68HC908 Flash microcontrollers
<b>AD-52PL-DS530</b> : 52 PLCC to 40 DIP. Use for Dallas 87C530 devices
<b>AD-68PL-16C92X</b> : 68 PLCC to 40 DIP. Use for Microchip PIC16C92X devices
<b>AD-68PL-17C75X</b> : 68 PLCC to 40 DIP. Use for Microchip PIC17C75X devices
<b>AD-84PL-PIC76X</b> : 84 PLCC to 40 DIP. Use for Microchip PIC17C76X devices
<b>AD-68PL-320E14</b> : 68 PLCC to 40 DIP. For Texas Instruments TMS320E14 devices
<b>AD-68PL-320E25</b> : 68 PLCC to 40 DIP. For Texas Instruments TMS320E25 devices
<b>AD-68PL-370C756</b> : 68 PLCC to 40 DIP. For Texas Instruments TMS370C756 devices
<b>AD-68PL-8751</b> : 68 PLCC to 40 DIP. Use for Temic/Atmel W&M 8951 Flash microcontrollers
<b>AD-68PL-87196KC</b> : 68 PLCC to 40 DIP. Use for Intel 87C196KC devices
<b>AD-68PL-87451</b> : 68 PLCC to 40 DIP. Use for Philips/Signetics 87C451 devices
<b>AD-68PL-87552</b> : 68 PLCC to 40 DIP. Use for Philips/Signetics 87C552 devices
<b>AD-68PL-87592</b> : 68 PLCC to 40 DIP. Use for Philips/Signetics 87C592 devices
<b>AD-64QF-C508</b> : 64 QFP to 40 DIP. For Infineon/Siemens SAB-C508 parts
<b>AD-80QF-C5X5</b> : 80 QFP to 40 DIP. For Infineon/Siemens SAB-C5x5 parts
<b>AD-68PL-EP18XX</b> : 68 PLCC to 40 DIP. For Altera's EP1800 family
<b>AD-68PL-EPM5128</b> : 68 PLCC to 40 DIP. For Altera EPM5128 devices using POF files
<b>AD-68PL-EPM7064</b> : 68 PLCC to 40 DIP. For Altera EPM7064 devices using POF files
<b>AD-84PL-EPM7064</b> : 84 PLCC to 40 DIP. For Altera EPM7064 devices using POF files
<b>AD-44PL-JAM</b> : 44 PLCC to 40 DIP. For Altera MAX7000S & 7000AE devices using JAM files
<b>AD-68PL-JAM</b> : 68 PLCC to 40 DIP. For Altera MAX7000S & 7000AE devices using JAM files
<b>AD-84PL-JAM</b> : 84 PLCC to 40 DIP. For Altera MAX7000, 7000AE & MAX9000 devices using JAM files
<b>AD-100QF-JAM</b> : 100 QFP to 40 DIP. For Altera MAX7000 S & AE devices using JAM files
<b>AD-100TQ-JAM</b> : 100 TQFP to 40 DIP. For Altera MAX7000 S & AE devices using JAM files
<b>JAM-Blaster</b> : For ISP programming of MAX7000S/AE and MAX9000 devices using JAM files
<b>AD-68PL-MACHX2X</b> : 68 PLCC to 40 DIP. For Lattice/Vantis MACHX2X devices
<b>AD-84PL-MACHX3X</b> : 84 PLCC to 40 DIP. For Lattice/Vantis MACHX3X devices
<b>AD-100QF-MACH</b> : 100 QFP to 40-DIP. For Lattice/Vantis MACH ISP & M4/M5 devices
<b>AD-100TQ-MACH</b> : 100 TQFP to 40-DIP. For Lattice/Vantis MACH ISP & M4/M5 devices
<b>AD-144QF-MACH</b> : 144 QFP to 40-DIP. For Lattice/Vantis MACH M5 devices
<b>AD-144TQ-MACH</b> : 144 TQFP to 40-DIP. For Lattice/Vantis MACH M5 devices
<b>AD-160QF-MACH</b> : 160 QFP to 40-DIP. For Lattice/Vantis MACH M5 devices
<b>AD-208QF-MACH</b> : 208 QFP to 40-DIP. For Lattice/Vantis MACH M5 devices
<b>AD-240QF-MACH</b> : 240 QFP to 40-DIP. For Lattice/Vantis MACH M5 devices
<b>AD-68PL-XC7272</b> : 68 PLCC to 40 DIP. For Xilinx XC7272 devices
<b>AD-68PL-XC7354</b> : 84 PLCC to 40 DIP. For Xilinx XC72XX devices
<b>AD-68PL-XC7372</b> : 68 PLCC to 40 DIP. For Xilinx XC7354 devices
<b>AD-84PL-XC72XX</b> : 68 PLCC to 40 DIP. For Xilinx XC73XX devices
<b>AD-84PL-XC73XX</b> : 84 PLCC to 40 DIP. For Xilinx XC73XX & XC95xx devices

## Adapters for 40-pin programmers only

For use on the LV40 Portable, and our old range of 40-pin programmers only. NOT for use on any of the LV48 series programmers, or the Matrix Systems

<b>AD-48DP-711A/E</b> : 48 DIP to 40 DIP. For Motorola MC68HC711A/E devices
<b>AD-44PL-16BIT</b> : 44 PLCC to 40 DIP. For 16-bit memory devices
<b>AD-44PL-8742</b> : 44 PLCC to 40 DIP. For Intel compatible 8742 devices
<b>AD-44PL-8751</b> : 44 PLCC to 40 DIP. For Intel compatible 8751 devices
<b>AD-44PL-16CXX</b> : 44 PLCC to 40 DIP. For Microchip PIC16Cxx devices
<b>AD-44PL-17C4X</b> : 44 PLCC to 40 DIP. For Microchip PIC17C4x devices
<b>AD-44PL-370C742</b> : 44 PLCC to 40 DIP. For Texas Instruments TMS370C742 devices
<b>AD-44PL-705C8</b> : 44 PLCC to 40 DIP. For Motorola MC68HC705C8/C8A/C9/C9A devices
<b>AD-44PL-711D3</b> : 44 PLCC to 40 DIP. For Motorola MC68HC711D3 devices
<b>AD-44PL-XC7236</b> : 44 PLCC to 40 DIP. For Xilinx XC7236 EPLD devices
<b>AD-44PL-73XX</b> : 44 PLCC to 40 DIP. For Xilinx XC73xx EPLD devices
<b>AD-44PL-ATV2500</b> : 44 PLCC to 40 DIP. For Atmel ATV2500 CPLD devices
<b>AD-44PL-AVR</b> : 44 PLCC to 40 DIP. For Atmel AVR microcontrollers
<b>AD-44PL-EP9XX</b> : 44 PLCC to 40 DIP. For Altera EP9xx family of PLD devices
<b>AD-44PL-EPM5064</b> : 44 PLCC to 40 DIP. For Altera EPM5064 CPLD devices
<b>AD-44PL-EPM7032</b> : 44 PLCC to 40 DIP. For Altera EPM7032 CPLD devices
<b>AD-44PL-MACHX1X</b> : 44 PLCC to 40 DIP. For Lattice/Vantis MACH1 CPLD devices
<b>AD-44PL-PA1740</b> : 44 PLCC to 40 DIP. For ICT PEEL ARRAY CPLD devices
<b>AD-44PL-PSD3</b> : 44 PLCC to 40 DIP. For STMicro/WSI PSD3xx peripheral devices
<b>AD-44PS-FLASH</b> : 44 PSOP to 40 DIP. For Flash memory devices
<b>AD-48TS40-F0XX</b> : 48 TSOP to 40 DIP. For 8-bit Flash memory devices
<b>AD-48TS40-FX00</b> : 48 TSOP to 40 DIP. For 16-bit Flash memory devices
<b>AD-56TS40-F0XX</b> : 56 TSOP to 40 DIP. For 8-bit Flash memory devices
<b>AD-56TS40-FX00</b> : 56 TSOP to 40 DIP. For 16-bit Flash memory devices

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