

Features

- SUPPORTS ALL ispLSI® 1000, 1000E, 2000, 2000E, 2000V, 3000, 5000V, 6000 AND 8000 DEVICE FAMILY MEMBERS
- STAND-ALONE DEVICE PROGRAMMER
- DOWNLOAD DIRECTLY TO AN ISP™ DEVICE ON A SYSTEM BOARD
 - Only 5 Control/Data Pins Needed
- QUICK DEVICE PROGRAMMING
- INEXPENSIVE, SMALL AND COMPACT
 - Eliminates Need For Expensive, Remote Programmer
- EXCELLENT FOR PROTOTYPING NEW DESIGNS
 - Not Intended For Production Programming
- EASY TO USE
- CONNECTS DIRECTLY TO PARALLEL PRINTER PORT OF HOST PC

Description

The ISP Engineering Kit Model 100 provides designers with a quick and inexpensive means of evaluating and prototyping new designs using Lattice Semiconductor Corporation (LSC) in-system programmable Large Scale Integration (ispLSI) devices. This Kit is designed for engineering purposes only and is not intended for production use. The Kit programs devices from the parallel printer port of a host PC using Lattice Semiconductor's ispEXPERT Compiler and Systems. By connecting a system cable (included) from a host PC to the ISP Engineering Kit, or connecting from the host PC to the target device on the system board, a JEDEC file can be easily downloaded into the ispLSI device(s).

Components

The ISP Engineering Kit Model 100 consists of two primary components, each sold separately:

- Universal Programming Module (UPM)
- Socket adapters (The adapters plug into the UPM base. The adapter provides the appropriate PLCC, PQFP, TQFP or MQUAD socket for a particular ispLSI device package).



ISP Engineering Kit - Model 100

UPM Description

The Model 100 Universal Programming Module is designed to support all package types available from LSC. It consists of the following components:

- Universal programming module base unit
- 110VAC/9VDC at 200mA power supply converter (included for North America and Asia only)
- 25-pin parallel port adapter
- 6' system download cable with an RJ-45 telephone style connector at each end

The connection between the host PC and the UPM base unit is shown in Figure 1.

Electrical Characteristics

Power Supply (North America and Asia Only)

AC Input Voltage: 110 VAC
DC Output Voltage: 9 VDC @ 200mA

UPM Physical Characteristics

Length: 3.75 inches
Width: 2.625 inches
Depth: 1.375 inches

Download Cable

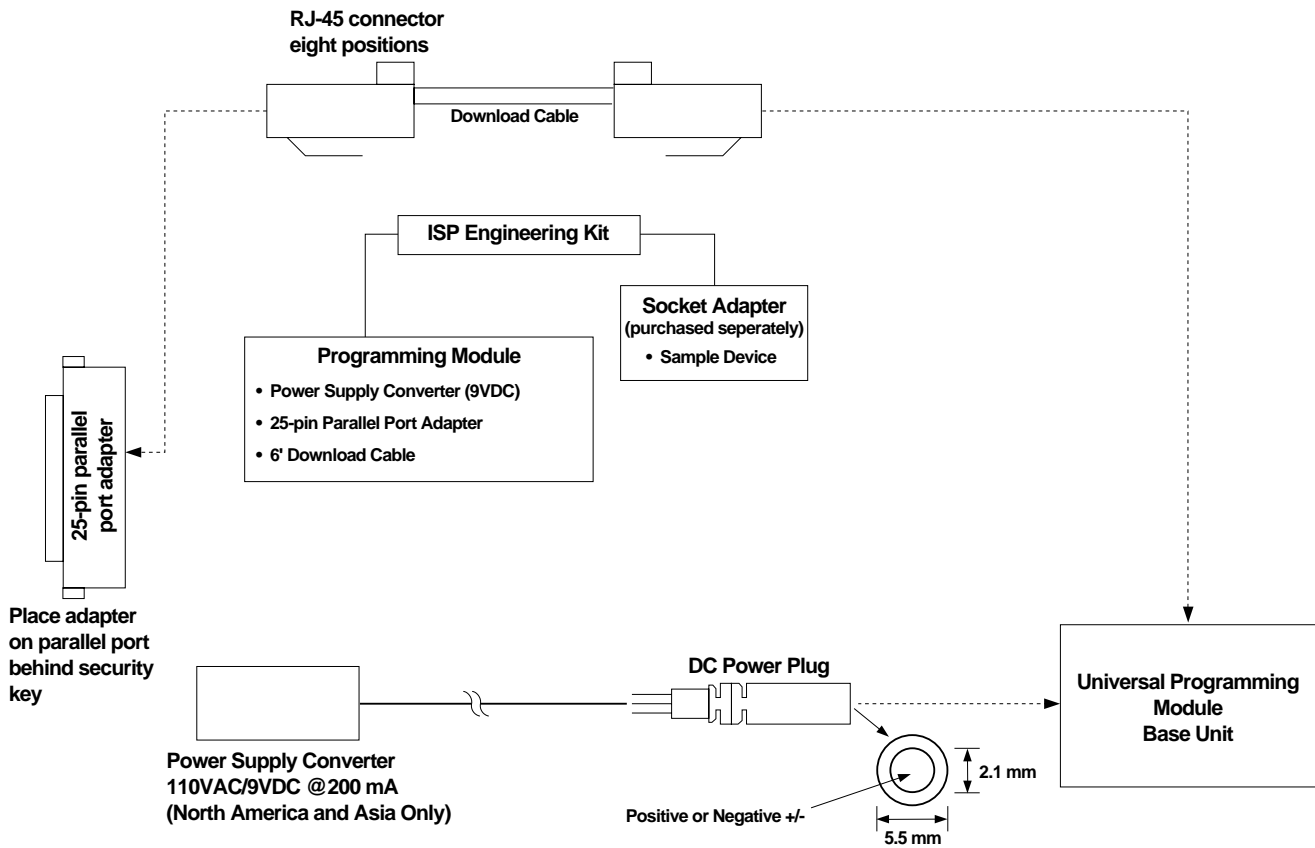
System Download Cable with RJ-45 Connectors

Length: 6.0 feet (192.8 cm)
Connectors: RJ-45 to RJ-45 connector

Technical Support Assistance

Hotline: 1-800-LATTICE (Domestic)
1-408-428-6414 (International)
FAX: 1-408-944-8450
email: ispLSlapps@latticesemi.com

Figure 1. Universal Programming Module Description



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Product Ordering Information

Part Number	Description
pDS4102-PM	ISP Engineering Kit Model 100 for the PC (North America and Asia only)
pDS4102E-PM	ISP Engineering Kit Model 100 for the PC (European Model, No Power Adapter)
pDS4102-3/5ADP	3.3V-to-5V Adapter for ISP Engineering Kit Model 100

Socket Adapter Information

Socket Adapter Part Number	Description	Package Identifier	Devices Supported	Sample Included
pDS4102-J44	44-Pin PLCC	LJ	ispLSI 1016E ispLSI 2032 ispLSI 2032E ispLSI 2032V ispLSI 2064V	ispLSI 2032-80LJ
pDS4102-T44	44-Pin TQFP	LT	ispLSI 1016 ispLSI 1016E ispLSI 2032 ispLSI 2032E ispLSI 2032V ispLSI 2064V	ispLSI 2032-80LT
pDS4102-T48	48-Pin TQFP	LT	ispLSI 2032 ispLSI 2032E	ispLSI 2032-80LT48
pDS4102-J68	68-Pin PLCC	LJ	ispLSI 1024	ispLSI 1024-60LJ
pDS4102-J84	84-Pin PLCC	LJ	ispLSI 1032E ispLSI 2064	ispLSI 2064-80LJ
pDS4102-J84/2064V	84-Pin PLCC for 2064V	LJ	ispLSI 2064V ispLSI 2128V	ispLSI 2064V-60LJ84
pDS4102-T100	100-Pin TQFP	LT	ispLSI 1032E ispLSI 2064	ispLSI 2064-80LT
pDS4102-T100/1024	100-Pin TQFP for 1024	LT	ispLSI 1024	ispLSI 1024-60LT
pDS4102-T100/2128V	100-Pin TQFP for 2128V	LT	ispLSI 2064V ispLSI 2128V	ispLSI 2128V-60LT100
pDS4102-Q128	128-Pin PQFP	LQ	ispLSI 1048E ispLSI 2096	ispLSI 2096-80LQ
pDS4102-Q128/2096V	128-Pin PQFP for 2096V	LQ	ispLSI 2096V	ispLSI 2096V-60LQ128
pDS4102-T128	128-Pin TQFP	LT	ispLSI 1048E ispLSI 2096	ispLSI 2096-80LT
pDS4102-T128/2096V	128-Pin TQFP for 2096V	LT	ispLSI 2096V	ispLSI 2096V-60LT128
pDS4102-Q160/2128V	160-Pin PQFP for 2128V	LQ	ispLSI 2128V	ispLSI 2128V-60LQ160
pDS4102-T176	176-Pin TQFP	LT	ispLSI 2128 ispLSI 2128E	ispLSI 2128-80LT
pDS4102-T176/2128V	176-Pin TQFP for 2128V	LT	ispLSI 2128V	ispLSI 2128V-60LT176
pDS4102-T176/GX120	176-Pin TQFP for GDX120A	T176	ispGDX120A	ispGDX120A-7T176
pDS4102-M208	208-PIN MQUAD	LM	ispLSI 6192SM ispLSI 6192DM ispLSI 6192FF	ispLSI 6192SM-50LM
pDS4102-M208/3320	208-Pin MQUAD for 3320	LM and LQ	ispLSI 3320	ispLSI 3160-70LQ
pDS4102-Q208	208-Pin PQFP	Q208	ispGDX160	ispGDX160-7Q208
pDS4102-M240	240-Pin MQUAD	LM	ispLSI 3192	ispLSI 3192-70LM
pDS4102-M304	304-Pin MQUAD	LM	ispLSI 3256E	ispLSI 3256E-70LM

Socket Adapter Table.eps