

| Lattice Semiconductor pLSI and ispLSI Development System (pDS) Environment | What You Have or Need from a Third-Party Vendor | What You Need From Lattice Semiconductor | Lattice Semiconductor PC Part Numbers | Lattice Semiconductor Sun Part Numbers |
|--|---|--|---------------------------------------|--|
| ispStarter Kit | N/A | ispStarter Kit (ispLSI 1016 & 2032) | isp-SK2 | N/A |
| Boolean Entry and Fitting | N/A | pDS | pDS1101-PC1 | N/A |
| 3000 Family Device Support Option* | N/A | pDS 3000 Upgrade | pDS1101-3UP/PC1 | N/A |
| Simulation Options* | Viewlogic | PROsim Simulator Including Libraries | pDS3302-PC2 | N/A |
| | Viewlogic | Viewlogic Library and Interface | pDS1102-PC2 | N/A |
| | Viewlogic | PROsim Upgrade Including Libraries | pDS1103-PC2 | N/A |
| | Viewlogic | PROsim Upgrade Including Libraries | pDS1104-PC2 | N/A |
| | Viewlogic | Viewlogic Library and Interface | pDS1102-PC2 | N/A |
| | OrCAD | OrCAD Library and Interface | pDS1170-PC1 | N/A |
| | Verilog | Verilog Library | pDS1131-PC1 | N/A |
| | VHDL | Verilog and VHDL Simulation Libraries | pDS1131-PC1 | N/A |

| Lattice Semiconductor pDS+ ABEL Environment | What You Have or Need from a Third-Party Vendor | What You Need From Lattice Semiconductor | Lattice Semiconductor PC Part Numbers | Lattice Semiconductor Sun Part Numbers |
|---|---|--|---------------------------------------|--|
| PLD Compiler and Fitting | ABEL Compiler | pDS+ ABEL Fitter | pDS2102-PC1 | pDS2102-SN1 |
| 3000 Family Device Support Option** | N/A | pDS+ ABEL 3000 Upgrade | pDS2102-3UP/PC1 | pDS2102-3UP/SN1 |
| Simulation Options** | Viewlogic | PROsim Simulator Including Libraries | pDS3302-PC2 | N/A |
| | Viewlogic | Viewlogic Library and Interface | pDS1102-PC2 | N/A |
| | Viewlogic | PROsim Upgrade Including Libraries | pDS1103-PC2 | N/A |
| | Viewlogic | PROsim Upgrade Including Libraries | pDS1104-PC2 | N/A |
| | Viewlogic | Viewlogic Library and Interface | pDS1102-PC2 | N/A |
| | Viewlogic | Viewlogic Library and Interface | N/A | pDS1102-SN1 |
| | OrCAD | OrCAD Library and Interface | pDS1170-PC1 | N/A |
| | Synario | Synario Verilog Simulator | pDS1120-PC1 | N/A |
| | Cadence | Cadence Verilog-XL Simulator | N/A | pDS1160-SN1 |
| | VHDL | Vital-Compliant VHDL Simulator | Verilog and VHDL Simulation Libraries | pDS1131-PC1 |

* Lattice Semiconductor pDS Software is required with any of these options.
 ** The appropriate third-party front end tools and the Lattice Semiconductor pDS+ Fitter are required with any of these options.
 *** pDS3302A should be purchased in conjunction with pDS1301-PC2.

| Lattice Semiconductor pDS+ Cadence Environment | What You Have or Need from a Third-Party Vendor | What You Need From Lattice Semiconductor | Lattice Semiconductor PC Part Numbers | Lattice Semiconductor Sun Part Numbers |
|--|---|---|---------------------------------------|--|
| Capture, Simulation, and Fitting | Concept Schematic Editor Verilog-XL Simulator | pDS+ Cadence Fitter (Includes Concept Schematic Library and Verilog-XL Simulation Library) | N/A | pDS2160-SN1 |
| Synthesis, Simulation, and Fitting | Synergy Synthesis Tool Verilog-XL Simulator Verilog-XL Simulator (Optional) | pDS+ Cadence Fitter (Includes Concept Schematic Library and Verilog-XL Simulation Library) | N/A | pDS2160-SN1 |
| 3000 Family Device Support Option** | N/A | Cadence Synergy Library | N/A | pDS1165-SN1 |
| Simulation Options** | Cadence Verilog | pDS+ Cadence 3000 Upgrade | N/A | pDS2160-3UP/SN1 |
| | Cadence VHDL | Cadence Library and Interface | N/A | pDS1160-SN1 |
| | Leapfrog Simulator | Verilog and VHDL Simulation Libraries | N/A | pDS1131-SN1 |

| Lattice Semiconductor pDS+ Exemplar Environment | What You Have or Need from a Third-Party Vendor | What You Need From Lattice Semiconductor | Lattice Semiconductor PC Part Numbers | Lattice Semiconductor Sun Part Numbers |
|--|---|--|---------------------------------------|--|
| VHDL or Verilog-HDL Synthesis and Fitting | Logic Explorer, Antares (Exemplar) Galileo | pDS+ Exemplar Fitter Including Libraries | pDS2110-PC1 | pDS2110-SN1 |
| 3000 Family Device Support Option** | N/A | pDS+ Exemplar 3000/6000 Upgrade | pDS2110-3UP/PC1 | pDS2115-3UP/SN1 |
| Simulation Options** | Viewlogic | PROsim Simulator Including Libraries | pDS3302-PC2 or pDS3302A-PC2*** | N/A |
| | Viewlogic | Viewlogic Library and Interface | pDS1102-PC2 | N/A |
| | Viewlogic | PROsim Upgrade Including Libraries | pDS1103-PC2 | N/A |
| | Viewlogic | PROsim Upgrade Including Libraries | pDS1104-PC2 | N/A |
| | Viewlogic | Viewlogic Library and Interface | pDS1102-PC2 | N/A |
| | Viewlogic | Viewlogic Library and Interface | N/A | pDS1102-SN1 |
| | OrCAD | OrCAD Library and Interface | pDS1170-PC1 | N/A |
| | Verilog | Verilog Library | pDS1121-PC1 | N/A |
| | Cadence | Cadence Verilog Simulator | N/A | pDS1160-SN1 |
| | Vantage | Speedwave VHDL Simulator | Verilog and VHDL Simulation Libraries | pDS1131-PC1 |
| VHDL | Vital-Compliant VHDL Simulator | Verilog and VHDL Simulation Libraries | pDS1131-PC1 | pDS1131-SN1 |
| Antares (Model Tech) | System V Simulator | Verilog and VHDL Simulation Libraries | pDS1131-PC1 | pDS1131-SN1 |

** The appropriate third-party front end tools and the Lattice Semiconductor pDS+ Fitter are required with any of these options.
 *** pDS3302A should be purchased in conjunction with pDS1307-PC2.

| Lattice Semiconductor pDS+ CUPL Environment | What You Have or Need from a Third-Party Vendor | What You Need From Lattice Semiconductor | Lattice Semiconductor PC Part Numbers | Lattice Semiconductor Sun Part Numbers |
|---|---|--|---------------------------------------|--|
| PLD Compiler and Fitting | CUPL Compiler | pDS+ CUPL Fitter | pDS2190-PC1 | N/A |
| 3000 Family Device Support Option** | N/A | pDS+ CUPL 3000 Upgrade | pDS2190-3UP/PC1 | N/A |
| Simulation Options** | N/A | PROsim Simulator Including Libraries | pDS3302-PC2 | N/A |
| | Viewlogic | Viewlogic Library and Interface | pDS1102-PC2 | N/A |
| | Viewlogic | PROsim Upgrade Including Libraries | pDS1103-PC2 | N/A |
| | Viewlogic | PROsim Upgrade Including Libraries | pDS1104-PC2 | N/A |
| | Viewlogic | Viewlogic Library and Interface | pDS1102-PC2 | N/A |
| | ORCAD | ORCAD Library and Interface | pDS1170-PC1 | N/A |
| | Verilog | OVI-Compliant Verilog Simulator | pDS1131-PC1 | N/A |
| | VHDL | Vital-Compliant VHDL Simulator | pDS1131-PC1 | N/A |

| Lattice Semiconductor pDS+ LOG/iC Environment | What You Have or Need from a Third-Party Vendor | What You Need From Lattice Semiconductor | Lattice Semiconductor PC Part Numbers | Lattice Semiconductor Sun Part Numbers |
|---|---|--|---------------------------------------|--|
| PLD Compiler and Fitting | LOG/iC PLUS or Perfect Compiler and ODS | pDS+ LOG/iC Fitter | pDS2103-PC1 | N/A |
| 3000 Family Device Support Option** | N/A | pDS+ LOG/iC 3000 Upgrade | pDS2103-3UP/PC1 | N/A |
| Simulation Options** | N/A | PROsim Simulator Including Libraries | pDS3302-PC2 | N/A |
| | Viewlogic | Viewlogic Library and Interface | pDS1102-PC2 | N/A |
| | Viewlogic | PROsim Upgrade Including Libraries | pDS1103-PC2 | N/A |
| | Viewlogic | PROsim Upgrade Including Libraries | pDS1104-PC2 | N/A |
| | Viewlogic | Viewlogic Library and Interface | pDS1102-PC2 | N/A |
| | ORCAD | ORCAD Library and Interface | pDS1170-PC1 | N/A |
| | Verilog | OVI-Compliant Verilog Simulator | pDS1131-PC1 | N/A |
| | VHDL | Vital-Compliant VHDL Simulator | pDS1131-PC1 | N/A |

** The appropriate third-party front end tools and the Lattice Semiconductor pDS+ Fitter are required with any of these options.
 *** pDS3302A should be purchased in conjunction with pDS1301-PC2.

| Lattice Semiconductor pDS+ Mentor Environment | What You Have or Need from a Third-Party Vendor | What You Need From Lattice Semiconductor | Lattice Semiconductor HP Part Numbers | Lattice Semiconductor Sun Part Numbers |
|---|--|--|---------------------------------------|--|
| Capture, Simulation, and Fitting | Design Architect Schematic Editor QuickSim II Simulator | pDS+ Mentor Filter (Includes Design Architect Schematic Library and QuickSim II Simulation Library) | pDS2150-HP1 | pDS2150-SN1 |
| Synthesis, Simulation, and Fitting | Autologic Synthesis Tool QuickSim II Simulator | pDS+ Mentor Filter (Includes Design Architect Schematic Library and QuickSim II Simulation Library) | pDS2150-HP1 | pDS2150-SN1 |
| 3000 Family Device Support Option** | N/A | Mentor Autologic Library | pDS1155-HP1 | pDS1155-SN1 |
| Simulation Options** | Mentor | pDS+ Mentor 3000 Upgrade | pDS2150-3UP/HP1 | pDS2150-3UP/SN1 |
| | Cadence | Mentor Library and Interface | pDS1150-HP1 | pDS1150-SN1 |
| | VHDL | Cadence Library and Interface | N/A | pDS1160-SN1 |
| | Quick VHDL Simulator or System V Simulator from Antares | Verilog and VHDL Simulation Libraries | pDS1131-HP1 | pDS1131-SN1 |

| Lattice Semiconductor pDS+ OrCAD Environment | What You Have or Need from a Third-Party Vendor | What You Need From Lattice Semiconductor | Lattice Semiconductor PC Part Numbers | Lattice Semiconductor Sun Part Numbers |
|--|--|---|---------------------------------------|--|
| Capture, Simulation, and Fitting | SDT 386+ or Capture for Windows Schematic Editor VST386+ Simulation for Windows Simulator | pDS+ OrCAD Fitter (Includes Lattice Semiconductor's OrCAD Schematic Capture Libraries and Simulation Libraries) | pDS2170-PC1 | N/A |
| PLD Compiler, Simulation, and Fitting | PLD 386+ PLD Compiler VST386+ Simulator | pDS+ OrCAD Fitter (Includes Lattice Semiconductor's OrCAD Schematic Capture Libraries and Simulation Libraries) | pDS2170-PC1 | N/A |
| 3000 Family Device Support Option** | N/A | pDS+ OrCAD 3000 Upgrade | pDS2170-3UP/PC1 | N/A |
| Simulation Options** | Viewlogic | PROsim Simulator Including Libraries | pDS3302-PC2 | N/A |
| | Viewlogic | Viewlogic Library and Interface | pDS1102-PC2 | N/A |
| | Viewlogic | PROsim Upgrade Including Libraries | pDS1103-PC2 | N/A |
| | Viewlogic | PROsim Upgrade Including Libraries | pDS1104-PC2 | N/A |
| | Viewlogic | Viewlogic Library and Interface | pDS1102-PC2 | N/A |
| | OrCAD | OrCAD Libraries and Interface | pDS1170-PC1 | N/A |
| | Verilog | Verilog and VHDL Simulation Libraries | pDS1131-PC1 | N/A |
| VHDL | Verilog and VHDL Simulation Libraries | pDS1131-PC1 | N/A | |

** The appropriate third-party front end tools and the Lattice Semiconductor pDS+ Fitter are required with any of these options.
 *** pDS3302A should be purchased in conjunction with pDS1301-PC2.

| Lattice Semiconductor pDS+ Synario Environment | What You Have or Need from a Third-Party Vendor | What You Need From Lattice Semiconductor | Lattice Semiconductor PC Part Numbers | Lattice Semiconductor Sun Part Numbers |
|---|--|---|---------------------------------------|--|
| GAL Compiler (Capture and ABEL Entry) | None | ISP Synario System | ISP-SYN | N/A |
| Capture, ABEL Entry Functional Simulation and Fitting (Up to 96 Macrocells) | None | ISP Synario System | ISP-SYN | N/A |
| Capture, ABEL Entry and Fitting | None | ISP Synario Entry | pDS1401-PC1 | N/A |
| Capture, Simulation and Fitting | Synario Schematic Editor (Syn-Entry) | pDS+ Synario Fitter (Includes Synario Interface Kit*) | pDS2120-PC1 | N/A |
| Capture, Simulation, GAL Compiler, and Fitting | Synario Schematic Editor and ABEL Compiler (Syn-Entry) | pDS+ Synario Fitter (Includes Synario Interface Kit*) | pDS2120-PC1 | N/A |
| 3000 Family Device Support Option** | N/A | pDS+ Synario 3000 Upgrade | pDS2120-3UP/PC1 | N/A |
| Simulation Options** | Synario | ISP Synario Simulator | pDS3402-PC1 | N/A |
| | Viewlogic | PROsim Simulator Including Libraries | pDS3302-PC2 | N/A |
| | Viewlogic | Viewlogic Library and Interface | pDS1102-PC2 | N/A |
| | Viewlogic | PROsim Upgrade Including Libraries | pDS1103-PC2 | N/A |
| | Viewlogic | PROsim Upgrade Including Libraries | pDS1104-PC2 | N/A |
| | Viewlogic | Viewlogic Library and Interface | pDS1102-PC2 | N/A |
| | ORCAD | ORCAD Library and Interface | pDS1170-PC1 | N/A |
| | Synario | None | N/A | N/A |
| | Verilog | OVI-Compliant VHDL Simulator | pDS1131-PC1 | N/A |
| | VHDL | Vital-Compliant VHDL Simulator | pDS1131-PC1 | N/A |

* Includes SYNpLSI (Device Kit)
 ** The appropriate third-party front end tools and the Lattice Semiconductor pDS+ Fitter are required with any of these options.
 *** pDS3302A should be purchased in conjunction with pDS1301-PC2.

| Lattice Semiconductor pDS+ Synopsys Environment | What You Have or Need from a Third-Party Vendor | What You Need From Lattice Semiconductor | Lattice Semiconductor HP Part Numbers | Lattice Semiconductor Sun Part Numbers |
|---|---|--|---------------------------------------|--|
| Synthesis and Fitting | Design Compiler-Expert Synthesis Tool | pDS+ Synopsys Fitter (Includes Lattice Semiconductor Synopsys Synthesis Libraries) | pDS2140-HP1 | pDS2140-SN1 |
| Synthesis and Fitting | Design Compiler-Professional Synthesis Tool | pDS+ Synopsys Fitter (Includes Lattice Semiconductor Synopsys Synthesis Libraries) | pDS2140-HP1 | pDS2140-SN1 |
| Synthesis and Fitting | FPGA Compiler Synthesis Tool | pDS+ Synopsys Fitter (Includes Lattice Semiconductor Synopsys Synthesis Libraries) | pDS2140-HP1 | pDS2140-SN1 |
| 3000 Family Device Support Option** | N/A | pDS+ Synopsys 3000 Upgrade | pDS2140-3UP/HP1 | pDS2140-3UP/SN1 |
| Simulation Options** | Synopsys | Verilog and VHDL Simulation Libraries | pDS1131-HP1 | pDS1131-SN1 |
| | Viewlogic | Viewlogic Library and Interface | N/A | pDS1102-SN1 |
| | Mentor | Mentor Library and Interface | pDS1150-HP1 | pDS1150-SN1 |
| | Cadence | Cadence Library and Interface | N/A | pDS1160-SN1 |
| | Verilog | Verilog and VHDL Simulation Libraries | pDS1131-PC1 | N/A |
| | VHDL | Verilog and VHDL Simulation Libraries | pDS1131-HP1 | pDS1131-SN1 |

| Synopsys Synthesis in Other Third-Party/Lattice Semiconductor pDS+ Environments | What You Have or Need from a Third-Party Vendor | What You Need From Lattice Semiconductor | Lattice Semiconductor HP Part Numbers | Lattice Semiconductor Sun Part Numbers |
|---|--|---|---------------------------------------|--|
| Synthesis and Fitting in the Cadence Environment | Any Synopsys Synthesis Tool and Cadence Concept Schematic Editor | pDS+ Cadence Fitter | N/A | pDS2160-SN1 |
| Synthesis and Fitting in the Mentor Environment | Any Synopsys Synthesis Tool and Mentor Design Architect Schematic Editor | Lattice Semiconductor Synopsys Synthesis Libraries | N/A | pDS1140-SN1 |
| Synthesis and Fitting in the Viewlogic Environment | Any Synopsys Synthesis Tool and Viewlogic ViewDraw Schematic Editor | pDS+ Mentor Fitter | pDS2150-HP1 | pDS2150-SN1 |
| | | Lattice Semiconductor Synopsys Synthesis Libraries | pDS1140-HP1 | pDS1140-SN1 |
| | | pDS+ Viewlogic Fitter | N/A | pDS2101-SN1 |
| | | Lattice Semiconductor Viewlogic Library and Interface | N/A | pDS1102-SN1 |
| | | Lattice Semiconductor Synopsys Synthesis Libraries | N/A | pDS1140-SN1 |

** The appropriate third-party front end tools and the Lattice Semiconductor pDS+ Fitter are required with any of these options.
 *** pDS3302A should be purchased in conjunction with pDS1301-PC2.

| Lattice Semiconductor pDS+ Viewlogic Environment | What You Have or Need from a Third-Party Vendor | What You Need From Lattice Semiconductor | Lattice Semiconductor PC Part Numbers | Lattice Semiconductor Sun Part Numbers | Sun Solaris 2 O/S | |
|--|--|--|--|---|---|-----|
| Capture and Fitting | None | pDS+ Viewlogic Filter PROcapture Schematic Editor | pDS2101-PC2 pDS1301-PC2 | N/A N/A | N/A N/A | |
| | None | pDS+ Viewlogic Filter PROsynthesis Synthesis Tool PROcapture Schematic Editor (Required in Synthesis Flow) | pDS2101-PC2 pDS3305A-PC2 pDS1301-PC2 | N/A N/A N/A | N/A N/A N/A | |
| Capture and Fitting | PROcapture or ViewDraw Schematic Editor | pDS+ Viewlogic Filter Viewlogic Library and Interface | pDS2101-PC2 pDS1102-PC2 | pDS2101-SN1 pDS1102-SN1 | pDS2101-SN2 pDS1102-SN2 | |
| | PROcapture or ViewDraw Schematic Editor and PROsynthesis or ViewSynthesis Synthesis Tool | pDS+ Viewlogic Filter Viewlogic Synthesis Library Viewlogic Library and Interface | pDS2101-PC2 pDS1105-PC2 pDS1102-PC2 | pDS2101-SN1 pDS1105-SN1 pDS1102-SN1 | pDS2101-SN2 pDS1105-SN1 pDS1102-SN2 | |
| PLD Compiler and Fitting | ViewPLD Compiler | pDS+ ABEL Filter | pDS2102-PC1 | pDS2102-SN1 | N/A | |
| 3000 Family Device Support Option** | N/A | pDS+ Viewlogic 3000 Upgrade | pDS2101-3UP/PC2 | pDS2101-3UP/SN1 | pDS2101-3UP/SN1 | |
| Simulation Options** | Viewlogic | PROsim Simulator Including Libraries | pDS3302-PC2 or pDS3302A-PC2*** | N/A | N/A | |
| | Viewlogic | Viewlogic Library and Interface | pDS1102-PC2 | N/A | N/A | |
| | Viewlogic | PROsim Upgrade Including Libraries | pDS1103-PC2 | N/A | N/A | |
| | Viewlogic | PROsim Upgrade Including Libraries | pDS1104-PC2 | N/A | N/A | |
| | Viewlogic | Viewlogic Library and Interface | pDS1102-PC2 | N/A | N/A | |
| | ORCAD | Viewlogic Library and Interface ORCAD Library and Interface | N/A pDS1170-PC1 | N/A | pDS1102-SN2 N/A | |
| | Verilog | OVI-Compliant Verilog Simulator | pDS1131-PC1 | pDS1131-SN1 | N/A | |
| | Cadence | Cadence Verilog Simulator | N/A | pDS1160-SN1 | N/A | |
| | Vantage | Speedwave VHDL Simulator | pDS1131-PC1 | pDS1131-SN1 | N/A | |
| | VHDL | Vital-Compliant VHDL Simulator | Verilog and VHDL Simulation Libraries | pDS1131-PC1 | pDS1131-SN1 | N/A |

** The appropriate third-party front end tools and the Lattice Semiconductor pDS+ Filter are required with any of these options.
 *** pDS3302A should be purchased in conjunction with pDS1301-PC2.



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