

# Market Statistics Service (MSS) 2004 Product Category List

## 1. Services

### 1.1 Design Services Consulting

- 1.1.1 Board/System Design Service Consulting
- 1.1.2 Semiconductor Design Service Consulting

### 1.2 Custom Tool Development & Design Environments and Product Data Management (PDM) & Component Information Systems (CIS) Services

### 1.3 Training Services

### 1.4 Design Flow & Methodology Development

### 1.5 Other Services

## 2. Computer-Aided Engineering (CAE) Tools

### 2.1 System-Level Design & Verification Tools

- 2.1.1 System-Level Design
- 2.1.2 System-Level Verification

### 2.2 Design Entry Tools (Textual and Graphical)

- 2.2.1 HDL and Graphical Design Entry Tools
- 2.2.2 Schematic Entry Tools
  - 2.2.2.1 IC Schematic Entry Tools
  - 2.2.2.2 PCB Schematic Entry Tools

### 2.3 Event-Driven Simulators

- 2.3.1 RTL Simulators
  - 2.3.1.1 Mixed-Language Simulators
  - 2.3.1.2 VHDL-Based Simulators

- 2.3.1.3 Verilog-Based Simulators
- 2.3.2 Gate-Level Only Simulators
- 2.3.3 Other Simulators

### 2.4 Analog & Mixed Signal Simulators

- 2.4.1 Analog Simulators
- 2.4.2 Mixed-Signal Simulators

### 2.5 Formal and Functional Verification Tools

- 2.5.1 Formal Verification Tools hardware
- 2.5.2 Functional Verification Tools

### 2.6 Analysis Tools

- 2.6.1 IC/ASIC Static Timing Analysis Tools
- 2.6.2 IC/ASIC Signal Integrity Analysis Tools
- 2.6.3 IC/ASIC Power Analysis and Optimization Tools
- 2.6.4 IC/ASIC Transistor-Level Simulation & Analysis Tools
- 2.6.5 PCB-Specific Analysis Tools
- 2.6.6 All Other Analysis Tools

### 2.7 Design-for-Test and Test Automation Tools

- 2.7.1 ATPG
- 2.7.2 BIST
  - 2.7.2.1 Memory
  - 2.7.2.2 Logic
- 2.7.3 Scan
  - 2.7.3.1 Internal
  - 2.7.3.2 Boundary
- 2.7.4 Fault Simulation and Other Test

### 2.8 Synthesis Tools

New categories are highlighted.

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2.9 IC/ASIC Hardware-Assisted Verification

2.10 Other CAE Hardware & Software

### 3. PCB & MCM Layout Tools

3.1 PCB/MCM Layout Tools

3.2 PCB Libraries and Library Tools

3.3 Other PCB/MCM Tools

### 4. IC Physical Design & Verification Tools

4.1 IC/ASIC Automatic Placement & Routing Tools

4.2 IC/ASIC Design Planning & Floorplanning Tools

4.3 IC Full Custom Layout Tools

4.4 IC Layout Verification Tools

4.5 Parasitic Extraction Tools

4.6 RET EDA (Including OPC and PSM)

4.7 Technology CAD (TCAD)

4.8 Mask Data Prep

4.9 Other IC/ASIC and FPGA Physical Design & Verification Tools

### 5. Semiconductor Intellectual Property (SIP)

#### 5.1 SIP-Related Tools

5.1.1 Module Generators

5.1.2 Development Tools for Module Generators

5.1.3 SIP Creation and Packaging Tools

5.1.4 SIP Management Tools

5.1.5 Royalty-Based SIP Tools

#### 5.2 Macrocells and Cores

5.2.1 Physical Library

5.2.2 Memory Element

5.2.3 Non-Volatile Memory

5.2.4 Analog and Mixed Signal

5.2.4.1 RF

5.2.4.2 Components

5.2.4.3 Signal Processing

5.2.5 Arithmetic, Mathematic, and Logic Functional Blocks

5.2.6 Interface/Peripheral Cores

5.2.6.1 xDSL

5.2.6.2 PCI Controllers

5.2.6.2.1 PCI Controller core (soft RTL /firm/hard)

5.2.6.2.2 PCI Controller PHY

5.2.6.3 USB Controllers

5.2.6.3.1 USB Controller (soft RTL /firm/hard)

5.2.6.3.2 USB Controller PHY

5.2.6.4 PCMCIA

5.2.6.5 IEEE 1284

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- 5.2.6.6 IEEE 1394
- 5.2.6.7 SONET
- 5.2.6.8 Ethernet (IEEE802.x) Controllers
  - 5.2.6.8.1 Ethernet Controller (soft RTL /firm/hard)
  - 5.2.6.8.2 Ethernet Controller PHY
- 5.2.6.9 Bluetooth
- 5.2.6.10 Rapid I/O
- 5.2.6.11 Infiniband
- 5.2.6.12 Fiberchannel
- 5.2.6.13 SPI-4
- 5.2.6.14 Other Interface/Peripherals
- 5.2.7 CODEC/Encryption
  - 5.2.7.1 Encoders/Decoders
    - 5.2.7.1.1 MPEGx
    - 5.2.7.1.2 Viterbi
    - 5.2.7.1.3 Reed Solomon
    - 5.2.7.1.4 Turbo-coding
    - 5.2.7.1.5 Other Encoders/Decoders
  - 5.2.7.2 Encryption/Decryption
  - 5.2.7.3 Modulators/Demodulators
  - 5.2.7.4 Other CODEC/Encryption (Error Correction/Detection)
- 5.2.8 Graphics, Image and Audio
- 5.2.9 Processors
  - 5.2.9.1 Controllers
  - 5.2.9.2 MCU/MPU
  - 5.2.9.3 DSP Processor Cores

- 5.2.9.4 Other Processors
- 5.2.10 Subsystems
- 5.2.11 Test Functions
- 5.2.12 DSP Functions
- 5.2.13 Other Macrocells & Cores
- 5.3 Verification SIP
  - 5.3.1 Interface/Peripheral Cores
  - 5.3.2 CODEC/Encryption
  - 5.3.3 Graphics, Imaging & Audio
  - 5.3.4 Processors
  - 5.3.5 Other Verification SIP
- 5.4 Embedded Software
  - 5.4.1 Real-Time Operating Systems
  - 5.4.2 Stacks & Drivers
  - 5.4.3 Applications
  - 5.4.4 Other Embedded Software

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