



# inEMI

International Electronics Manufacturing Initiative

## Office/Large Business Systems PEG

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Advancing manufacturing technology

# 2008-9 Product Emulator Descriptions

Emulators	Characteristics
Office Systems / Large Business Systems	Products which seek maximum performance from a few thousand dollar cost limit to literally no cost limit
Telecom/Datacom	Products that serve the networking, datacom and telecom markets and cover a wide range of cost and performance targets
Portable / Consumer	High volume Consumer Products for which cost is the primary driver including Hand held, battery-powered products driven by size and weight reduction
Specialty Emulators	Defined by Operating Environment
Automotive	Products which must operate in an automotive environment
Defense and Aerospace	Products which must operate in extreme environments
Medical Products	Products which must operate within a high reliability environment

# Industry trends to consider

- **Printed Circuit Board for high-frequency signaling**
  - Reduced loss interconnects (copper roughness)
  - Reduced loss dielectrics
  - Via stub reduction
  - Impedance variation and control
  - Reliability and test requirements
  - RoHS processing requirements on the PCB industry
- **Package technology for high-density electronics**
  - Die stacking
  - SiP or multi-die packaging
  - Embedded passives
  - I/O Pitch and density

# Industry trends to consider

- **Component and system complexity**
  - Number of voltage levels and voltage boundaries
  - Serial bus signal rates
  - Types of signaling protocols and standards
- **Thermal**
  - Chip power management
  - Chip power and cooling technology ( $R_{int}$  and  $R_{ext}$ )
  - System power density and impact of high-frequency buses
  - Data center management

# Industry trends to consider

- **Business aspects**
  - Review cost trends of components
  - Supply chain locations
  - R&D spending
- **Environmental and Regulatory considerations**
  - Green Initiatives and implementation (Energy efficiency)
  - RoHS regulations and adoption



[www.inemi.org](http://www.inemi.org)

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