

# **Intel 380AB/PB Dock Set Product Overview**

## **82380AB Mobile PCI-To-ISA Bridge (MISA)**

## **82380PB Mobile PCI-To-PCI Bridge (MPCI)**





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## 82380AB Mobile PCI-To-ISA Bridge (MISA) and 82380PB Mobile PCI-To-PCI Bridge (MPCI)

### MPCI:

- **PCI-to-PCI Bridge (MPCI)**
  - Efficient Repeater Architecture. Mirrors All Transactions Across the Bridge
  - Supports the PCI Bus Enumeration Mechanism for PCI-To-PCI Bridges
  - Supports a 5V Desktop PCI Interface for up to Four Bus Master PCI Add-In Card Slots on the Secondary PCI Bus
  - The MISA PCI-To-ISA Bridge Allows a Docking Station to have Three ISA Slots
  - PC/PCI DMA Protocol and PCI Docking Interface Creates a Very Low Pin Count Docking Connector
- **Full Docking Support (MPCI)**
  - Hot Docking: No Preconditioning—On, Off, or Suspended
  - Undocking Mechanism Guarantees a Safe Notebook
  - The Same Docking Station can be used with 5V and 3.3V Notebooks
  - Supports Automatic Isolation of all Active Docking Connector Signals
  - Support for Both Desktop (A/C Powered) and Mobile (Battery Powered) Docking Stations
  - Non-Volatile Memory Interface to Store Docking Identification, and Notebook Configuration Information

- **Full Power Management Support for Mobile Docking Stations (MPCI)**
  - Suspend (Powered-On, to DRAM, and to Disk)
  - Resume
  - PCI Clockrun Protocol
  - Powered-On Suspend/Resume Mode for A/C Powered Desktop Docking Stations
  - Low Power Mode Support for Undocked Mobile Docking Stations
- **208-lead SQFP Package for the 82380PB MPCI**

### MISA:

- **PCI-to-ISA Bridge (MISA)**
  - PCI Bus up to 33 MHz
  - ISA Bus up to 8.33 MHz
  - 5 Volt ISA and PCI Interfaces
  - Full ISA Support Including ISA Masters
  - PC/PCI DMA Protocol for Software Transparent, Low Pin-Count DMA on ISA
  - Supports 3 ISA Slots
- **160-lead MQFP Package for the 82380AB MISA**

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The Intel 380AB/PB Dock Set (380AB/PB) consists of the 82380AB Mobile PCI-to-ISA Bridge (MISA) and the 82380PB Mobile PCI-to-PCI Bridge (MPCI). The 380AB/PB supports four PCI slots and three ISA slots. The MPCI and MISA can also be used individually to provide either PCI or ISA slot expansion.

The 380PB MPCI provides a PCI-to-PCI bridge to a 5V PCI desktop style add-in bus. Internal arbitration supports four bus masters on the secondary PCI bus.

The Docking Control logic controls all docking and undocking sequences. The Quiet Dock isolation interface allows Hot-Insertion into the docking station. The MPCI supports the PCI bus enumeration mechanism for PCI-to-PCI bridges. This is needed to support the Windows 95\* dynamic configuration of system resources when the system docks or undocks. The E<sup>2</sup>PROM interface logic provides an industry standard interface to a non-volatile memory device (E<sup>2</sup>PROM) for supporting dynamic autoconfiguration of a previously configured notebook/docking station combination. The power management logic provides a control and status interface between the docking station and notebook that allows the docking station to know and control the state of the notebook.

The MPCI's subtractive decoding guarantees that all accesses targeted for a downstream ISA bridge (such as the MISA) arrive at their destination. Software does not need to determine the devices on the ISA bridge and then program positive decode ranges (as is needed on traditional positive decode bridges).

The MISA generates all the signals necessary to support a full 5V ISA bus. MISA supports the Mobile PC/PCI DMA protocol to provide full ISA DMA support in a 2-wire interface.

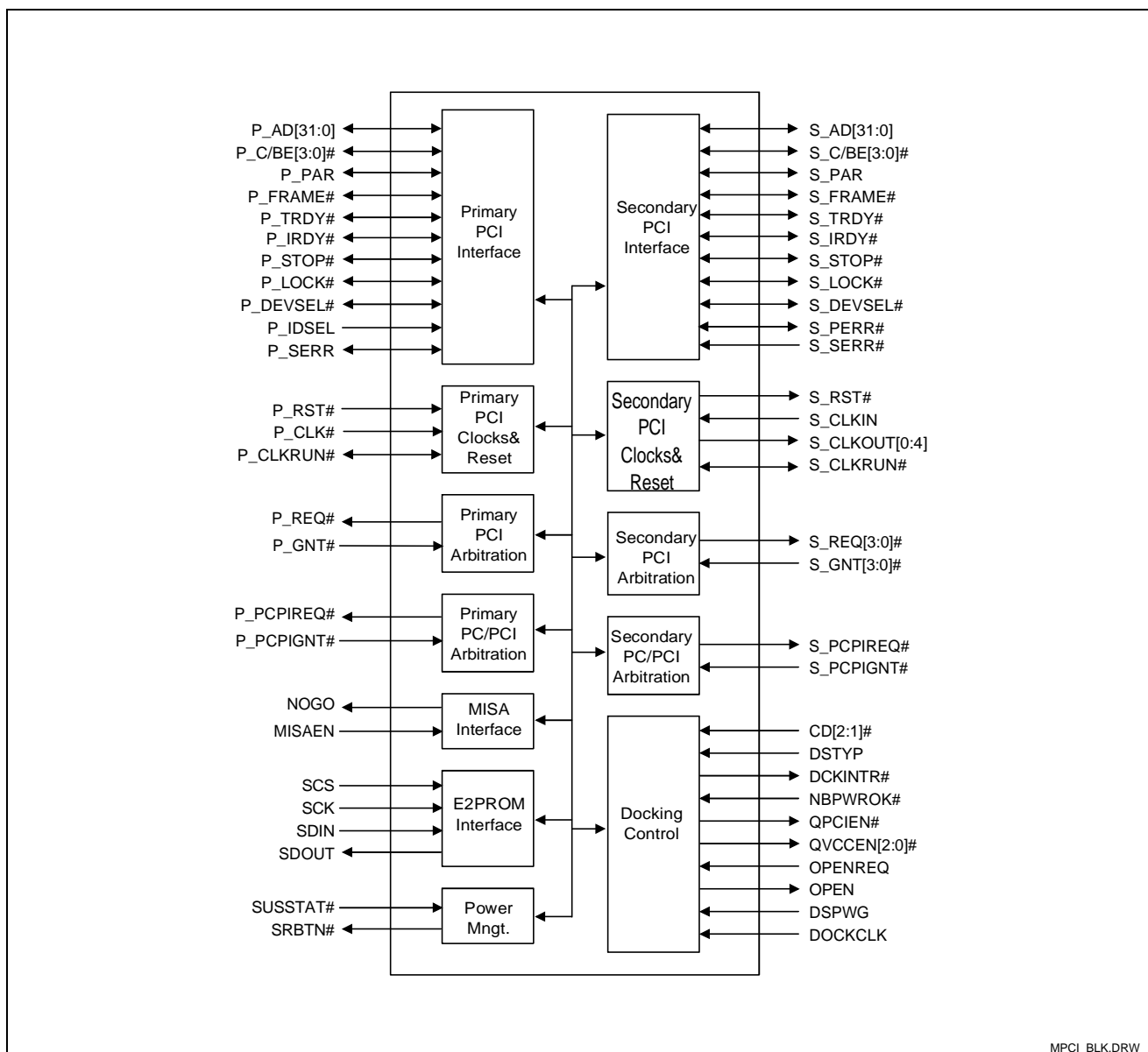


Figure 1. MPCI Block Diagram

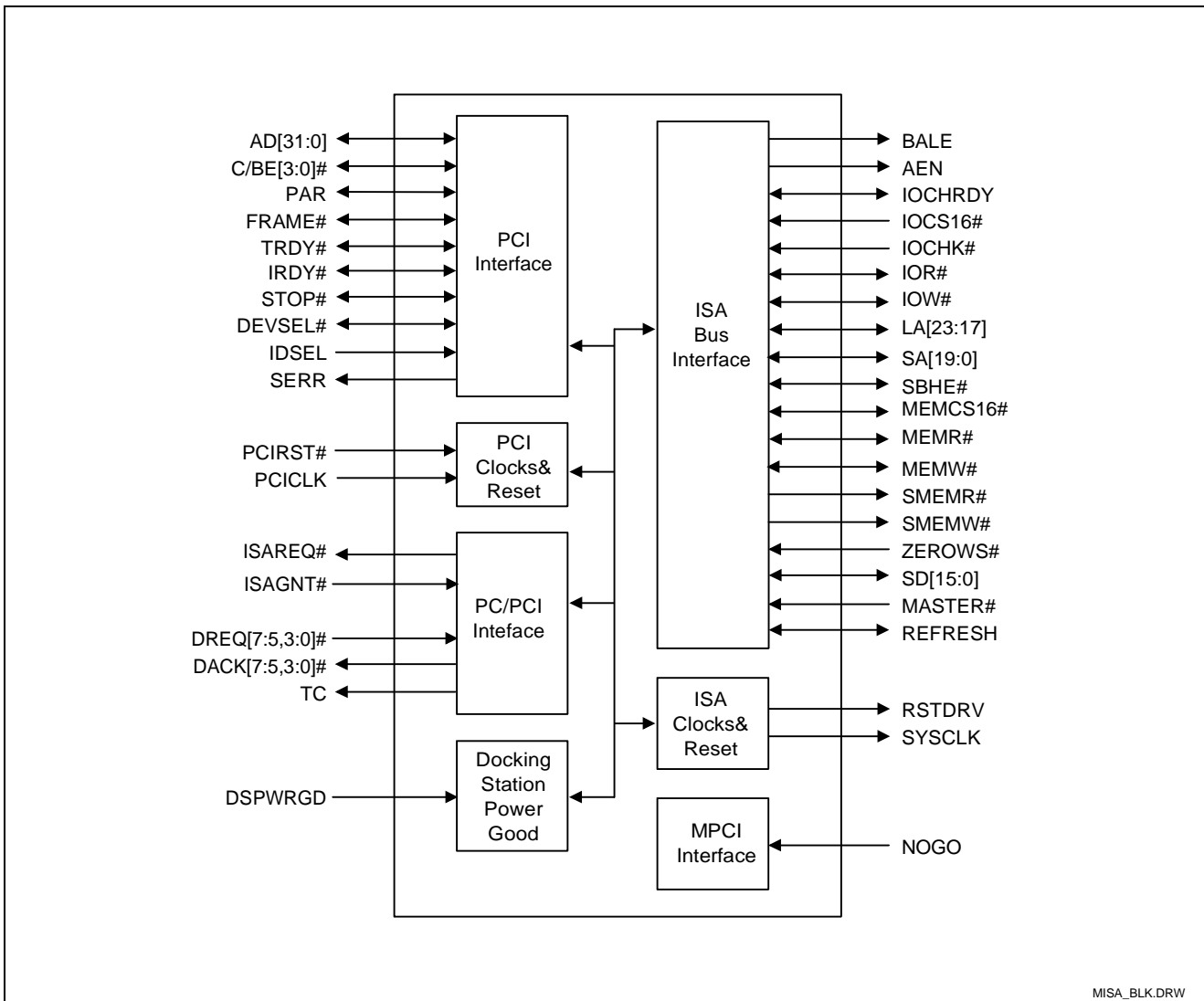


Figure 2. MISA Block Diagram

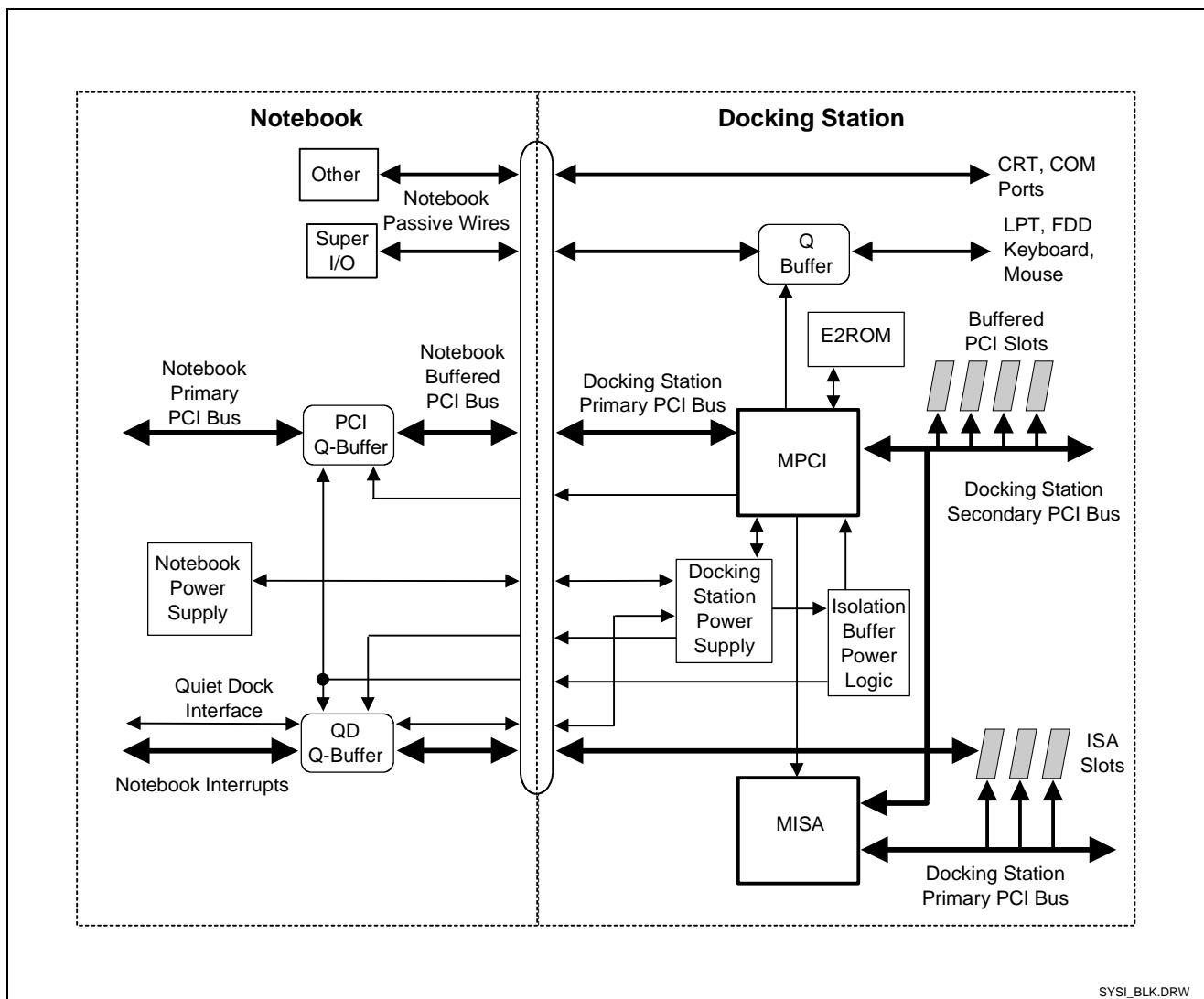


Figure 3. Intel 380AB/PB System Block Diagram