



INTEL 380FB PCISSET: 82380FB MOBILE PCI-to-PCI BRIDGE (MPCI2)

- **PCI-to-PCI Bridge**
 - Efficient Repeater Architecture. Mirrors Most Transactions Across the Bridge
 - Subtractive Decoding Guarantees that All Accesses Targeted for a Down Stream ISA Bridge (such as the MISA) Arrive at Destination
 - Supports the PCI Bus Enumeration Mechanism for PCI-to-PCI Bridges
 - High Performance Bridge Supports Fast Back-to-Back agents, and Memory Prefetching
 - 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 an Additional Three ISA Slots
 - PC/PCI DMA Protocol and PCI Docking Interface Creates a Very Low Pin Count Docking Connector
- **Full Docking Support**
 - Notebooks can be Docked with No Pre-conditioning: On, Off, or Suspended (powered-on, to DRAM, or to disk)
- Undocking Mechanism Guarantees Uninterrupted Notebook Operation
- 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**
 - 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 82380FB MPCI2**

The Intel 380FB PCISet (380FB) consists of the 82380FB Mobile PCI-to-PCI Bridge (MPCI2) and the 82380AB Mobile PCI-to-ISA Bridge (MISA). The 380FB supports four PCI slots and three ISA slots. The MPCI2 and MISA can also be used individually to provide either PCI slot expansion or ISA slot expansion.

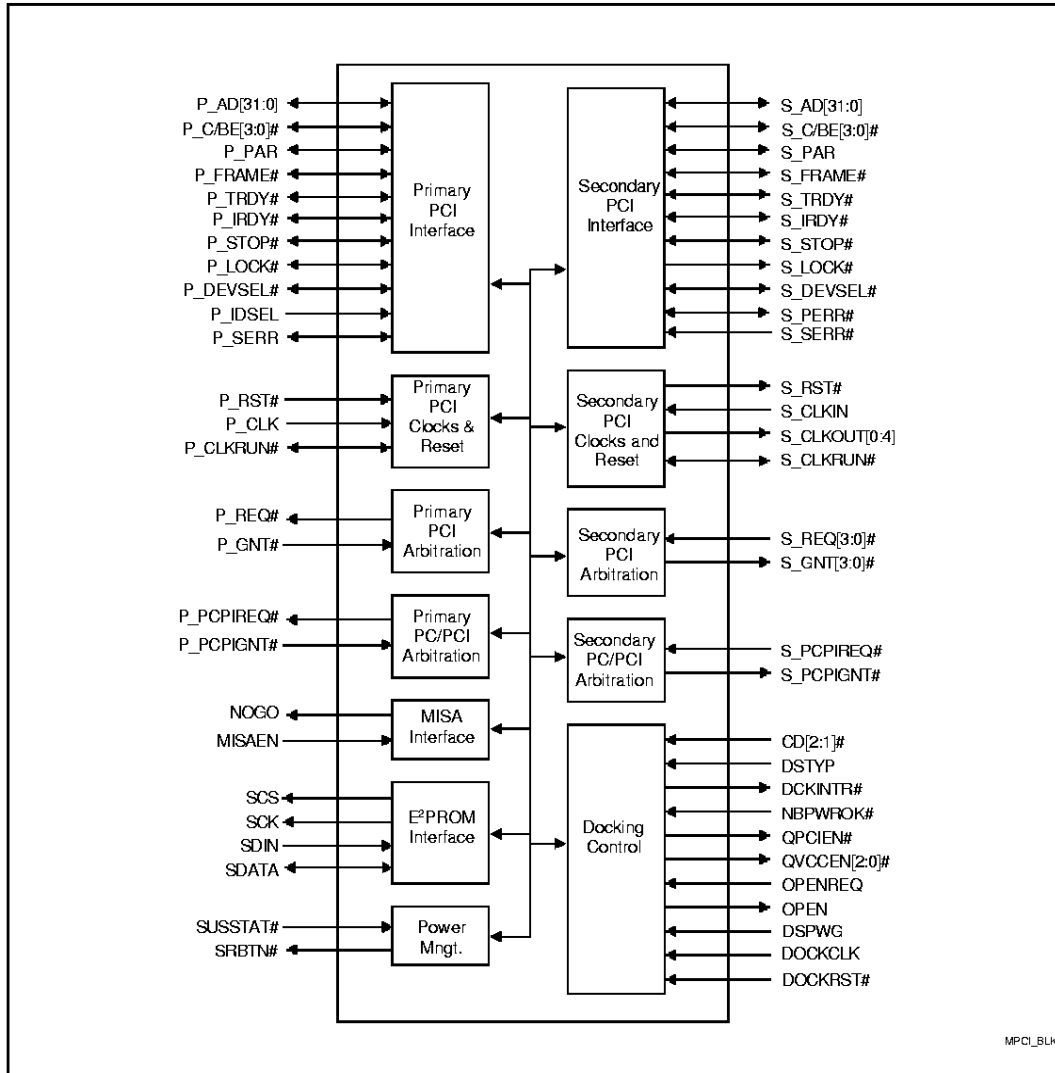
The 380FB supports a full Hot Docking capable docking station with 5V PCI and ISA add-in expansion slots. MPCI2 provides the docking control for hot insertion, power management, and a PCI-to-PCI bridge to a 5V PCI desktop style add-in bus. Internal arbitration supports four bus masters on the secondary PCI bus. The PC/PCI arbitration interface logic provides PC/PCI bridge support. The 380FB controls all docking, undocking and suspend/resume sequences for the docking station. The E²PROM interface logic provides an industry standard interface to a non-volatile memory device (E²PROM) 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 control the state of the notebook. A non-volatile memory interface is used to store docking identification and notebook configuration information to speed dynamic configuration for a pre-configured notebook docking combination.

MPCI2 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. Otherwise, the operating system must reset the system after reconfiguration.

Information in this document is provided in connection with Intel products. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by the sale of Intel products. Except as provided in Intel's Terms and Conditions of Sale for such products, Intel assumes no liability whatsoever, and Intel disclaims any express or implied warranty, relating to sale and/or use of Intel products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright or other intellectual property right. Intel products are not intended for use in medical, life saving, or life sustaining applications. Intel retains the right to make changes to specifications and product descriptions at any time, without notice. The Intel 380FB PCISet may contain design defects or errors known as errata. Current characterized errata are available on request. Third-party brands and names are the property of their respective owners.

The undocking mechanism of the 380FB guarantees a safe notebook removal. Event notification allows docking resources to be dynamically removed and applications gracefully shut down, if needed. A hardware mechanism is provided to indicate when the notebook is prepared to undock. This can be used to eject or unlock the notebook from the docking station.

The MPC12'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).



MPC12 Simplified Block Diagram