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Cogent Computer Systems, Inc.

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CSB1701 - CSB17xx MXM SOM Development Target Board

The CSB1701, designed, developed and manufactured by Cogent Computer Systems, Inc., is a Micro-ATX form factor board designed to allow effective, quick to market software and hardware development with the wide range of CSB17xx series of MXM SOM modules.

Specifications and Features

- **PCI EXPRESS SOCKET 0 -** This Socket is an x16 for Mechanical Compatibility. It is connected to SOM PCI Express Port 0 as an x4 Wide Link. Actual Link Width and Support is SOM Specific.
- **PCI EXPRESS SOCKET 1 -** This Socket is an x16 for Mechanical Compatibility. It is connected to SOM PCI Express Port 1 as an x4 Wide Link in x4 Mode. In x1 Mode it connects to SOM PCI Express Port 0, Lane 0. Actual Link Width and Support for x1 or x4 mode is SOM Specific.
- **PCI EXPRESS SOCKET 2 -** This Socket is an x1. It is connected to SOM PCI Express Port 1, Lane 1 when Port 1 is in x1 Mode. Support for x1 mode is SOM Specific.
- **PCI EXPRESS SOCKET 3 -** This Socket is an x1. It is connected to SOM PCI Express Port 1, Lane 2 when Port 1 is in x1 Mode. Support for x1 mode is SOM Specific.
- **10/100/1000 ETHERNET -** Two Shielded, Combo RJ45/USB Connectors provide access to SOM Copper Ethernet Ports 0 and 1
- **XAUI/SGMII -** Two PCIe x4 Connectors (Mounted behind PCIe Sockets 2 and 3) are used to provide access to the SOM XAUI and SGMII Ports
- **SATA -** Two Standard 7-Pin SATA Connectors allow access to the SOM SATA Ports
  HIGH SPEED USB HOST 0 - USB Host port 0 goes to a Four Port High Speed USB Hub. Ports 0 and 1 of the Hub go to Combo Ethernet/USB Jack 0, while Hub ports 2 and 3 go to Combo Jack 1.
- **USB SPEED USB HOST 1 -** USB Host port 1 goes to a Four Port High Speed USB Hub. Ports 0 and 1 of the Hub go to FeaturePak Socket 0, while Hub ports 2 and 3 go to FeaturePak Socket 1.
- **SERIAL I/O -** Two 4-wire RS232 Serial Ports are Accessed via a stacked Dual of DB-9 Male
- **CPU SPECIFIC PORT (CSP) -** A 40-Pin Header provides access to the 3 CPU Specific I/O Ports along with SPI, UART2 and I2C. Additionally, CSP0 is routed to a standard SD/MMC Socket.
- **FEATUREPAK SOCKETS -** Two Industry Standard FeaturePak Sockets provide Multiple I/O Expansion Options. Socket 0 supports PCIe x1 and Dual USB, while Socket 0 supports Dual USB. Both provide Dual 50-Pin Headers for Access to the On-Board I/O.
- **JTAG -** A 20-Pin Header provides access to the CPU JTAG Port.
- **POWER SUPPLY -** A Standard 20-pin ATX Power Connector is used to Power the CSB1701
- **COGENT MXM SOM SUPPORT -** Common, Interchangeable Footprint across Multiple CPU Architectures; Low Profile 4.3mm Socket supports all MXM SOM Sizes of 55mm, 75mm and 95mm; 12V Fan Header for Active CPU Cooling; 8-Position DIP Switch for SOM Configuration Options.
- **MICRO-ATX SIZE -** 7.5" x 9.5" Board fits into any ATX or Micro-ATX Enclosure, including most Small Form Factor (SFF) Enclosures

Introduction and Overview

The Multiple PCI Express Connectors (with Flexible Support for x1 and x4 Mode), USB, SATA, Dual 10/100/1000 Copper Ethernet, SGMII/XAUI and Dual FeaturePak I/O Expansion on a standard Micro-ATX Form Factor Motherboard all combine to make the CSB1701 the ideal Software and Hardware Development Platform for any CSB17xx SOM. To accelerate this process, the Schematics and Gerber's of the CSB1701 are provided by Cogent at no charge. This IP can then be freely adapted to quickly enable custom CSB17xx targets.

Cogent is proud to be a Charter Member of the FeaturePak Initiative. For more information on member companies, technical specifications and available modules go to http://www.featurepak.org.

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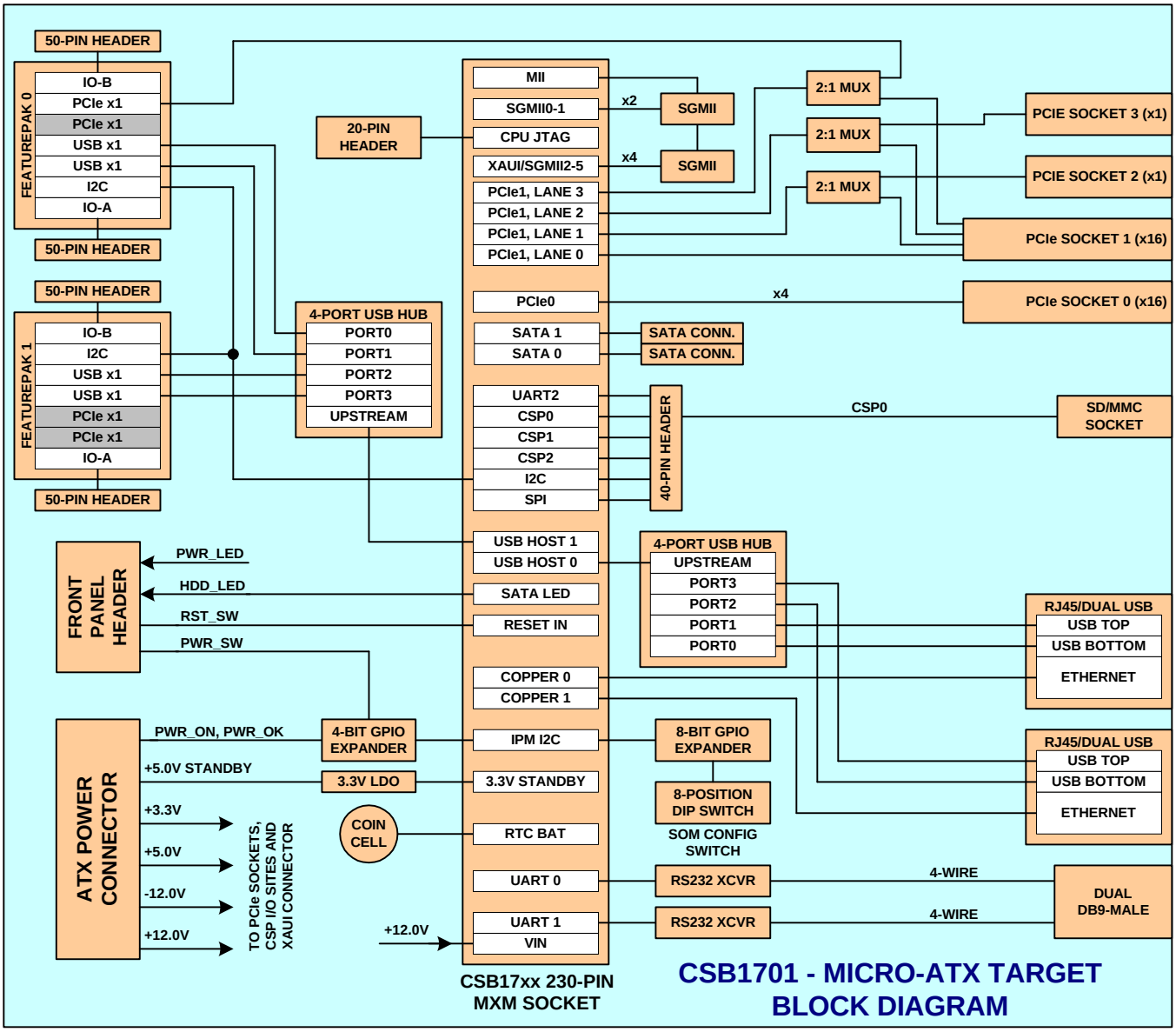

Cogent Development Kits

The CSB1701 is an integral part of each Cogent KIT17xx Development Kit (replace xx with the CSB17xx module, ie - KIT1725 for the Marvell CSB1725 MXM SOM). Included in each KIT17xx is a Small Form Factor (SFF) case with 300W Power supply. Also included is a set of Power, Ethernet, USB and Serial cables. Contact Cogent for more detailed information about the CSB1701 and the KIT17xx Development Kit series.