Meta Reference Manual

Overview Meta Functional Description Epiphany Memory Map Elink Connectors Control Connector FMC Connector I2C Connector Parallella Connectors Clock Management Power Management System Reset Sequence Coordinate Dip Switch Cooling Mechanical Specifications Warranty/Disclaimers License

Meta Functional Description

Epiphany Memory Map

Each Epiphany chip in the Meta system has a unique memory range set through on-board resistors and the ROW/COLUMN coodinate set with dip-switches on the Meta-Carrier. The following table shows the offset of each core within the Meta System. To get the exact absolute address offset for an Epiphany core, add together the address module address, chip address, and core address.

For example, the offset address of core (0,0) in chip (0,2) on module (2,0) would be: 0x80800000

Coordinate	Module	Chip	Core
(0,0)	0x00000000	0x00000000	0x00000000
(0,1)	0x01000000	0x00400000	0x00100000
(0,2)	0x02000000	0x00800000	0x00200000
(0,3)	0x03000000	0x00C00000	0x00300000
(1,0)	0x40000000	0x10000000	0x04000000
(1,1)	0x41000000	0x10400000	0x 0 4 100000
(1,2)	0x42000000	0x10800000	0x04200000
(1,3)	0x43000000	0x10C00000	0x04300000
(2,0)	0x80000000	0x20000000	0x08000000
(2,1)	0x81000000	0x20400000	0x08100000
(2,2)	0x82000000	0x20800000	0x08200000
(2,3)	0x83000000	0x20C00000	0x08300000
(3,0)	0xC0000000	0x30000000	0x0C000000
(3,1)	0xC1000000	0x30400000	0x0C100000
(3,2)	0xC2000000	0x30800000	0x0C200000
(3,3)	0xC3000000	0x30C00000	0x0C300000

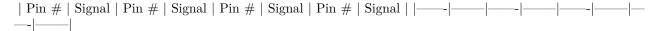
Table 1: Meta-System Memory Map

Elink Connectors

Each Meta-Module has four Epiphany-elink board to board connectors (north, east, west, south), with each connector supporting four independent bidirectional Epiphany elinks. The Meta-Module connects to the Meta-Carrier as a tightly coupled sandwich.

The Elink connector pinout is shown in the following tables.

Table: South and West Elink Connectors



Control Connector

The reset and clocking signals for the Meta-Module is provided by the Meta-Carrier through the control connector.

Meta Warranty/Disclaimers

THERE IS NO WARRANTY FOR THE DESIGN MATERIALS DESCRIBED IN THIS REFERENCE MANUAL, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE DESIGN MATERIALS "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE DESIGN MATERIALS IS WITH YOU. SHOULD THE DESIGN MATERIALS PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION. THE FOREGOING LIMITED WARRANTY IS THE EXCLUSIVE WARRANTY MADE BY SELLER TO BUYER AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED, IMPLIED, OR STATUTORY, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. EXCEPT TO THE EXTENT OF THE INDEMNITY SET FORTH ABOVE, NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

License

This reference manual and all Meta board design files are licensed under the Creative Commons Attribution-Share Alike 3.0 License. To view a copy of this license, visit:

http://creativecommons.org/licenses/bysa/3.0/

All derivative works are to be attributed to Andreas Olofsson.