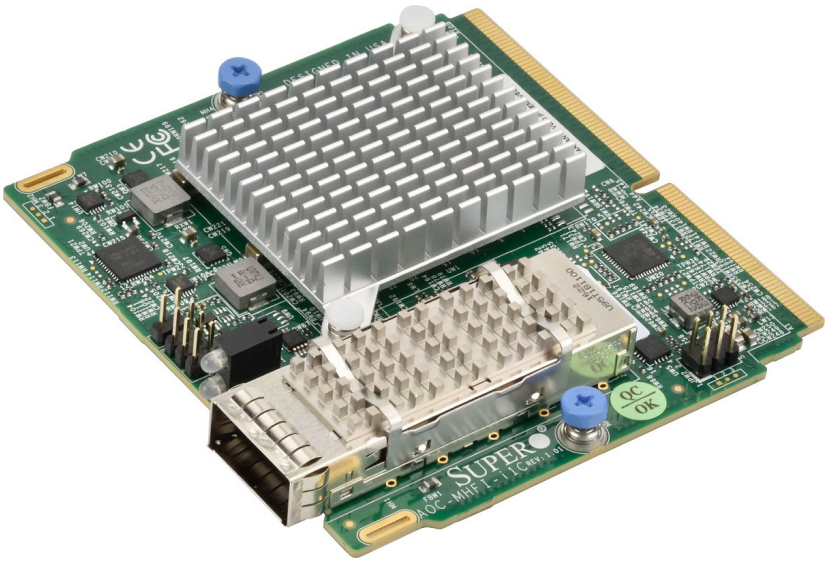
AOC-MHFI-i1C



User's Guide

Revision 1.0

The information in this User's Guide has been carefully reviewed and is believed to be accurate. The vendor assumes no responsibility for any inaccuracies that may be contained in this document, and makes no commitment to update or to keep current the information in this user's guide, or to notify any person or organization of the updates. **Please Note: For the most up-to-date version of this user's guide, please see our Website at www.supermicro.com.**

Super Micro Computer, Inc. ("Supermicro") reserves the right to make changes to the product described in this user's guide at any time and without notice. This product, including software and documentation, is the property of Supermicro and/or its licensors, and is supplied only under a license. Any use or reproduction of this product is not allowed, except as expressly permitted by the terms of said license.

IN NO EVENT WILL SUPER MICRO COMPUTER, INC. BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, SPECULATIVE OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OR INABILITY TO USE THIS PRODUCT OR DOCUMENTATION, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN PARTICULAR, SUPER MICRO COMPUTER, INC. SHALL NOT HAVE LIABILITY FOR ANY HARDWARE, SOFTWARE, OR DATA STORED OR USED WITH THE PRODUCT, INCLUDING THE COSTS OF REPAIRING, REPLACING, INTEGRATING, INSTALLING OR RECOVERING SUCH HARDWARE, SOFTWARE, OR DATA.

Any disputes arising between the manufacturer and the customer shall be governed by the laws of Santa Clara County in the State of California, USA. The State of California, County of Santa Clara shall be the exclusive venue for the resolution of any such disputes. Supermicro's total liability for all claims will not exceed the price paid for the hardware product.

FCC Statement: This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense.

California Best Management Practices Regulations for Perchlorate Materials: This Perchlorate warning applies only to products containing CR (Manganese Dioxide) Lithium coin cells. "Perchlorate Material-special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate".

User's Guide Revision 1.0

Release Date: Sep 10, 2018

Printed in the United States of America

Preface

About this User's Guide

This user's guide is written for system integrators, IT technicians, and knowledgeable end users. It provides information for the installation and use of the AOC-MHFI-i1C add-on card.

About this Add-on Card

High Performance Computing (HPC) solutions require the highest level of performance, scalability, and availability to accommodate complex application workloads. Designed specifically for HPC, the AOC-MHFI-i1C uses an advanced “on-load” design that automatically scales fabric performance with higher core counts, making these adapters ideal for skyrocketing workloads. Also known as the Omni-Path Host Fabric Interface (HF), this add-on card is available in SIOM form factor and operates at 100Gbps throughput. The AOC-MHFI-i1C is the most compact and powerful networking adapter in the market today.

An Important Note to the User

All images and layouts shown in this user's guide are based upon the latest PCB revision available at the time of publishing. The card you have received may or may not look exactly the same as the graphics shown in this user's guide.

Returning Merchandise for Service

A receipt or copy of your invoice marked with the date of purchase is required before any warranty service will be rendered. You can obtain service by calling your vendor for a Returned Merchandise Authorization (RMA) number. When returning the motherboard to the manufacturer, the RMA number should be prominently displayed on the outside of the shipping carton, and the shipping package is mailed prepaid or hand-carried. Shipping and handling charges will be applied for all orders that must be mailed when service is complete. For faster service, you can also request a RMA authorization online http://www.supermicro.com/RmaForm/.

This warranty only covers normal consumer use and does not cover damages incurred in shipping or from failure due to the alternation, misuse, abuse or improper maintenance of products.

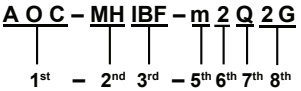
During the warranty period, contact your distributor first for any product problems.

Conventions Used in the User's Guide

Pay special attention to the following symbols for proper system installation and for safety instructions to prevent damage to the system or injury to yourself:

Note: Additional information given for proper system setup.

Naming Convention for Standard Network Adapters



Character	Representation	Options
1st	Product Family	AOC: Add On Card
2nd	Form Factor	S: Standard, P: Proprietary, C: MicroLP, M: Super IO Module (SIOM), MH: SIOM Hybrid
3rd	Product Type/Speed	G: GbE (1Gb/s), TG: 10GbE (10Gb/s), 25G: 25GbE (25Gb/s), 40G: 40GbE (40Gb/s), 50G: 50GbE (50Gb/s), 100G: 100GbE (100Gb/s), IBE: EDR IB (100Gb/s), IBF: FDR IB (56Gb/s), IBQ: QDR IB (40Gb/s), HFI: Host Fabric Interface
4th	Chipset Model (Optional)	N: Niantec (82599), P: Powerville (i350), S: Sageville (X550)
5th	Chipset Manufacturer	i: Intel, m: Mellanox, b: Broadcom
6th	Number of Ports	1: 1 port, 2: 2 ports, 4: 4 ports
7th	Connector Type (Optional)	S: SFP+/SFP28, T: 10GBase-T, Q: QSFP+, C: QSFP28
8th	2nd Controller/Connector Type (Optional)	G: 1x GbE RJ45, 2G: GbE 2x RJ45, S: 1x 10G SFP+ T: 10GBase-T, 2T: 2x 10GBase-T

Networking Adapter List

Model	Type	Form Factor	Controller	Connection	Dimension (w/o Brackets) (L x H)	Power (W)
AOC-MGP-i2	GbE	SIOM	Intel® i350 AM2	2 RJ45 (1Gb/port)	3.622" (92mm) x 3.428" (87.08mm)	3.7
AOC-MGP-i4	GbE	SIOM	Intel® i350 AM4	4 RJ45 (1Gb/port)	3.622" (92mm) x 3.428" (87.08mm)	4.4
AOC-MTGN-i2S	10GbE	SIOM	Intel® 82599ES	2 SFP+ (10Gb/port)	3.622" (92mm) x 3.428" (87.08mm)	7.2
AOC-MTG-i4S	10GbE	SIOM	Intel® XL710-BM1	4 SFP+ (10Gb/port)	3.622" (92mm) x 3.428" (87.08mm)	7
AOC-MTG-i2T	10GbE	SIOM	Intel® X550-AT2	2 RJ45 (10GBase-T)	3.622" (92mm) x 3.428" (87.08mm)	13
AOC-MTG-i4T	10GbE	SIOM	2x Intel® X550-AT2	4 RJ45 (10GBase-T)	3.622" (92mm) x 3.428" (87.08mm)	26
AOC-MHIBF-m1Q2G	FDR IB GbE	SIOM	Mellanox® ConnectX-3 Pro Intel® i350	1 QSFP (56Gb/port) 2 RJ45 (1Gb/port)	3.622" (92mm) x 3.428" (87.08mm)	9
AOC-MHIBF-m2Q2G	FDR IB GbE	SIOM	Mellanox® ConnectX-3 Pro Intel® i350	2 QSFP (56Gb/port) 2 RJ45 (1Gb/port)	3.622" (92mm) x 3.428" (87.08mm)	11
AOC-MHIBE-m1CG	EDR IB GbE	SIOM	Mellanox® ConnectX-4 VPI Intel® i210	1 QSFP28 (100Gb/port) 1 RJ45 (1Gb/port)	3.622" (92mm) x 3.428" (87.08mm)	19
AOC-MH25G-b2S2G	25GbE	SIOM	Broadcom® BCM57414 Intel® i350	2 SFP28 (25Gb/port) 2 RJ45 (1Gb/port)	3.622" (92mm) x 3.428" (87.08mm)	9
AOC-MH25G-m2S2T	25GbE	SIOM	Mellanox® ConnectX-4 Lx EN Intel® X550-AT2	2 SFP28 (25Gb/port) 2 RJ45 (10GBase-T)	3.622" (92mm) x 3.428" (87.08mm)	25
AOC-M25G-m4S	25GbE	SIOM	Mellanox® ConnectX-4 Lx EN	4 SFP28 (25Gb/port)	3.622" (92mm) x 3.428" (87.08mm)	20
AOC-M25G-i2S	25GbE	SIOM	Intel® XXV710	2 SFP28 (25Gb/port)	3.622" (92mm) x 3.428" (87.08mm)	11.8
AOC-MHFI-i1C	Omni-Path	SIOM	Intel® OP HFI ASIC (Wolf River WFR-B)	1 QSFP28 (100Gb/port)	3.622" (92mm) x 3.428" (87.08mm)	15

Note: The table above is continued on the next page.

Model	Type	Form Factor	Interface	Controller	Connection	Dimension (w/o Brackets) (L x H)	Power (W)
AOC-SGP-i2	GbE	Standard LP	PCI-E x4	Intel® i350 AM2	2 RJ45 (1Gb/port)	3.9" (99mm) x 2.73" (69mm)	3.5
AOC-SGP-i4	GbE	Standard LP	PCI-E x4	Intel® i350 AM4	4 RJ45 (1Gb/port)	3.9" (99mm) x 2.73" (69mm)	5
AOC-STG-i2T	10GbE	Standard LP	PCI-E x8	Intel® X540-AT2	2 RJ45 (10GBase-T)	5.9" (150mm) x 2.73" (69mm)	13
AOC-STGS-i1T	10GbE	Standard LP	PCI-E x4	Intel® X550-AT	1 RJ45 (10GBase-T)	5.9" (150mm) x 2.73" (69mm)	9
AOC-STGS-i2T	10GbE	Standard LP	PCI-E x4	Intel® X550-AT2	2 RJ45 (10GBase-T)	5.9" (150mm) x 2.73" (69mm)	11
AOC-STG-i4T	10GbE	Standard LP	PCI-E x8	Intel® XL710-BM1	4 RJ45 (10GBase-T)	5.9" (14.99cm) x 2.73"(6.9cm)	15.5
AOC-STGN-i1S	10GbE	Standard LP	PCI-E x8	Intel® 82598EN	1 SFP+ (10Gb/port)	4.0" (102mm) x 2.73" (69mm)	10
AOC-STGN-i2S	10GbE	Standard LP	PCI-E x8	Intel® 82599ES	2 SFP+ (10Gb/port)	4.0" (102mm) x 2.73" (69mm)	11.2
AOC-STGF-i2S	10GbE	Standard LP	PCI-E x8	Intel® X710-BM2	2 SFP+ (10Gb/port)	5.19" (132mm) x 2.73" (69mm)	5.6
AOC-STG-b4S	10GbE	Standard LP	PCI-E x8	Broadcom® BCM57840S	4 SFP+ (10Gb/port)	5.4" (137mm) x 2.73" (69mm)	14
AOC-STG-i4S	10GbE	Standard LP	PCI-E x8	Intel® XL710-BM1	4 SFP+ (10Gb/port)	5.9" (150mm) x 2.73" (69mm)	8
AOC-S25G-m2S	25GbE	Standard LP	PCI-E x8	Mellanox® CX-4 LX	2 SFP28 (25Gb/port)	5.6" (142mm) x 2.713" (69mm)	8.7
AOC-S40G-i1Q	40GbE	Standard LP	PCI-E x8	Intel® XL710-BM1	1 QSFP+ (40Gb/port)	5.9" (150mm) x 2.73" (69mm)	6.5
AOC-S40G-i2Q	40GbE	Standard LP	PCI-E x8	Intel® XL710-BM2	2 QSFP+ (40Gb/port)	5.9" (150mm) x 2.73" (69mm)	7
AOC-S100G-m2C	100GbE	Standard LP	PCI-E x16	Mellanox® CX-4 EN	2 QSFP28 (100Gb/port)	6.6" (168mm) x 2.73" (69mm)	16.3
AOC-PTG-i1S	10GbE	Proprietary	PCI-E x8	Intel® 82599EN	1 SFP+ (10Gb/port)	10.04" (255mm) x .78" (20mm)	7.5
AOC-UG-i4	GbE	UIO FH	PCI-E x8	Intel® 82571EB	4 RJ45 (1Gb/port)	6.6" (167mm) x 3.9" (98mm)	10
AOC-CGP-i2	GbE	MicroLP	PCI-E x4	Intel® i350 AM2	2 RJ45 (1Gb/port)	4.45" (113mm) x 1.54" (39mm)	4
AOC-CG-i2	GbE	MicroLP	PCI-E x4	Intel® 82580	2 RJ45 (1Gb/port)	4.45" (113mm) x 1.3" (34mm)	4
AOC-CTG-i1S	10GbE	MicroLP	PCI-E x8	Intel® 82599EN	1 SFP+ (10Gb/port)	4.85" (123mm) x 1.54" (39mm)	10
AOC-CTG-i2S	10GbE	MicroLP	PCI-E x8	Intel® 82599ES	2 SFP+ (10Gb/port)	4.85" (123mm) x 1.54" (39mm)	11
AOC-CTG-i2T	10GbE	MicroLP	PCI-E x8	Intel® X540-AT2	2 RJ45 (10GBase-T)	4.8" (123mm) x 2.75" (77mm)	13
AOC-CTGS-i2T	10GbE	MicroLP	PCI-E x4	Intel® X550-AT2	2 RJ45 (10GBase-T)	4.45" (113mm) x 1.54" (39mm)	12
AOC-C25G-m1S	25GbE	MicroLP	PCI-E x8	Mellanox® CX-4 Lx EN	1 SFP28 (28Gb/port)	4.45" (113mm) x 1.54" (39mm)	8.5

Contacting Supermicro

Headquarters

Address:	Super Micro Computer, Inc. 980 Rock Ave. San Jose, CA 95131 U.S.A.
Tel:	+1 (408) 503-8000
Fax:	+1 (408) 503-8008
Email:	marketing@supermicro.com (General Information) support@supermicro.com (Technical Support)
Website:	www.supermicro.com

Europe

Address:	Super Micro Computer B.V. Het Sterrenbeeld 28, 5215 ML 's-Hertogenbosch, The Netherlands
Tel:	+31 (0) 73-6400390
Fax:	+31 (0) 73-6416525
Email:	sales@supermicro.nl (General Information) support@supermicro.nl (Technical Support) rma@supermicro.nl (Customer Support)
Website:	www.supermicro.nl

Asia-Pacific

Address:	Super Micro Computer, Inc. 3F, No. 150, Jian 1st Rd. Zhonghe Dist., New Taipei City 235 Taiwan (R.O.C)
Tel:	+886-(2) 8226-3990
Fax:	+886-(2) 8226-3992
Email:	support@supermicro.com.tw
Website:	www.supermicro.com.tw

Table of Contents

Chapter 1

Overview

1-1 Overview

Congratulations on purchasing your add-on card from an acknowledged leader in the industry. Supermicro products are designed with the utmost attention to detail to provide you with the highest standards in quality and performance. For product support and updates, please refer to our website at http://www.supermicro.com/products/nfo/networking.cfm#adapter.

1-2 Product Highlights

- Omni-Path Host Fabric Interface (HFI)
- Super I/O Module (SIOM) Form Factor
- 100 Gbps link speed
- Single QSFP28 connector
- End-to-end fabric optimization
- Scalable, low latency MPI (less than 1µs end-to-end)
- High MPI message rates (160mmps)
- Efficient storage communication with new 8K and 10K MTUs
- Congestion control and QoS (with deterministic latency)
- Low power consumption
- Scalable to tens-of-thousands of nodes
- Open Fabrics Alliance (OFA) software
- MSI-X interrupt handling for high performance on multi-core hosts

1-3 Technical Specifications

General

- Super I/O Module (SIOM) Form Factor
- PCI-E 3.0 x16 bus interface
- End point device type

Advanced Interrupts

- MSI-X
- INTx

ASIC

- Single Intel® OP HFI ASIC

Max Data Rate

- 100 Gbps

Virtual Lanes

- Configurable from one to eight VLs plus one management VL

MTUt

- Configurable MTU size of 2 KB, 4 KB, 8 KB, or 10KB

Interfaces

- Supports QSFP28 Quad Small Form Factor pluggable passive copper cables, optical transceivers, and active optical cables

Port

- One Intel® OP 4X host fabric interface QSFP28

Software Operating Systems

- Red Hat enterprise Linux
- SUSE enterprise Linux server
- CentOS
- Scientific Linux

Power Consumption

- Copper: Typical 7.4W, Maximum 11.7W
- Optical: Typical 10.6W, Maximum 14.9W (Class 4 Optics)

Operating Conditions

- Operating temperature: 0°C to 40°C (32°F to 104°F)
- Storage temperature: -40°C to 70°C (-40°F to 158°F)
- Storage humidity: 90% non-condensing relative humidity at 35ºC

Physical Dimensions

- Card PCB dimensions: 92mm (3.62in) x 87.1mm (3.43in) (W x D)

Supported Platforms

- Supermicro® motherboards with Super I/O module slot
- Supermicro® server systems with Super I/O module slot (See SIOM compatibility matrix online)

http://www.supermicro.com/support/resources/AOC/AOC_Compatibility_SIOM.cfm

Note: This product is only sold as part of an integrated solution with Supermicro server systems.

1-4 Available SKUs

SKUs	Part Number	Description
AOC-MHFI-i1C	AOC-MHFI-i1C	Single-port Omni-Path Host Fabric adapter
	BKT-0106L	Swappable bracket for 2U+ chassis
AOC-MHFI-i1CM	AOC-MHFI-i1CM	Single-port Omni-Path Host Fabric adapter
	BKT-0104L	Internal bracket

1-5 Similar Products

Product Part Number	Form Factor	Speed	Connector Type	Total Ports	Controller
AOC-MGP-i2	SIOM	1GbE	RJ45	2	Intel i350
AOC-MGP-i4	SIOM	1GbE	RJ45	4	Intel i350
AOC-MTGN-i2S	SIOM	10GbE	SFP+	2	Intel 82599
AOC-MTG-i4S	SIOM	10GbE	SFP+	4	Intel XL710
AOC-MTG-i2T	SIOM	10GbE	RJ45	2	Intel X550
AOC-MTG-i4T	SIOM	10GbE	RJ45	4	Intel X550
AOC-MH25G-m2S2T	SIOM	25GbE 10GbE	SFP28 RJ45	2 2	Mellanox ConnectX-4 Lx EN Intel i350
AOC-MHIBF-m2Q2G	SIOM	InfiniBand FDR GbE	QSFP+ RJ45	2 2	Mellanox ConnectX-3 Pro Intel i350
AOC-MHIBF-m1Q2G	SIOM	InfiniBand FDR GbE	QSFP+ RJ45	1 2	Mellanox ConnectX-3 Pro Intel i350

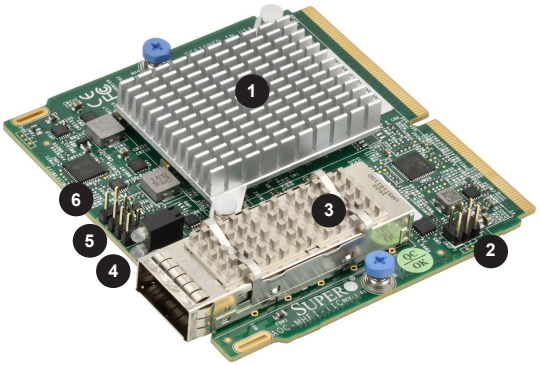
1-6 Optional Parts List

Type	Part Number	Description
QSFP28 Omni-Path Copper Cable	CBL-NTWK-0892-OPC05	Intel Omni-Path Passive Copper Cable QSFP28 0.5M
	CBL-NTWK-0892-OPC10	Intel Omni-Path Passive Copper Cable QSFP28 1M
	CBL-NTWK-0892-OPC15	Intel Omni-Path Passive Copper Cable QSFP281.5M
	CBL-NTWK-0892-OPC20	Intel Omni-Path Passive Copper Cable QSFP28 2M
	CBL-NTWK-0892-OPC30	Intel Omni-Path Passive Copper Cable QSFP28 3M
QSFP28 Omni-Path Active Optical Cable	CBL-NTWK-0892-OPF30	Intel Omni-Path Active Optical Cable QSFP28 3M
	CBL-NTWK-0892-OPF50	Intel Omni-Path Active Optical Cable QSFP28 5M
	CBL-NTWK-0892-OPF100	Intel Omni-Path Active Optical Cable QSFP28 10M
	CBL-NTWK-0892-OPF150	Intel Omni-Path Active Optical Cable QSFP28 15M
	CBL-NTWK-0892-OPF200	Intel Omni-Path Active Optical Cable QSFP28 20M
	CBL-NTWK-0892-OPF300	Intel Omni-Path Active Optical Cable QSFP28 30M
	CBL-NTWK-0892-OPF500	Intel Omni-Path Active Optical Cable QSFP28 50M

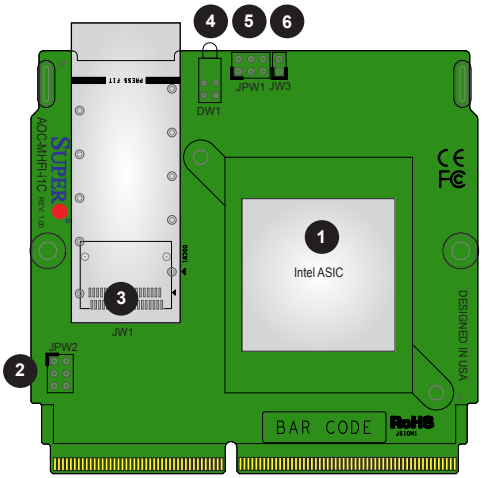
Chapter 2

Hardware Components

2-1 Add-On Card Image and Layout



The AOC-MHFI-i1C Image



The AOC-MHFI-i1C Layout

1. Intel ASIC	4. LED Indicator
2. ST Micro MCU	5. ZL8800 Voltage Regulator
3. QSFP28 Port	6. ZL8800 Output EN

2-2 Major Components

The following components are on the AOC-MHFI-i1C:

1. Intel ASIC
2. ST Micro MCU
3. QSFP28 port
4. LED indicator
5. ZL8800 voltage regulator
6. ZL8800 Output EN

2-3 Connectors and LED Indicators

QSFP28 Port

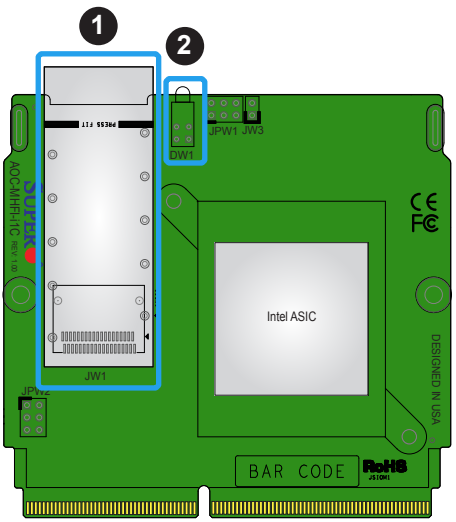
The AOC-MHFI-i1C has one QSFP28 port located at JW1. This port supports connection speeds of 100Gb/s. Use a QSFP28 cable.

LED Indicators

Each QSFP28 port has a corresponding LED. The AOC-MHFI-i1C has one LED indicator located at DW1. Refer to the table below for LED color and definition.

QSFP28 HFI Activity Indicators Green LED State	
LED Status	Definition
Off	No Cable Attached
Steady On	Link up; Ready for Management or Data Traffic
Flashing	Link up; Management Traffic Only
Random Blinking	Link up; Passing Traffic

QSFP28 HFI Activity Indicators Yellow LED State	
LED Status	Definition
Yellow	Board Power Up
Off	No Power



1.QSFP28 Connector

2. LED Indicator

ZL8800 Voltage Regulator Programming Header

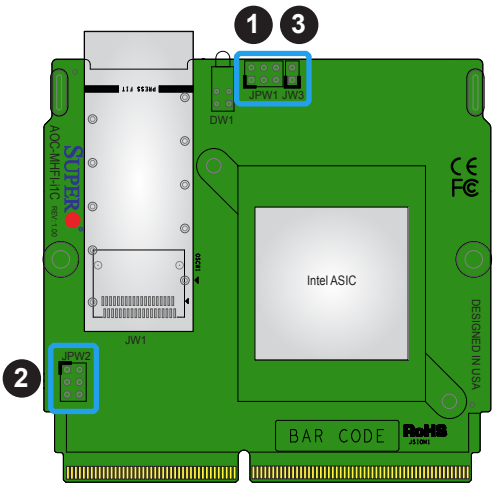
The ZL8800 voltage regulator programming header is located at JPW1 on the AOC card. Use this header to program voltage output.

ST Micro MCU Programming Header

The ST Micro MCU programming header is located at JPW2. Use this header to program the MCU.

ZL8800 Output EN Header

The ZL8800 Output EN header is located at JW3. This header needs to be disabled (closed) during programming.



1. ZL8800 Voltage Regulator
2. ST Micro MCU
3. ZL8800 Output EN

Chapter 3

Installation

3-1 Static-Sensitive Devices

Electrostatic Discharge (ESD) can damage electronic components. To avoid damaging your add-on card, it is important to handle it very carefully. The following measures are generally sufficient to protect your equipment from ESD.

Precautions

- Use a grounded wrist strap designed to prevent static discharge.
- Touch a grounded metal object before removing the add-on card from the antistatic bag.
- Handle the add-on card by its edges only; do not touch its components.
- Put the add-on card back into the antistatic bags when not in use.
- For grounding purposes, make sure that your system chassis provides excellent conductivity between the power supply, the case, the mounting fasteners and the add-on card.

Unpacking

The add-on card is shipped in antistatic packaging to avoid static damage. When unpacking your component or system, make sure that you are static protected.

Note: To avoid damaging your components and to ensure proper installation, always connect the power cord last, and always unplug it before adding, removing or changing any hardware components.

3-2 Before Installation

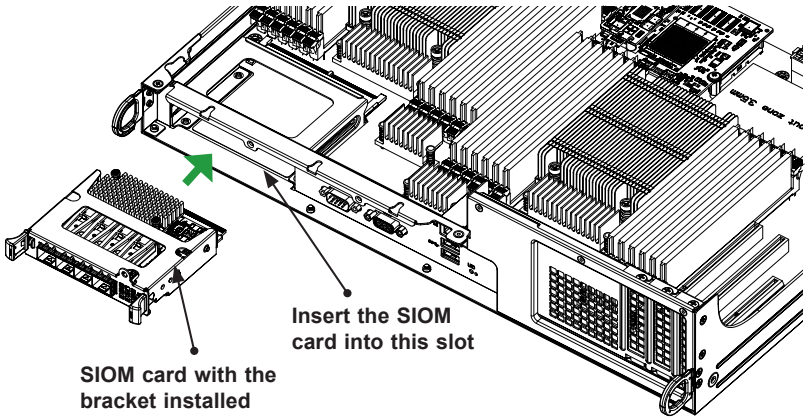
Before you install the add-on card, follow the instructions below.

1. Power down the system.
2. Unplug the power cord.
3. Use industry-standard anti-static equipment such as gloves or a wrist strap and follow the precautions on page 3-1 to avoid damage caused by ESD.
4. Familiarize yourself with the server, motherboard, and/or chassis documentation.
5. Confirm that your operating system includes the latest updates and hotfixes.

3-3 Installing the Add-on Card

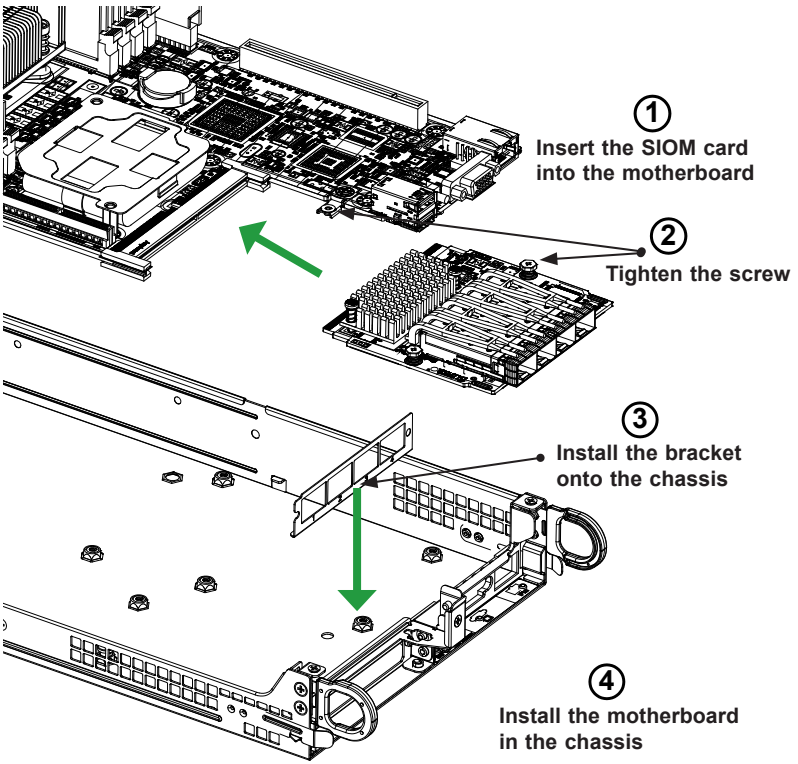
Follow the steps below to install the add-on card into your system.

1. Remove the server cover and, if any, set aside any screws for later use.
2. Remove the add-on card slot cover. If the slot cover has a screw, place it aside for later use.
3. Position the add-on card in front of the SIOM slot and gently push in both sides of the card until it slides into the slot.



Note: This add-on card does not support hot plug. Please turn off the AC power and remove the power cord from the wall socket before you install or remove the add-on card.

Follow this step to install the add-on card if your system does not support a swappable bracket. Insert the SIOM card onto the motherboard, and then install the motherboard in the chassis. An internal bracket comes with the SIOM card 1U in the chassis SKU. It needs to be installed onto the chassis.



Note: Supermicro recommend that the SIOM card shown above be installed by a system integrator or by the manufacturer.

4. Secure the add-on card to the chassis. If required, use the screws that you previously removed.
5. Attach any necessary external cables to the add-on card.
6. Replace the system cover.
7. Plug in the power cord and power up the system.

3-4 Installing Intel Omni-Path Software on Linux

Follow the steps below to install the Intel Omni-Path Software on Linux.

Note: Before you perform the Omni-Path Software installation, please make sure you understand Intel Omini-Path Software installation recommendations and your systems meet Intel Fabric Software Installation Prerequisites that can be found in Intel® Omni-Path Fabric Software under the Release Notes.

Before you install

Refer to Intel Release Notes for a list of compatible operating systems.

Download the Intel Omni-Path Software

1. Using a web browser, type "downloadcenter.intel.com" in the address field and press "Enter", or access the Supermicro site at https://www.supermicro.com/wftp/Networking_Drivers/.

2. In Intel download center in the "Search downloads" field, type "Omni-Path".

3. From the Intel download center, in the search result, select the "Intel® Omni-Path Fabric Software".

4. In the "Available Downloads" list, select the file(s) you need for the OS you have installed on your fabric. If you are using the Supermicro site, select the file to download.

   Note: There are two types of software that are available. For more information on Intel Omni-Patch Fabric host and Fabric Suite, please refer to the Intel Omni-Path Fabric Software website:

   a. Intel Omni-Path Fabric host Software:

   `IntelOPA-Basic.DISTRO.VERSION.tgz`

   b. Intel Omni-Path Fabric Suite (IFS) Software:

   `IntelOPA-IFS.DISTRO.VERSION.tgz`

5. Save the download to your hard drive.

Intel® Omni-Path Software Installation

The following procedure installs ULPs and drivers with all default options automatically. To customize your installation, please refer to the Intel Release Notes page, which can be found on the Intel® Omni-Path Fabric Software website.

Perform the following procedure to install the Intel® Omni-Path Software:

1. Open an SSH client session, if necessary, and log into the host where the package is being installed. Make sure you are root user.

2. Copy the tar file to /root directory.

3. Change directory to /root:

```
cd /root
```

4. Unpack the Tar files:

   a. Basic:

```
tar xvfz IntelOPA-Basic.DISTRO.VERSION.tgz
```

   b. IFS

```
tar xvfz IntelOPA-IFS.DISTRO.VERSION.tgz
```

5. Change directory to IntelOPA-[Basic|IFS].DISTRO.VERSION directory:

   a. Basic

```
cd IntelOPA-Basic.DISTRO.VERSION
```

   b. IFS

```
cd IntelOPA-IFS.DISTRO.VERSION
```

   c. Start the intallation in /root.

   d. Type:

```
./INSTALL -a
```

   e. Installation will start automatically. When complete, you should see the following message:

```
A System Reboot is recommended to activate the software changes
Done Installing OPA Software.
Rebuilding boot image with "/usr/bin/dracut -f"...done.
```

(Disclaimer Continued)

The products sold by Supermicro are not intended for and will not be used in life support systems, medical equipment, nuclear facilities or systems, aircraft, aircraft devices, aircraft/emergency communication devices or other critical systems whose failure to perform be reasonably expected to result in significant injury or loss of life or catastrophic property damage. Accordingly, Supermicro disclaims any and all liability, and should buyer use or sell such products for use in such ultra-hazardous applications, it does so entirely at its own risk. Furthermore, buyer agrees to fully indemnify, defend and hold Supermicro harmless for and against any and all claims, demands, actions, litigation, and proceedings of any kind arising out of or related to such ultra-hazardous use or sale.