

## Quick Start Guide

For Health and safety information, refer to the sheet [LS-AHKL-0001](#).

The Amulet Hotkey® CoreModule™ FX300 is a unique, single slot PCIe expansion module for the Dell PowerEdge FX2 chassis, incorporating a

Each CoreModule FX300 contains one Intel® Programmable Acceleration Card (PAC) with the Intel® Arria® 10 GX FPGA. The Arria 10 provides data centers with both inline and lookaside acceleration, high-performance and outstanding versatility. The FX300 delivers superior scalability, reliability and performance.

There may be different ways to configure, depending on use case. As well as explaining the basic installation of the FX300, this guide gives setup examples of how to use an CoreModule FX300 with an FC640 for remote access to the FGPA.

### Assign two module slots to one blade (default)

Each CoreModule FX300 contains one Arria PCIe card that maps to a blade installed in the top/bottom position in the same side at the front of the FX2s chassis as shown in [Figure 1](#).



Figure 1: Four blade configuration example

In [Figure 1](#) the CoreModule FX300s in positions PCIe1 & PCIe2 at the rear left hand side (LHS) connect with a blade in the bottom Compute 4 position on the right hand side (RHS) at the front.

The second pair (PCIe3 & PCIe4) connect to the blade in the top Compute 2 position on the same side.

The third pair (PCIe5 & PCIe6) connect to the bottom Compute 3 position on the front LHS.

The fourth pair (PCIe7 & PCIe8) connect to Compute 1 in the top position on the front LHS.

### Assign four module slots to one blade

If only one blade is used on half of the chassis, the space below can be empty, contain a storage sled, or a compute sled with no PCIe expansion requirement.

In [Figure 2](#), four CoreModule FX300s connect with a single blade in the top Compute position. So Compute 1 connects to PCIe5, 6, 7 & 8 on the RHS (rear). Compute 2 connects to PCIe 1, 2, 3, 4 on the LHS (rear).



Figure 2: Two blade configuration example



### How to select the mapping for four module slots to one blade

**! Caution:** This is only possible when all sleds or blades are powered down.

- 1 Login to the CMC with the IP address, username and password.
- 2 Select PCIe Overview from the left-hand menu and click the Setup tab.
- 3 Make sure the Enable PCIe Slot Reassignment box is checked. See [Figure 3](#).

**Note:** This selection is automatic when a storage sled is installed in the chassis slots Compute 3 or Compute 4, reassigning the slot below to the slot above.

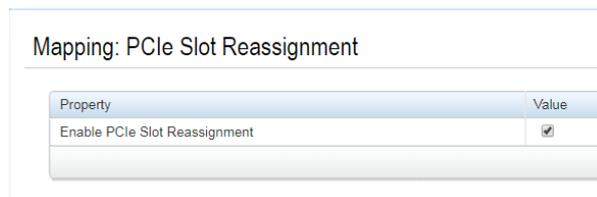


Figure 3: Reconfigure the iDRAC for alternative slot reassignment

### Prepare the blades in the FX2s chassis

- 1 For a new install, power down all the blades.
- 2 For an existing configuration (if applicable):
  - a) shut down or migrate all VMs hosted by the blades;
  - b) in the VMware vSphere client, locate the ESXi server in the Inventory and put it in to Maintenance Mode;
  - c) power down any blades that will connect to the CoreModule FX300.
- 3 Remove any PCIe modules that occupy the slots where you will install the CoreModule FX300.

### Install a CoreModule FX300 module in a PCIe slot

The CoreModule FX300 module installs easily into the rear of the FX2s chassis into one of the eight slots of the expansion bay.

Do the following steps to install each module.

**! Caution:** Always use anti-static handling procedures, such as wearing a wrist-strap, before handling the CoreModule FX300.

- 1 Remove all packaging and the connector protector from the module.
- 2 Decide which is the correct position to install the module(s).

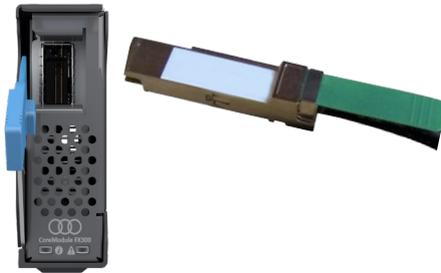
**Note:** Make sure you install the CoreModule FX300 module in the correct PCIe slot of the expansion bay for your configuration. Refer to [Figure 1](#) and [Figure 2](#).

- 3 Press in the release tab on the top of the module lever.
- 4 Pull the module lever down prior to inserting into the expansion bay.
- 5 Align the connectors on the rear of the CoreModule FX300 module with the expansion connector at the rear of the FX2 chassis. See [Figure 4](#).
- 6 Push the module into the expansion bay so it is almost fully installed.
- 7 Push the card-puller lever up until you hear a click. The module is installed.



**Figure 4:** Install the CoreModule FX300 module in a PCIe expansion slot.

- 8 Connect a QSFP connection to the front of the module if required. See [Figure 5](#).



**Figure 5:** Location for QSFP connection to the front port

A fully populated chassis looks like [Figure 6](#).



**Figure 6:** A populated FX2s chassis with eight CoreModule FX300 modules

## Set up the CoreModule FX300

**! Caution:** Follow the requirements for proper thermal control of the FX400.

Sled	iDRAC	Minimum BIOS	Minimum requirement
FC640	iDRAC9	2.5.4	4.00.00.00 (70) firmware installed

- 1 Install the latest approved iDRAC on all compute sleds in the FX2s chassis.  
See our support website and the Tech Note for the latest approved versions.

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- 2 To select the configuration in [Figure 1](#), make sure the checkbox for Enable PCIe Slot Reassignment is deselected.
- 3 To select the configuration in [Figure 2](#), make sure the checkbox for Enable PCIe Slot Reassignment is selected.
- 4 Power on the blades in the FX2s chassis.
- 5 Set the BIOS setting SR-IOV Global Enable to ENABLED.

## To remove the CoreModule FX300

**! Caution:** Always use anti-static handling procedures such as wearing a wrist-strap before handling the CoreModule FX300 module.

- 1 Shut down any applications running on the CoreModule FX300.
- 2 Power down the blades that map to the CoreModule FX300 module.
- 3 Press in the release tab on the top of the module lever.
- 4 Pull the lever down. This ejects the module from the connectors on the backplane of the chassis.
- 5 Carefully draw out the CoreModule FX300 module and fit the connector protector that came with the unit. See [Figure 7](#).
- 6 Put in a suitable anti-static bag.



**Figure 7:** Remove the CoreModule FX300 module from the FX2s chassis

### Health and Safety (Refer to legislation sheet [LS-AHKL-0001](#))

- This device complies with part 15 of the FCC Rules (Class A)
- Operating temperature range: 15° to 35° C (59° to 95° F)
- Operating humidity range: 10% to 80% (non-condensing)

For product documentation, downloads and technical assistance, visit:



For further information on all our products, visit [www.amulethotkey.com](http://www.amulethotkey.com).