



# FCmeter™ Quick Start Guide

Version 1.2  
June 30, 2012

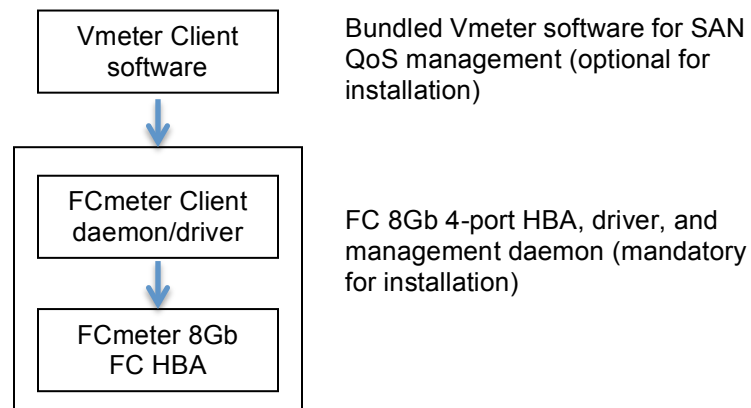
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## 1 SYSTEM OVERVIEW

Congratulations on your purchase of the Vicom FCmeter 8Gb Video FC SAN HBA. This FCmeter 8G with QoS management solution boosts workstation performance, while also eliminating streaming interruptions caused by congestion from burst I/O demands on shared storage.

This Quick Start Guide gives step-by-step instructions for configuring a basic system. The basic system consists of the FCmeter HBA, the FCmeter Client (HBA driver and management daemon), and the bundled Vmeter SAN Quality Management software.



### 1.1 Package Content Check List

The list below consists of all the items that are included in your FCmeter package:

- The FCmeter 8Gb FC HBA (Host Bus Adaptor)
- Instructions for downloading the FCmeter Client installation package
- Instructions for downloading the Vmeter Client installation package

## 2 FCMETER CLIENT

The FCmeter Client consists of an FCmeter HBA card together with its driver and associated software utilities.

### 2.1 System Requirements

The following are the minimum system requirements for an FCmeter client system:

#### 2.1.1 Workstation

- Mac Pro System with Intel processor
- At least 1GB RAM
- At least 10 MB of available hard disk space

#### 2.1.2 Operating Systems

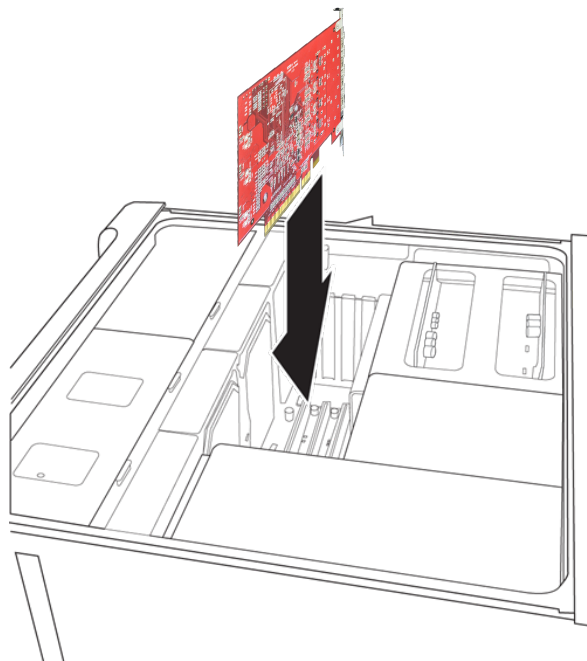
- Mac OS X 10.6 or 10.7

### 2.2 Installation Steps

Below is an outline of the installation steps that you will need to follow.

#### 2.2.1 Installing the FCmeter HBA

The FCmeter HBA is a PCIe card that you must install in each client system. You should plug the HBA card into one of the workstation's PCIe x16 slots.



### **2.2.2 Installing the FCmeter Client Software**

To install the FCmeter client software:

1. Retrieve the FCmeter installation package on client system
2. Launch the FCmeter client installation package. (Note: You must have Administrative Privileges to install this package)
3. Follow the on-screen instructions to complete the installation. (We strongly recommend that you carefully read the information presented on the Read Me screen)
4. Perform the required system restart at the end of the installation procedure

### **2.2.3 Starting the FCmeter Driver and Management Daemon**

Following successful installation of the FCmeter client software package, the FCmeter driver and its companion management daemon are automatically launched during FCmeter client system startup. The management daemon is required to enable the FCmeter HBA's FC ports. If the management daemon is disabled, the FCmeter HBA's FC ports will be disabled too.

## **2.3 Uninstalling the FCmeter Client**

To uninstall the FCmeter client software:

1. From the Terminal, go to /usr/local/FCmeter directory and issue the command:

```
sudo ./uninstall.sh
```

2. Reboot the system

## **2.4 FCmeter Client CLI**

The FCmeter client software provides a number of CLI (Command Line Interface) programs. From the Terminal, FCmeter CLI dynamically controls the FCmeter HBA. All CLI commands are placed in /usr/local/FCmeter/bin.

### ***FCMConfig – FCmeter Driver Configuration***

FCMConfig (as the name suggests) is for setting user configurable parameters of the FCmeter driver. These parameters are stored in non-volatile memory on the FCmeter HBA, and are preset at the factory to appropriate defaults.

Usage: FCMConfig {all | <port> [-s {8 | 4 | 2}] -f <seconds> | -m {on | off} | -h {on | off} | -d]}

Examples:

- The following command displays the current user-configurable settings for all four ports:

```
./FCMConfig all
```

- The following command displays the current user-configurable settings for the A1 port:  
`./FCMConfig a1`
- The following command limits the speed of the A2 port to a maximum of 4 Gb/s (depending on the speed of the SFP or SFP+):  
`./FCMConfig a2 -s 4`
- The following command resets the configurable parameters of the A1 port to factory defaults (8 Gb/s, point-to-point and 60 second link statistics polling interval):  
`./FCMConfig a1 -i`

### **FCMStatus – FCmeter HBA Status Checking**

FCMStatus is used for checking the current status of the specified HBA port.

Usage: FCMStatus <port> [-s | -p <port index> | -l <port index> <LUN index>]

Examples:

- The following command requests a summary report on the state of the A1 port:  
`./FCMStatus a1`

```

Driver version: 1.2.0 (Jan 18 2012 11:24:01)
Logger is connected
SFP(+) speed is 8 Gb/s
Link is up
Link has come up 1 times since driver was loaded
232 read commands have transferred a total of 4231 blocks
27 write commands have transferred a total of 302 blocks
Link speed is 8 Gb/s
Topology is point-to-point with fabric present
Logged in with 2 target port(s)
  0: 0x010400
  1: 0x010500
4 total LUNs available
Link has been up for 36 seconds
Link statistics and related:
Link failure events      : 0
Loss of sync events     : 0
Loss of signal events   : 0
Protocol error events   : 0
Invalid code word events: 0
Invalid CRC events      : 0
Discarded frame events  : 0
EOFa received events    : 0
Lost read data events   : 0

```
- The following command requests the display of detailed information about the SFP or SFP+ installed in the B2 port:  
`./FCMStatus b2 -s`

```

Identifier      : SFP transceiver
Connector       : LC
Nominal Bit Rate : 8500 Mb/s
Vendor Name     : FINISAR CORP.

```

Part Number : FTLF8528P2BCV-QL  
Revision Level : A  
Serial Number : PG54YEC  
Date of Manufacture: 08/05 2009

- The following command requests the display of detailed information about the first storage port seen by the A1 port:

```
./FCMStatus a1 -p 0
```

```
Port ID: 0x010400  
WWPN: 2100-006022-adadff  
WWNN: 2000-006022-adadff  
LUN indexes: 0 through 1  
Port has been logged in for 11 minutes and 9 seconds  
61 read commands have transferred a total of 1238 blocks  
30 write commands have transferred a total of 633 blocks  
Link statistics:  
Link failure events : 0  
Loss of sync events : 0  
Loss of signal events : 0  
Protocol error events : 0  
Invalid code word events: 0  
Invalid CRC events : 0
```

- The following command requests the display of detailed information about the second LUN behind second storage port seen by the A1 port:

```
./FCMStatus a1 -l 1 1
```

```
Port ID: 0x010500  
WWPN: 2100-006022-09094f  
WWNN: 2000-006022-09094f  
LUN: 0001-000000000000  
LUN has been available for 14 minutes and 30 seconds  
27 read commands have transferred a total of 497 blocks  
45 write commands have transferred a total of 1025 blocks
```

### 3 VMETER CLIENT

Vmeter offers the speed management capability of SAN I/O to your Video workstation. It is optional. With Vmeter Client package installed, this additional SAN I/O monitoring and control feature enables SAN QoS management. Without Vmeter, FCmeter can be fully functioning to access FC SAN just as a typical 8Gb FC HBA.

You should confirm the proper installation of the FCmeter Client package (HBA, driver, and management daemon) first before installing the Vmeter Client package.

#### 3.1 Installation Steps

Below is an outline of the installation steps that you will need to follow.

##### 3.1.1 *Installing Software*

Double click on the Vmeter Client package in Finder on each FCmeter client (Note: You must have Administrative Privileges to install the Vmeter package.)

### **3.1.2 Creating Configuration File**

1. Make a copy of:  
`"/Users/cftech/vmeter/client/vmeter.conf.sample",`  
and rename it:  
`"/Users/cftech/vmeter/client/vmeter.conf".`
2. On each client, fill entries in the clients' section with the following information:  
Hostname: output of `uname -n`  
VID: output of `videntify` of the client system  
port#: port number of the Vmeter client daemon  
enabled: on – Vmeter enabled; off – Vmeter disabled  
min-MBPS: reserved MBPS for the client  
max-MBPS: maximum MPBS allowed for the client system

### **3.1.3 Starting the Vmeter Client Driver**

1. Run the install script in `/Users/cftech/vmeter/client` as follows:  
`cd /Users/cftech/vmeter/client`  
`sudo ./install vmeter.conf`
2. Reboot the system

## **3.2 Uninstalling the Vmeter Client**

1. On the client system:  
`cd /Users/cftech/vmeter/client`  
`sudo ./uninstall`
2. Remove the directory `/Users/cftech/vmeter/client`
3. Reboot the system

## **3.3 Vmeter Client CLI**

Please refer to the Vmeter User Guide.