

FIC-GEF Modules of H3C Series Routers

I. Introduction

FIC-1GEF/FIC-2GEF is the short of 1/2-port 1000Base-SX/1000Base-LX Ethernet optical interface card, where GE is the abbreviation of Gigabit Ethernet. F (Fiber) represents optical interface. FIC-1GEF/FIC-2GEF is primarily used for the communications between a router and LAN.

FIC-1GEF/FIC-2GEF supports the following functions:

- I Provide five kinds of 1000Base-SX/1000Base-LX SFP pluggable optical interface modules, including short haul multimode (850nm) optical interface module, medium haul single mode (1310nm) optical interface module, long haul single mode (1310nm) optical interface module, long haul single mode (1550nm) optical interface module, ultra long haul single mode (1550nm) optical interface module, user can purchase as required.
- I The interface works at 1000Mbps rate.
- I Support full duplex operational mode.
- I

II. Interface Attributes

The following table shows the attributes of FIC-1GEF/FIC-2GEF interface:

Table 8-1 FIC-1GEF/FIC-2GEF interface attributes

Attributes		FIC-1GEF description			FIC-2GEF description	
Interface number		1			2	
Type of connector		SFP/LC				
Interface standard		802.3,802.3u and 802.3ab				
Transmitting optical power	Type	short haul multimode (850nm) optical interface module	Medium haul single mode (1310nm) optical interface module	Long haul (1310nm) optical interface module	Long haul (1550nm) optical interface module	Ultra long haul (1550nm) optical interface module
	Minimum	-9.5dBm	-9dBm	-2dBm	-4dBm	-4dBm
	Maximum	0dBm	-3dBm	5dBm	1dBm	2dBm
Receiving sensitivity		-17dBm	-20dBm	-23dBm	-21dBm	-22dBm
Core wavelength		850nm	1310nm	1310nm	1550nm	1550nm
Type of fiber		62.5/125µm multimode fiber	9/125µm single mode fiber	9/125µm single mode fiber	9/125µm single mode fiber	9/125µm single mode fiber
Maximum transmission distance		0.55km	10km	40km	40km	70km
Operational mode		1000Mbps full duplex				

III. Panel and Interface Indicators

The following shows FIC-1GEF/FIC-2GEF panel:



Figure1 FIC-1GEF panel



Figure2 FIC-2GEF panel

The following provides the implication of indicators on FIC-1GEF/FIC-2GEF panel:

Table 2 Implication of FIC-1GEF/FIC-2GEF indicators

LINK	Extinguished represents the link is not connected; lighting represents that the link is connected.
ACT	Extinguished represents no data has been received/sent; flashing represents some data has been received/sent.

IV. Interface Cable

For FIC-1GEF/FIC-2GEF, user can select the corresponding fibers depending on the type of selected 1000Base-SX/1000 Base-LX SFP pluggable optical interface module. The optical interfaces of these optical modules are LC-type fiber connectors, so user is required to use fibers with LC-type fiber connector.



Figure3 LC type fiber connector appearance

& Note:

As a small fiber connector developed by Lucent Company, LC type fiber connector employs push/pull button installation.

Fibers are optional. User needs to specify the configured SFP module in advance when purchasing interface modules, or the corresponding fiber will not be available.

V. Connection of Interface Fiber

Note:

The following proceedings should be noted when cabling:

- I Do not overbend a fiber, its bending radius should no less than 10cm;
- I Make sure that the Tx side of an interface is connected to the Rx side correctly;
- I Guaranteeing the cleanness of fiber surface.

Warning:

Laser danger! Do not directly observe fiber connectors attached to the laser diode, this may damage eyes.

Step 1: insert SFP module into the corresponding SFP slot.

Step 2: confirm Rx and Tx optical interfaces on the GE interface, and insert one side of a fiber into Rx interface, the other is attached to Tx interface of the peer; insert one side of another fiber into Tx interface, the other is attached to Rx interface of the peer.

Step 3: After powered on, examine the state of LINK indicator of GE interface. Lighting represents that Rx link is connected; extinguished represents that Rx link is not connected, please examine lines.