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# User Instruction Manual

## **IQGBE40 and IQGBE80**

Ethernet Fiber Converter with 4/8 Port Switch



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## 1. About this Manual

This manual describes the IQGBE Ethernet Fiber Converters.

If you have any questions regarding the installation and setup of your product, please refer to the Customer Service contact details (see section 1.1).

### 1.1 Contact Details

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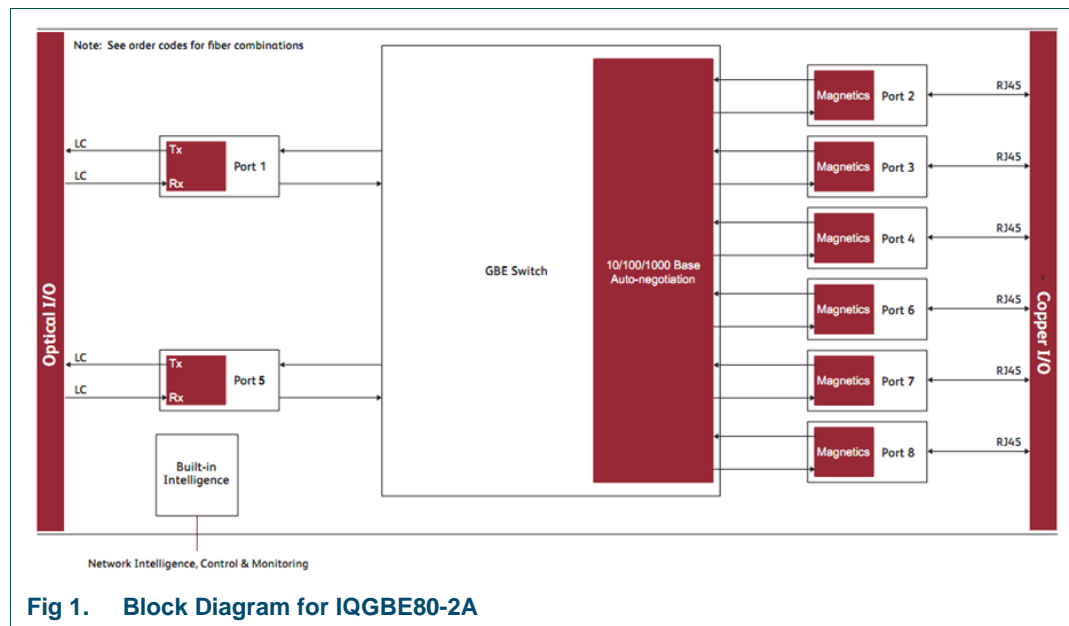
## 2. IQGBE Modules

### 2.1 Module Description

The IQGBE40/80 is a range of Gigabit Fiber Media Converter modules with either a 4 or 8 port Ethernet switch occupying either a single or double slot in an IQ modular frame. The RJ45 copper ports are triple speed auto negotiating enabling connectivity to 10, 100 or 1000Base Ethernet devices using standard CAT5 or better cable assemblies. The fiber interface utilizes an SFP (Small Form factor Pluggable) fiber module receptacle cage compliant with the SFP MSA (Multi Source Agreement). It accepts a single 1000Base SFP Fiber Transceiver with 1310nm singlemode laser transmitter and medium sensitivity receiver.

The IQGBE40/80 may be used for direct links to other fiber enabled Ethernet devices or used as part of a system using WDM or CWDM techniques to transport multiple serial digital data streams over a single optical cable.

### 2.2 Block Diagram



### 2.3 Rear Panel View

Ethernet fiber converter with 4 port switch. 3 copper Ethernet I/O, 1 Optical I/O

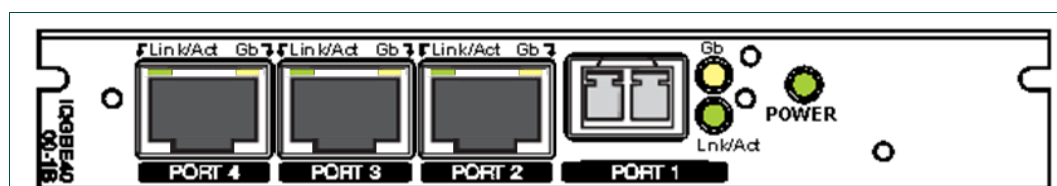


Fig 2. IQGBE4000-1A, IQGBE4000-1B

Ethernet fiber converter with 8 port switch. 6 copper Ethernet I/O, 2 Optical I/O

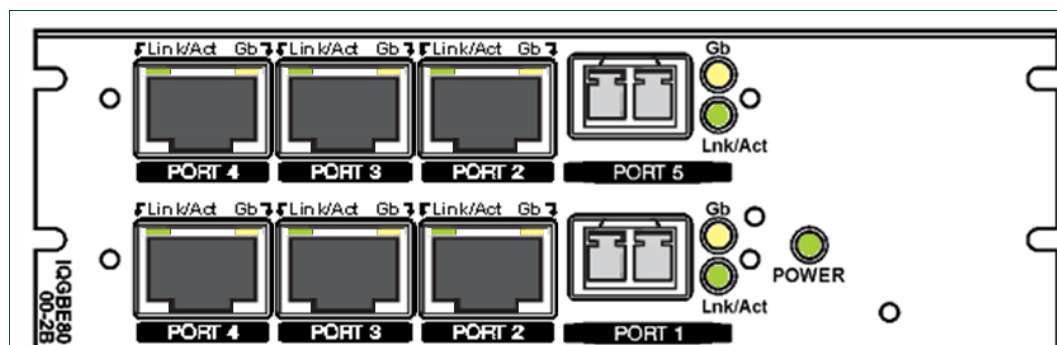


Fig 3. IQGBE8000-2A, IQGBE8000-2B

### 2.4 Order Codes

Versions of the module cards available are:

SFP options	
FGAN FC1-10KGB-13T	1310nm SFP Transceiver 10 km typical on 9/125 μm SMF
FGAN FC1-40KGB-13T	1310nm SFP Transceiver 55 km typical on 9/125 μm SMF
FGAN FC1-GBE-CT5	1000BASE-T Copper (RJ-45) SFP Transceiver
IQGBE4000-1A, IQGBE4000-1B	Ethernet fiber converter with 4 port switch. 3 copper Ethernet I/O, 1 Optical I/O.
IQGBE8000-2A, IQGBE8000-2B	Ethernet fiber converter with 8 port switch. 6 copper Ethernet I/O, 2 Optical I/O.

Table 1. Available Module Card Versions



## 2.5 Feature Summary

- 4 or 8 port Ethernet switch including fiber optic I/O
- Auto negotiation for 10/100/1000 speeds, flow control and half/full duplex modes
- Low and high power 1310 nm interfaces available
- Conforms to IEEE 802.3 wired Ethernet and fibre channel FC-PI-2 Rev. 10.0 standards
- Jumbo frame support (10k Bytes)
- MDI/MDIX auto-crossover: automatically determines whether or not cross over between pairs is needed on copper ports
- Provides typical fiber link distances of 10 to 55 km
- Easily integrates into a CWDM system by using the 'express' channel of the IQCWM10
- SFP status monitoring
- Front and rear of card power and port status LEDs
- Rollcall control and monitoring compatible

## 2.6 Technical Profile

### 2.6.1 Inputs and Outputs

Inputs and Outputs	
Electrical Ethernet	3 (4 with copper SFP) IQGBE40 6 (up to 8 with copper SFPs) IQGBE80
Connector/format	RJ-45, CAT 5, 6, 7 Electrical Interfaces LC singlemode Optical Interfaces
Conforms to	IEEE 802.3 Electrical Interfaces FC-PI-2 Rev. 10.0 Optical Interfaces
Cable length	Up to 100m for 1000Base-T (Electrical Interfaces) Up to 55 km 1000Base-X, depending on SFP and cable (Optical Interfaces)

**Table 2. Inputs and Outputs**

### 2.6.2 Controls

Controls	
<b>Indicators</b>	
Power	OK (Green)
CPU	OK (Green flashing)
Per Channel:	
Link	Link Up (Green)
Rate	10Mbps (Yellow), 100Mbps (Green), 1000Mbps (Blue)
<b>RollCall Functions</b>	
Port Status	Link, Speed, and Connector type
User memories	Name, save and recall 16 user memories
Memory Naming	User configurable naming of memories 1 - 16
Information Window	Port Status
Factory Defaults	Resets all of the unit's settings to their factory defaults.
<b>Logging:</b>	
Port Logging	Name Link Status Speed
SFP Logging	Type Status Connector Vendor Vendor Part Number Serial Number Rx Power State Rx Power Tx Power State Tx Power Wavelength Laser Bias Laser Bias State

**Table 3. Controls**

<b>Controls</b>	
Misc Logging	Serial Number OS Version Build Number Hardware Version Uptime Rear ID Rear Status Slot Width Slot Start Power Usage
RollTrack controls	On/Off, Index, Source, Address, Command, Status, Sending
RollTrack outputs	Unused Link Down Link Up Speed None Speed 10Mbps Speed 100Mbps Speed 1Gbps SFP 1 Not Fitted SFP 2 Not Fitted (IQGBE80 only) SFP 1 Fitted SFP 2 Fitted (IQGBE80 only) SFP 1 RX Pwr FAIL SFP 2 RX Pwr FAIL (IQGBE80 only) SFP 1 RX Pwr OK SFP 2 RX Pwr OK (IQGBE80 only) SFP 1 TX Pwr FAIL SFP 2 TX Pwr FAIL (IQGBE80 only) SFP 1 TX Pwr OK SFP 2 TX Pwr OK (IQGBE80 only) SFP 1 TX Bias FAIL SFP 2 TX Bias Fail (IQGBE80 only) SFP 1 TX Bias OK SFP 2 TX Bias OK (IQGBE80 only)

**Table 3. Controls**

### 2.6.3 Specifications

#### Specifications (Depends on SFP fitted)

##### 1310 nm Standard Haul Transceiver (FGAN FC1-10KGB-13T)

###### Tx

Wavelength	1310 nm
Spectral width	(FWHM)3 nm
Output power	-9.5 dBm (min), -3 dBm max
Extinction ratio	9:1 (min)
Transmission distance	10 km* (at 0.55db/km loss, dispersion limited per FC-PI-2 Rev.10)

\*actual transmission distances depend on type of fiber, data rate and receiver sensitivity as well as other system components.

###### Rx

Average Rx Sensitivity	-19 dBm (max)
Optical Center Wavelength	1265nm - 1600nm
LOS De Assert	-19 dBm (max)
LOS Assert	-30 dBm (min)
LOS Hysteresis	0.5 dB (min)

##### 1310 nm Long Haul Transceiver (FGAN FC1-40KGB-13T)

###### Tx

Wavelength	1310 nm
Spectral width	(FWHM)1 nm
Output power	0 dBm (min), +5 dBm max
Extinction ratio	9:1 (min)
Transmission distance	up to 55 km* (at 0.4db/km loss, dispersion limited per FC-PI Rev.13)

\*actual transmission distances depend on type of fiber, data rate and receiver sensitivity as well as other system components.

###### Rx

Average Rx Sensitivity	-22 dBm (max)
Optical Center Wavelength	1270nm - 1600nm
LOS De Assert	-19 dBm (max)
LOS Assert	-30 dBm (min)
LOS Hysteresis	0.5 dB (min)

##### Copper Interface Transceiver (FGAN FC1-GBE-CT5)

Standard IEEE 802.3 interface

Only operates at 1000Base-T

**Table 4. Specifications**

## 2.7 Connections

### 2.7.1 Copper Interfaces

#### IQGBE4000-1A/1B

10/100/1000Base-T connections to the unit are made via the RJ-45 connectors.

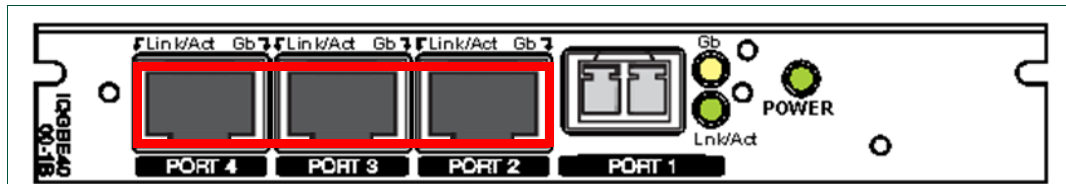


Fig 4. IQGBE4000-1A, IQGBE4000-1B Copper Connections

#### IQGBE8000-2A/2B

SDI inputs to the unit are made via BNC/75ohm panel jack connectors.

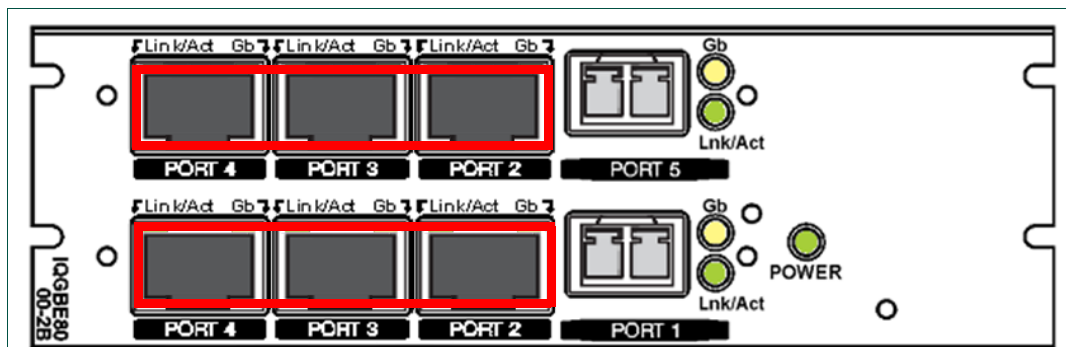


Fig 5. IQGBE8000-2A, IQGBE8000-2B Copper Connections

### 2.7.2 Fiber Connections

#### IQGBE4000-1A/1B

The rear has provision for a single SFP module.

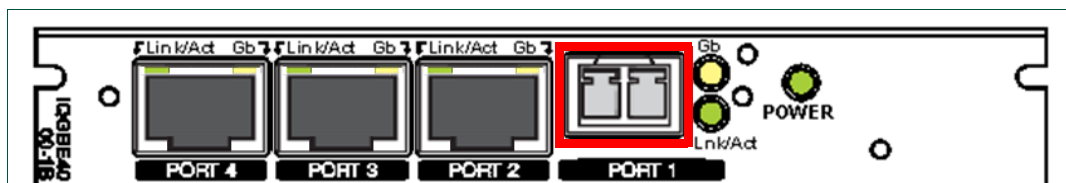


Fig 6. IQGBE4000-1A, IQGBE4000-1B Fiber Connections

#### IQGBE8000-2A/2B

The rear has provision for up to two SFP modules.

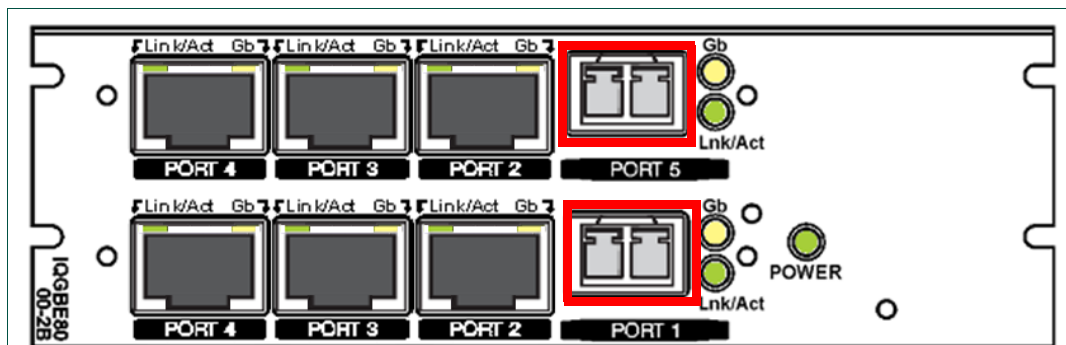
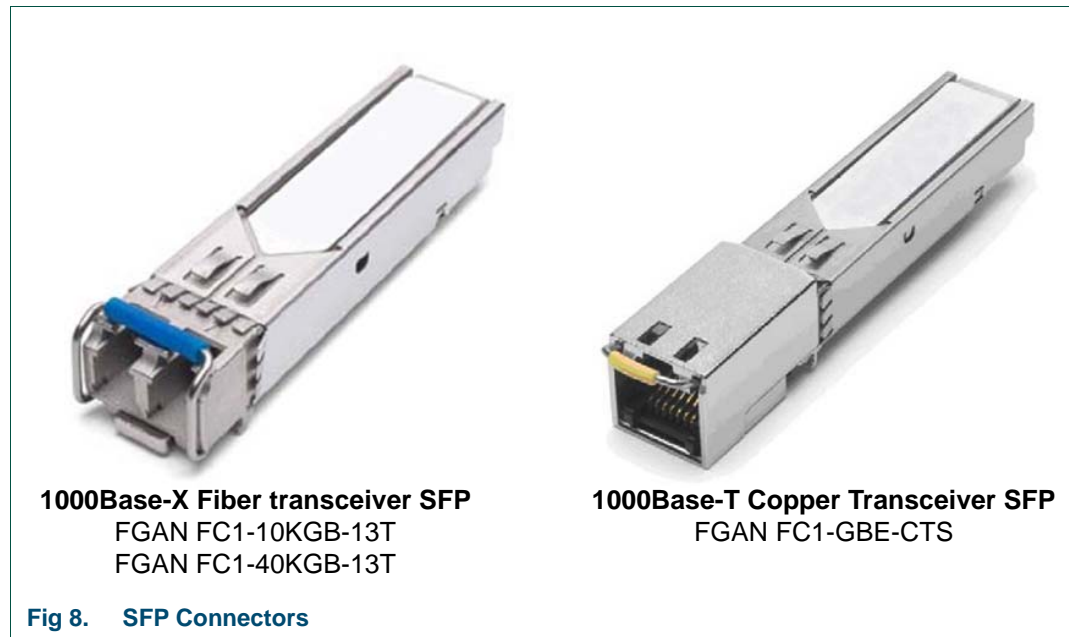


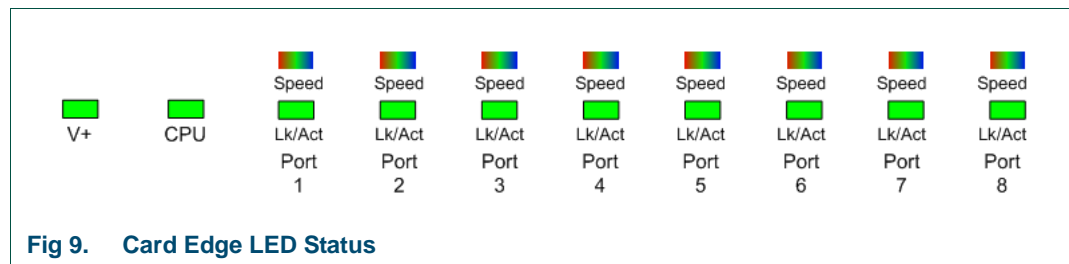
Fig 7. IQGBE8000-2A, IQGBE8000-2B Fiber Connections

## 2.8 SFP Modules

SFP modules can provide either fiber Ethernet connectivity via LC connectors or Copper Ethernet connectivity via RJ-45.



## 2.9 Card Edge Status



See Fig 9. for LED location and Table 5. for LED operation.

LED	Description
V+	When illuminated this LED indicates that the positive power supplies are present.
CPU	This led will flash to indicate that the CPU is running.
<b>Input Channel Status (Port 1 to Port 8)</b>	
<b>Link/Act:</b>	
Off	Link is DOWN
Green	Link is UP
<b>Speed:</b>	
Off	Port is not applicable to this product/SFP not fitted.
Yellow	10Mbps (e.g. 10Base-T)
Green	100Mbps (e.g. 100Base-T)
Blue	1000Mbps (e.g. 1000Base-T)
White	Link is DOWN

**Table 5. LED Operation**

## 2.10 Rear LED Status

Port & power status is also provided at the rear to aid confidence indication when installing network links.



Fig 10. Rear Panel LED Status

See Fig 10. for LED location and Table 6. for LED operation.

LED	Description
<b>Copper &amp; Fiber interfaces:</b>	
Link/Act	Link status is indicated by the green led being on. Activity is represented by the LED flashing
Gb Rate	When the link is operating at 1000Base-T/X the yellow LED is lit.
Power	Power is OK when the green POWER LED is lit.

Table 6. Rear Panel LED Status

## 2.11 Controlling the IQGBEXX from the RollCall Control Panel

### 2.11.1 Port Summary

Information about the status of the unit ports is displayed in the Port Summary section on each RollCall Control Panel screen.

The screen shows the link status for each of the unit's ports - after headings 1-4 (IQGBE40) or 1-8 (IQGBE80) as shown in Fig 11.-

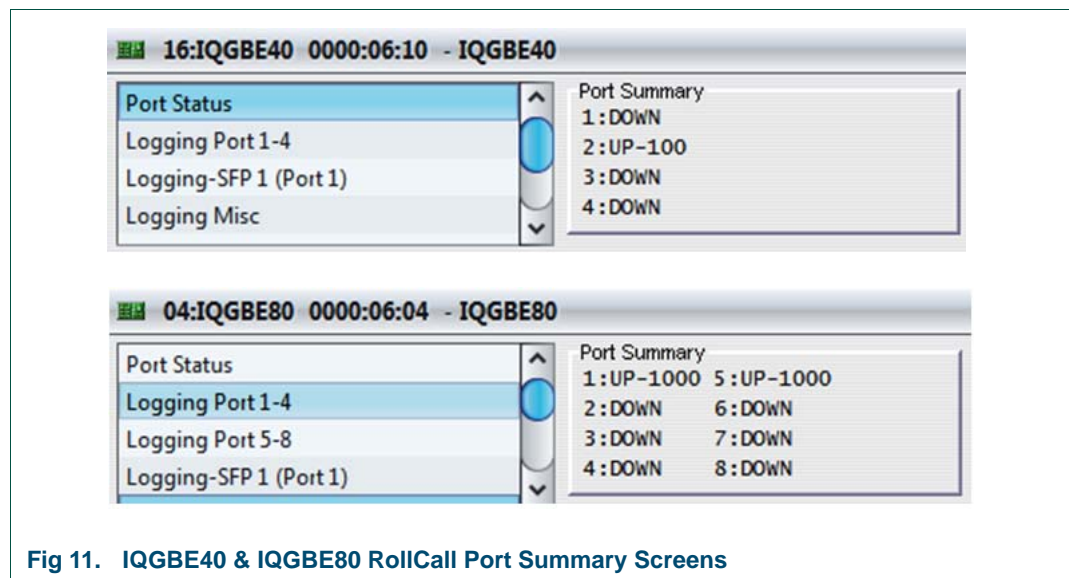


Fig 11. IQGBE40 & IQGBE80 RollCall Port Summary Screens

For each port, the link status displayed will be either:-

- DOWN - link is down
- UP-10 - link is up, speed is 10Mbps
- UP-100 - link is up, speed is 100Mbps
- UP-1000 - link is up, speed is 100Mbps

**Note:** when an SFP is not fitted, that port's status will be shown in this screen as DOWN.

### 2.12 Port Status Screen

This screen shows the details for each port's link Status. This includes:-

- Port Name - this defaults to **PORT X** where "X" is the port number, alternatively, it may be set as described in Setup Screen
- Link - this is the link status for the port, and will be displayed as either **Up:XXXX** or **Down**.

"XXXX" indicates the connection type:

- For SFP, this can be: 1000Base-SX, 1000Base-LX, 1000Base-CX or 1000Base-T"

- For non SFP ports, this can be 10Base-T, 100Base-T or 1000Base-T

- Speed - If the link is up, this will be display according to the negotiated speed as 10Mbps, 100Mbps, 1000Mbps or if the link is down: "-"
- Connector type - This will be displayed as Copper or Fiber if an SFP is fitted or "-" if not. The RX power is appended to the string in the case of Fiber.

This screen is present for IQGBE40 and IQGBE80.

For IQGBE40, 4 ports are shown in Fig 12.

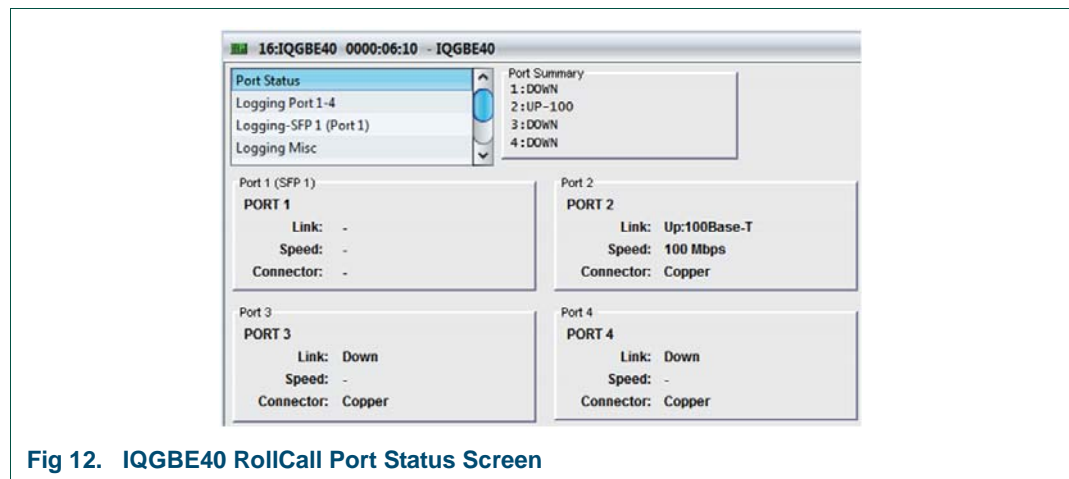


Fig 12. IQGBE40 RollCall Port Status Screen

**Note:** In Fig 12. SFP1 is not present, so that the status for Port 1 fields are shown as "-".



For IQGBE80, 8 ports are shown in Fig 13.:

In this example, Fiber SFPs are present for Ports 1 and 5:

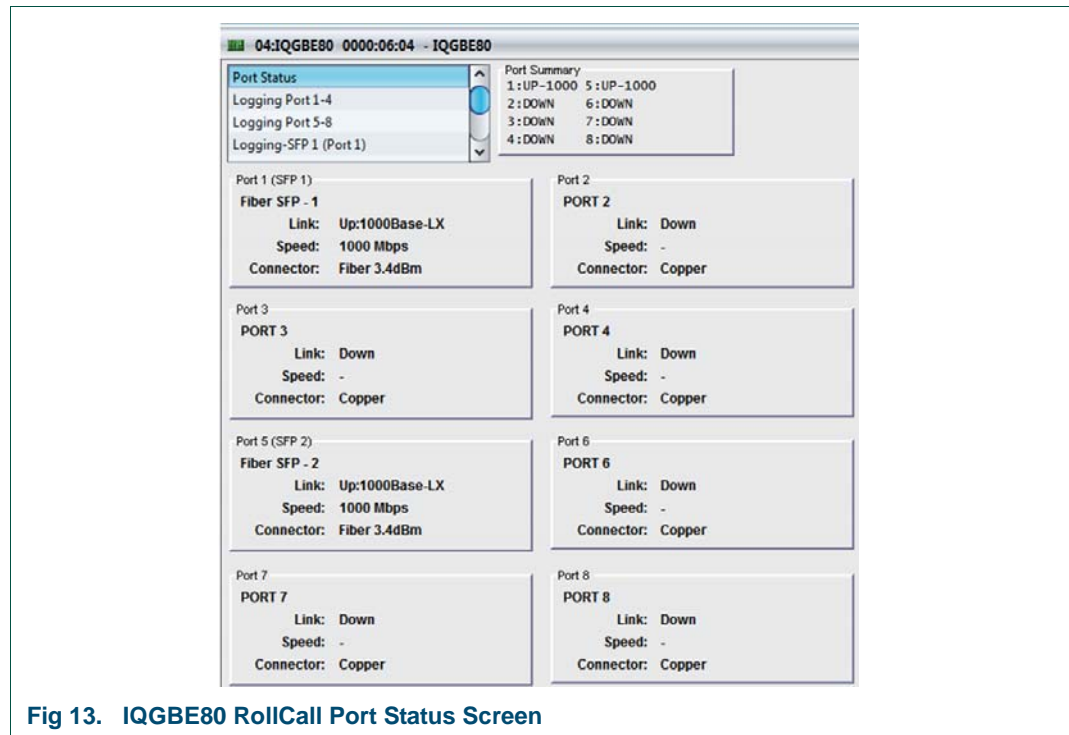


Fig 13. IQGBE80 RollCall Port Status Screen

### 2.13 Set Board Info Screen

This screen allows the user to set up the Serial Number of the unit.

A new board will not have a value assigned, and the screen will appear as shown in Fig 14.

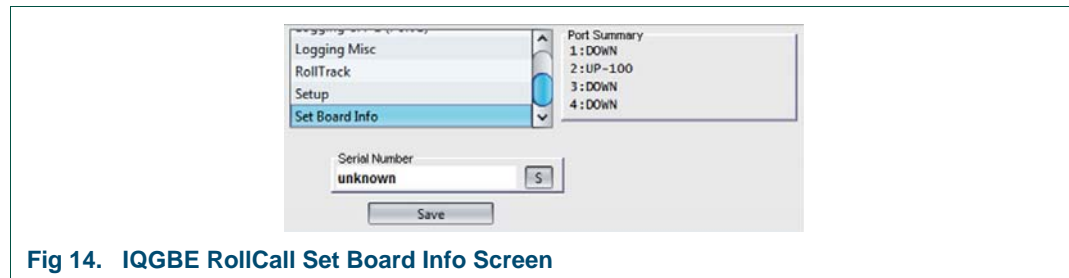


Fig 14. IQGBE RollCall Set Board Info Screen

An example of Serial Number setting is shown below, where the example number S12345678 is typed in. The user should then click the Send button (S), and then click on **Save** button.

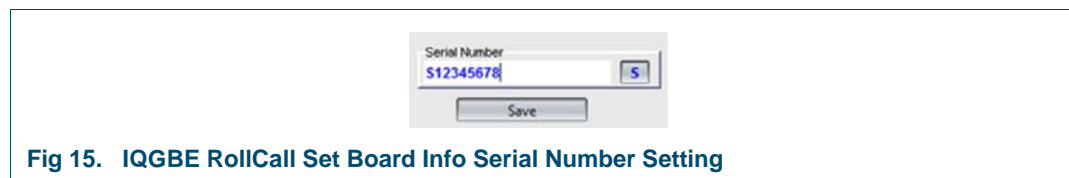


Fig 15. IQGBE RollCall Set Board Info Serial Number Setting

Once this is done successfully the Set Board Info screen will become invisible, and the serial number will be set, as shown in the Setup Screen (Fig 16.):

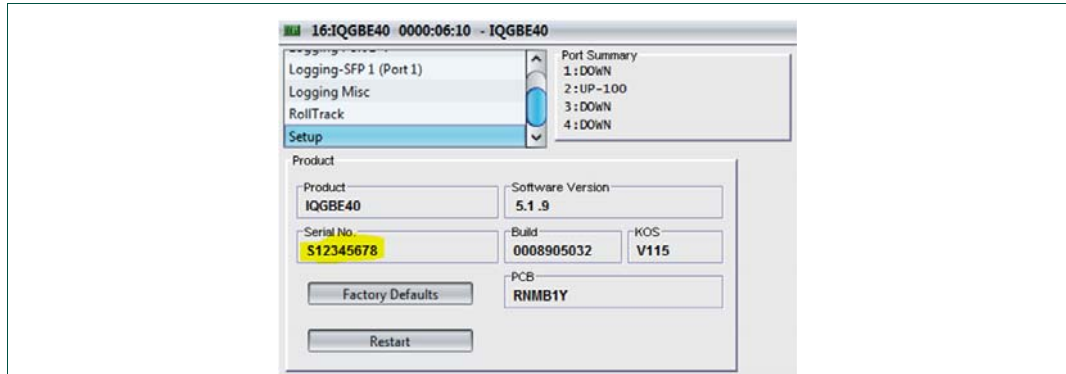


Fig 16. IQGBE RollCall Setup Screen

### 2.14 Setup Screen

The Setup screen displays basic information about the unit. Use the functions on the screen to restart the unit, return all settings to their factory defaults, and to change the names of the ports.

**Note:**

- Until the serial number is set it will appear blank as shown in Fig 17. For details see “Set Board Info Screen” on page 17.

For IQGBE40, Port1-4 Names may be edited.

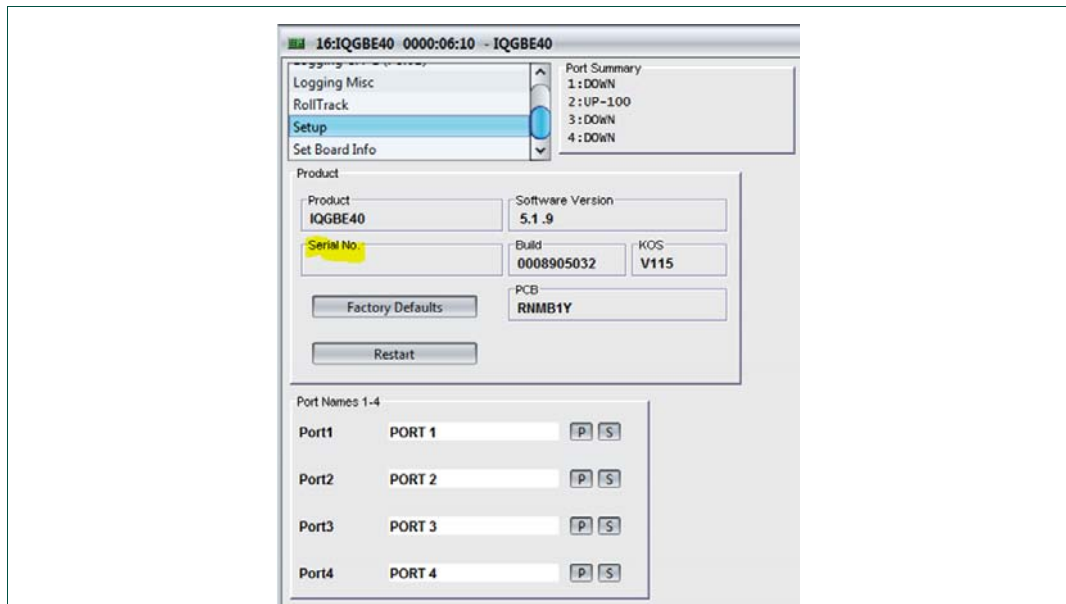
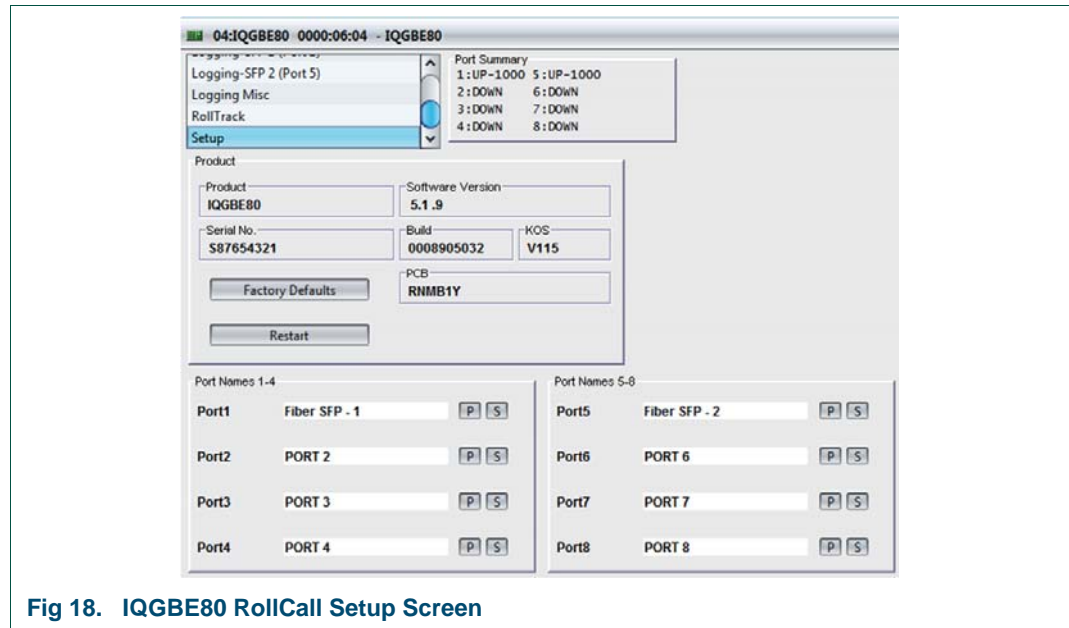


Fig 17. IQGBE40 RollCall Setup Screen

For IQGBE80, Port1-8 Names may be edited:



**Fig 18. IQGBE80 RollCall Setup Screen**

Table 7. describes the Setup screen for the IQGBE40 (Fig 17.) and the IQGBE80 (Fig 18.)

Screen Section	Description
Product:	The top left part of the screen shows the various versions, options, identifiers, etc., associated with the product's hardware, firmware and software and also provides a means of setting controls to defaults or restarting the unit.
Serial No.:	Displays the unit serial number. See Set Board Info Screen for details on setting this.
Restart:	Use this to restart the unit, simulating a power-up/power-down cycle.
Factory Defaults:	Use this to reset all of the unit's settings to their factory defaults.
<b>Port Name 1-8 (IQGBE80) &amp; 1-4 (IQGBE40):</b>	
The bottom half of the screen has entry fields for 8/4 Port Names. These are the Ports displayed in logging.	
To change a name, type the name in the text field and click on the <b>S</b> button. To return the name to its factory default, click on the <b>P</b> button.	

**Table 7. Setup Screen Information**

## 2.15 Logging

Logged parameters are made available to logging devices connected to the RollCall Network. They are also displayed on a number of RollCall Screens where they can selectively be switched off to prevent them being logged externally.

### Logging Port 1 - 4

This screen shows logging for Ports 1-4. This screen is present for IQGBE40 and IQGBE80.

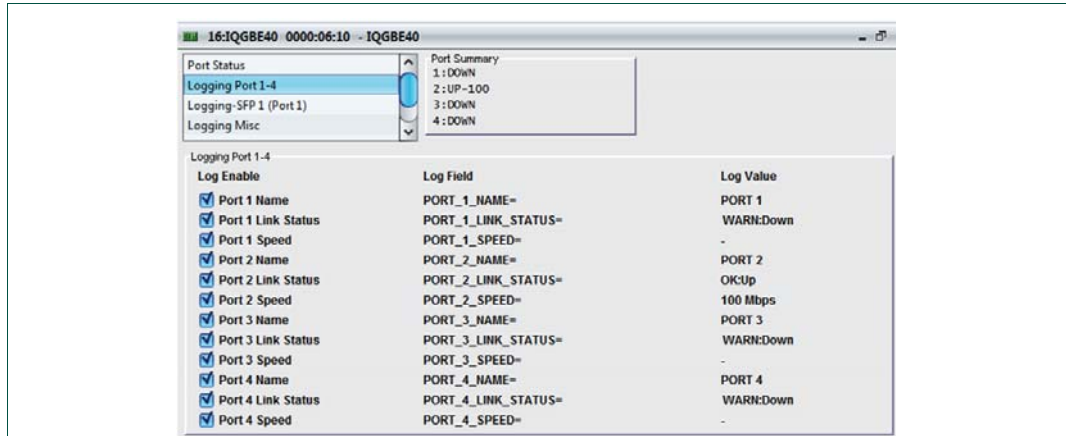


Fig 19. IQGBE RollCall Logging Screen Ports 1 to 4

### Logging Port 5 - 8

This screen shows logging for Ports 5-8. This screen is present for IQGBE80 only.

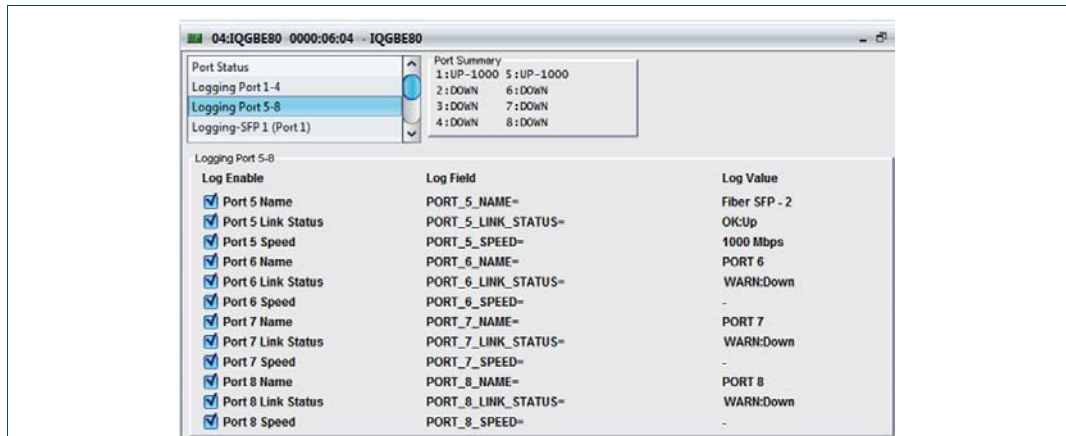


Fig 20. IQGBE80 RollCall Logging Screen Ports 5 to 8

### 2.15.1 Logging SFP1 (Port 1)

Fig 21. shows logging for SFP1, which is on Port 1. This screen is present for IQGBE40 and IQGBE80. In this example, a Fiber SFP is inserted, so that RX and TX parameters are also logged.

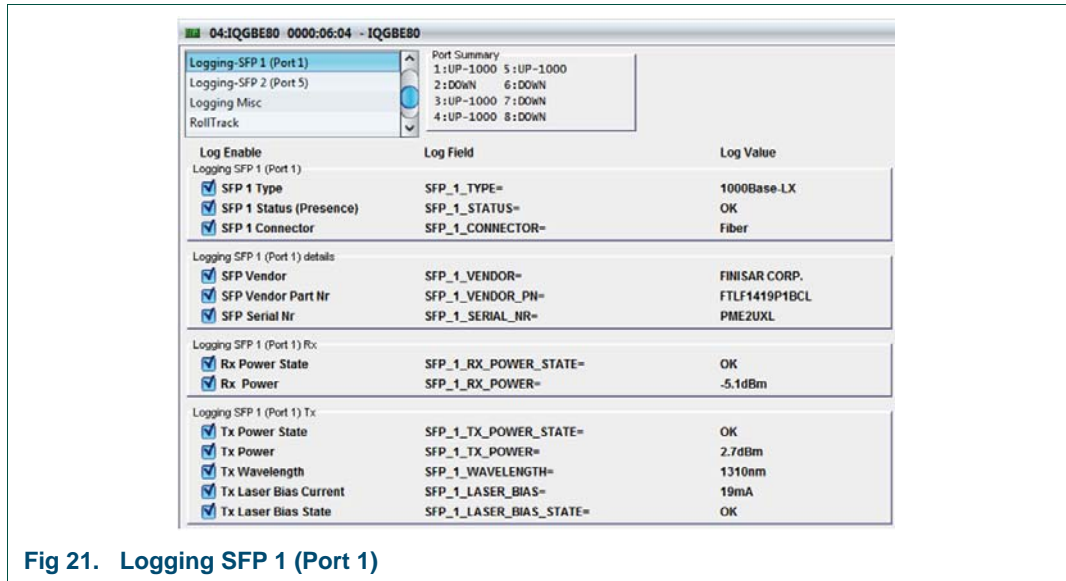


Fig 21. Logging SFP 1 (Port 1)

In Fig 22. a Copper SFP is inserted, so that RX and TX parameters are hidden from this screen, and are not logged:

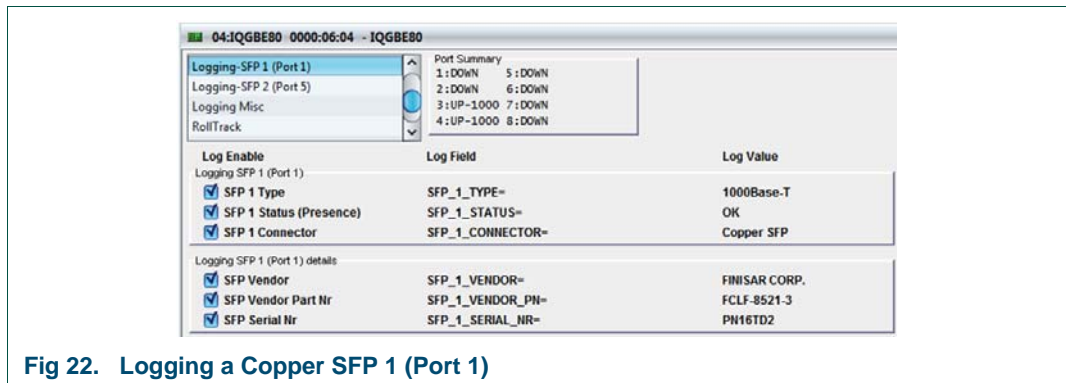


Fig 22. Logging a Copper SFP 1 (Port 1)

### 2.15.2 Logging SFP2 (Port 5)

Fig 23. shows logging for a Fiber SFP inserted as SFP2, which is on Port 5. This screen is present for IQGBE80 only.

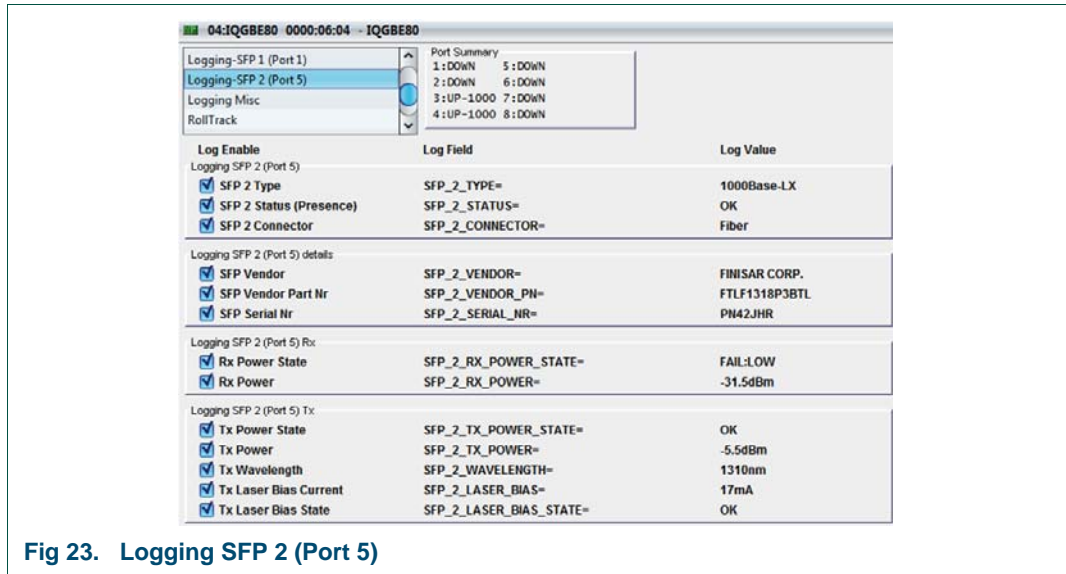


Fig 23. Logging SFP 2 (Port 5)

### 2.15.3 Logging Misc

Fig 24. displays various general logging fields for the board, this example shows IQGBE40:

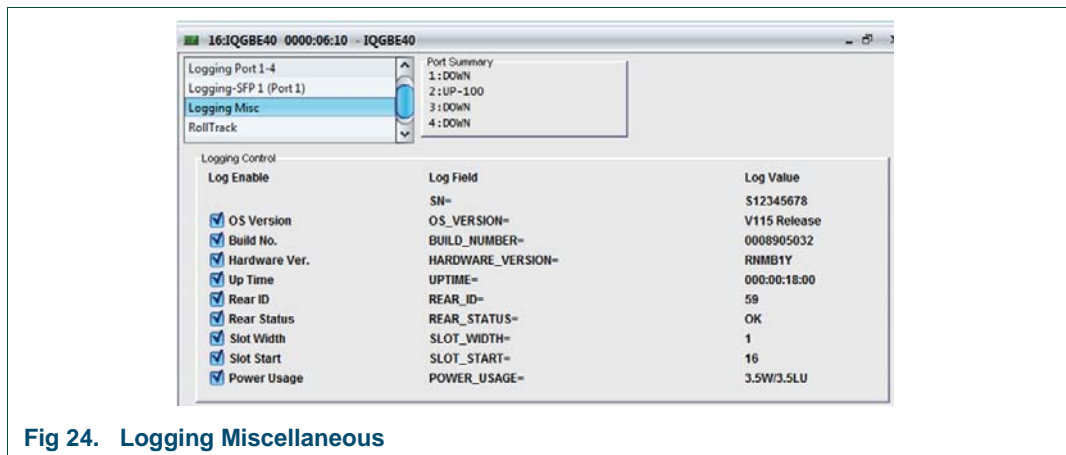


Fig 24. Logging Miscellaneous

Each logging screen comprises three columns:

- Log Enable: Select the check boxes that correspond to the parameters for which log information should be collected.
- Log Field: Displays the name of the logging field.
- Log Value: Displays the current log value.

## 2.16 RollCall Log Fields

**Note:**

- Table 8. shows the conditions for the following logging fields to be visible or hidden.
- The individual log enable box must also be ticked to enable logging for that field.

When SFP\_x is not fitted:-

SFP Logging Field	Condition		
	SFP_x is not fitted	SFP_x is fitted	
SFP_x_TYPE	Visible		
SFP_x_STATUS			
SFP_x_CONNECTOR			
SFP_x_VENDOR	Hidden	Visible	
SFP_x_VENDOR_PN			
SFP_x_SERIAL_NR		SFP_x is Fiber	SFP_x is Copper
SFP_x_RX_POWER_STATE		Visible	Hidden
SFP_x_RX_POWER			
SFP_x_TX_POWER_STATE			
SFP_x_TX_POWER			
SFP_x_WAVELENGTH			
SFP_x_LASER_BIAS			
SFP_x_LASER_BIAS_STATE			

**Table 8. Visible/Hidden Fields When SFP\_x Not Fitted**

Log Field	Log Description	Log Value (example)
SN=	<Serial number>	S13400781
OS_VERSION=	<Operating system version>	V115 Release
BUILD_NUMBER=	<Software build number>	0001500965
HARDWARE_VERSION=	<Hardware version number>	RNMB1Y
REAR_ID=	<Rear panel type>	19
REAR_STATUS=	<Validity of rear panel type>	OK WARN:Mismatch
SLOT_WIDTH=	<Width of rear panel>	1
SLOT_START=	<Module slot number>	12
UPTIME=	<Time since last restart in days:hrs:mins:sec>	001:23:35:00
POWER_USAGE=	<Power usage in Watts/Load Units>	5.8W/5.8LU
PORT_1_NAME=	<Fixed input identifier>	PORT 1 (default)
to	to	to
PORT_8_NAME=	<Fixed input identifier>	PORT 8 (default)
PORT_1_LINK_STATUS=	<Port 1 link status>	OK: Up WARN: Down
to	to	
PORT_8_LINK_STATUS=	<Port 8 link status>	

**Table 9. Log Table**

Log Field	Log Description	Log Value (example)
PORT_1_SPEED= to PORT_8_SPEED=	<Port link speed> to <Port 8 link speed>	- (link down) 10 Mbps 100 Mbps 1000 Mbps
SFP_1_STATUS= to SFP_2_STATUS=	<SFP1 fit status for Port 1> to <SFP2 fit status for Port 5>	None OK
SFP_1_TYPE= to SFP_2_TYPE=	<SFP 1 type> to <SFP 2 type>	WARN:Spare SFP skt OK:SFP Fitted (other) OK:1000Base-SX OK:1000Base-LX OK:1000Base-CX OK:1000Base-T
SFP_1_CONNECTOR= to SFP_2_CONNECTOR=	<SFP 1 connector> to <SFP 2 connector>	UnspecifiedOther Not Used Copper SFP Fiber
SFP_1_LASER_BIAS_STATE= to SFP_2_LASER_BIAS_STATE=	<SFP 1 laser bias current alarm/warning state> to <SFP 2 laser bias current alarm/warning state>	OK WARN:LOW FAIL:LOW WARN:HI FAIL:HI OK:OFF
SFP_1_LASER_BIAS to SFP_2_LASER_BIAS	<SFP 1 laser bias current> to <SFP 2 laser bias current>	22mA
SFP_1_TX_POWER_STATE to SFP_2_TX_POWER_STATE	<SFP 1 laser power alarm/warning state> to <SFP 2 laser power alarm/warning state>	OK WARN:LOW FAIL:LOW WARN:HI FAIL:HI OK:OFF
SFP_1_TX_POWER to SFP_2_TX_POWER	<Tx SFP 1 laser power> to <Tx SFP 2 laser power>	-2.4dBm
SFP_1_WAVELENGTH to SFP_2_WAVELENGTH	<SFP 1 wavelength> to <SFP 2 wavelength>	1310nm
SFP_1_RX_POWER_STATE to SFP_2_RX_POWER_STATE	<Rx SFP 1 power alarm/warning state> to <Rx SFP 4 power alarm/warning state>	OK WARN:LOW FAIL:LOW WARN:HI FAIL:HI

Table 9. Log Table



Log Field	Log Description	Log Value (example)
SFP_1_RX_POWER	<Rx SFP 1 power>	-4.1dBm
to	to	
SFP_2_RX_POWER	<Rx SFP 2 power>	

Table 9. Log Table

### 2.17 System-RollTrack Screen

The RollTrack settings allow information to be sent, by means of the RollCall network, to other compatible units on the same network.

Use the settings on the RollTrack screen to:

- Enable or disable the RollTrack functions.
- Configure up to 16 RollTrack outputs.
- Specify the conditions that trigger RollTrack data transmission.
- Set RollTrack destinations.
- Specify the RollTrack commands to be sent.

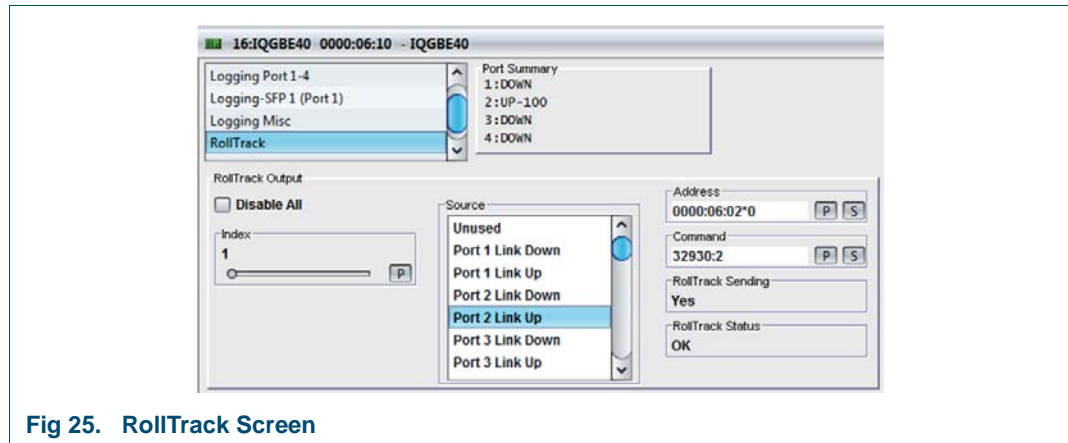


Fig 25. RollTrack Screen

### 2.17.1 RollTrack Sources

The RollTrack Source specifies the source of the information that triggers the transmission of data.

**Note:**

- These are context sensitive, so that certain sources will only appear dependant on fitting of an SFP, and whether the SFP is fiber or copper type.

RollTrack Source Name	Availability	Trigger
Port 1 Link Down	Yes	Port 1 Link status = down
Port 1 Link Up		Port 1 Link status = up
to		to
Port 4 Link Down		Port 4 Link status = down
Port 4 Link Up		Port 4 Link status = up
Port 5 Link Down	IQGBE80 Only	Port 5 Link status = down
Port 5 Link Up		Port 5 Link status = up
to		to
Port 8 Link Down		Port 8 Link status = down
Port 8 Link Up		Port 8 Link status = up
Port 1 Speed NONE	Yes	Port 1 Link Speed = none (link down)
Port 1 Speed 10Mbps		Port 1 Link Speed = 10Mbps
Port 1 Speed 100Mbps		Port 1 Link Speed = 100Mbps
Port 1 Speed 1Gbps		Port 1 Link Speed = 1Gbps
to		to
Port 4 Speed NONE		Port 4 Link Speed = none (link down)
Port 4 Speed 10Mbps		Port 4 Link Speed = 10Mbps
Port 4 Speed 100Mbps		Port 4 Link Speed = 100Mbps
Port 4 Speed 1Gbps	Port 4 Link Speed = 1Gbps	
Port 5 Speed NONE	IQGBE80 Only	Port 5 Link Speed = none (link down)
Port 5 Speed 10Mbps		Port 5 Link Speed = 10Mbps
Port 5 Speed 100Mbps		Port 5 Link Speed = 100Mbps
Port 5 Speed 1Gbps		Port 5 Link Speed = 1Gbps
to		to
Port 8 Speed NONE		Port 8 Link Speed = none (link down)
Port 8 Speed 10Mbps		Port 8 Link Speed = 10Mbps
Port 8 Speed 100Mbps		Port 8 Link Speed = 100Mbps
Port 8 Speed 1Gbps	Port 8 Link Speed = 1Gbps	
SFP 1 Not Fitted	Yes	SFP is NOT fitted in Slot1
SFP 1 Fitted		SFP is fitted in Slot1
SFP 1 RX Pwr FAIL	Yes if Fiber SFP fitted in slot 1	SFP1 RX power failure
SFP 1 RX Pwr OK		SFP1 RX power ok
SFP 1 TX Pwr FAIL		SFP1 TX power failure
SFP 1 TX Pwr OK		SFP1 TX power ok
SFP 1 TX Bias FAIL		SFP1 TX bias failure
SFP 1 TX Bias OK		SFP1 TX bias OK

**Table 10. RollTrack Sources**

RollTrack Source Name	Availability		Trigger
SFP 2 Not Fitted	IQGBE80 Only	Yes	SFP is NOT fitted in Slot2
SFP 2 Fitted			SFP is fitted in Slot2
SFP 2 RX Pwr FAIL		Yes if Fiber SFP fitted in slot 2	SFP2 RX power failure
SFP 2 RX Pwr OK			SFP2 RX power ok
SFP 2 TX Pwr FAIL			SFP2 TX power failure
SFP 2 TX Pwr OK			SFP2 TX power ok
SFP 2 TX Bias FAIL			SFP2 TX bias failure
SFP 2 TX Bias OK			SFP2 TX bias OK

**Table 10. RollTrack Sources**

### 2.17.2 RollTrack Addresses

The full RollTrack Address comprises four sets of numbers.

For example, 0000:10:01\*99.

- The first set, 0000 in the example, is the network segment code number.
- The second set, 10 in the example, identifies the (enclosure/mainframe) unit.
- The third set, 01 in the example, identifies the slot number in the unit.
- The fourth set, 99 in the example, is a user-configured number that uniquely identifies the destination unit in a multi-unit system. This ensures that only the correct unit responds to commands. If left at 00, an incorrectly fitted unit may respond inappropriately.

### 2.17.3 RollTrack Commands

Each RollTrack command comprises two sets of numbers, for example, 33039:3. The first set, 33039 in the example, is the RollTrack command number, which identifies the command. The second set, 3 in the example, is the value that is sent with the command.

### 2.17.4 Using RollTracks

To enable or disable RollTrack functions:

- To disable RollTrack functions, select the **Disable All** check box.
- To enable the RollTrack functions, clear the **Disable All** check box.

### 2.17.5 To configure a RollTrack action:

1. Select the **Index** number. This identifies the RollTrack action being configured. Up to 32 RollTrack actions can be created.
2. From the **Source** list, select the source of the information that will trigger RollTrack transmission.
3. Enter the RollTrack **Address** and click the **S** button. To return the address to its default value, click the preset **P** button.
4. Enter the RollTrack **Command** and click the Set **S** button. To return the value to its default, click the Preset **P** button.

### 2.17.6 Viewing RollTrack Information

**RollTrack Sending** and **RollTrack Status** display information about the status of RollTracks.

**RollTrack Sending** displays the information when the unit is actively sending a RollTrack command:

- **No:** The command is not being sent.
- **Yes:** The command is being sent.

**RollTrack Status** displays the status of the currently selected RollTrack Index:

- **OK:** RollTrack message sent and received OK.
- **Unknown:** RollTrack message has been sent but has not yet completed.
- **Timeout:** RollTrack message sent, but acknowledgement not received. This could be because the destination unit is not at the specified location.
- **Bad:** RollTrack message has not been sent correctly, acknowledged at the destination unit. This could be because the destination unit is not of the type specified.
- **Disabled:** RollTrack sending is disabled.