GIGAswitch/FDDI System

Release Notes (Version 2.2)

GIGAswitch Firmware Baselevels:

- Switch Control Processor (SCP) OP 2.2, SCP BB 2.0, SCP DL 1.0
- Two-port FDDI GIGAswitch Line Card (FGL-2) 2.2
- Four-port FDDI GIGAswitch Line Card (FGL-4) 2.0
- Two-port ATM GIGAswitch Line Card (AGL-2) 2.0
- Clock card (CLK) 2.1
- Power System Controller (PSC) 2.0
- Management Information Base (MIB) 1.3

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Preface

This document describes problems, corrections, restrictions, and documentation changes that pertain to the GIGAswitch system.

Intended Audience

The *GIGAswitch/FDDI System Release Notes* are intended for customers and Digital Service personnel. Read the release notes before you install, service, or use the GIGAswitch/FDDI System.

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GIGAswitch/FDDI Firmware 2.2

New Code Image for V2.2

This release provides the following **new** firmware:

- FGL-2 version 2.2

  fgl_op_22.rsx

- FGL-4 version 2.0

  fgl4_op_200.rsx

- AGL-2 version 2.0

  agl_op_200.rsx

- SCP_OP version 2.0

  scp_op_220.mop
  scp_op_220.sys
  scp_op_220.tftp

- GIGAswitch MIB version 1.3

  mib_gs_130.txt
  mib_gs_130_and_elan_270.txt

- Release Notes

  release_notes_rev220.txt
  mib_gs_130.notes

New Features in V2.2

This section describes the changes and new features in V2.2 firmware.

Documentation The GIGAswitch/FDDI documentation has been rewritten to include all features available in version 2.2.

New FGL PMD LEDs The LEDs on the FDDI PMDs now conform to other Digital products. The new interpretation of these LEDs is shown in Table 1–1:

Table 1–1 Meaning of PMD LEDs

State	PHY Status LED (Left)	Port Type LED (Right)
Off	Ready to connect	M-Type
Green Steady	Connection accepted	S-Type
Green Flashing	Broken or disabled	A/B Type
Amber Steady	Link confidence test failure	PMD loop test failed
Amber Flashing	Topology reject	–
Alternate Green/Amber	Dual homing standby	–

SAS M-Ports SAS ports can now be M-ports. In the previous release M-port capability (dual homing) was restricted to ports configured as DAS ports. That restriction has been removed. In particular, ports on both the FGL-2 and FGL-4 linecards may be configured as M-ports.

IP addresses There is a new OBM menu option which enables one to set (or delete) a single IP address on all GIGAswitch/FDDI ports simultaneously. Previously it was necessary to set or delete the IP address on each port separately.

Linecard Failure Trap A new trap has been added, which triggers when a linecard fails for any reason. Details are in the latest version of the GIGAswitch MIB.

Number of Filters The number of SA and DA filters that may be set has been increased to 1024 of each type. The number of allowed SAP/SNAP filters has been increased to 50.

Delayed Datalink Enable Datalinks are not enabled until bridge initialization is complete. This prevents unusable M-ports from putting a usable M-port into standby state.

Manual Datalink Enable

A new OBM option is available to selectively disable datalinks on linecard reboot. This is useful for preventing immediate failback of M-ports. The ports can be re-enabled from OBM.

Ring Purger

The Ring Purger function is disabled by default. In previous releases the default was to enable Ring Purger.

Bug Fixes

Several problems have been fixed. They are described below:

Spurious Timer
SCP would occasionally crash due to a spurious error in a timer. This event will no longer occur.

Dual Homing Setup
Previously setting a port to be an M-port would also enable that port - even if it had been explicitly disabled. Now it remains disabled. When enabled it becomes an M-port.

Default Gateway
Under certain conditions the default gateway would fail to be updated when it changed ports. The default gateway port can now be changed with no adverse consequence.

Reporting of SCP_BB rev
The rev of bootblock code on a backup SCP was incorrectly reported by OBM as 0.0. It is now correctly reported.

Inactive Entries
The number of inactive entries in the forwarding database was not previously reported. This number is now correctly reported by the MIB object **ebrInactiveForwardingDBEntries**.

ifOperStatus
ifOperStatus was reported incorrectly. This MIB object now reports the correct value.

Datagram Reassembly
A bug has been fixed involving the switch's improper reassembling of large IP datagrams.

ifNumber
ifNumber previously reported an incorrect value. This MIB2 object was previously reported as 36. It now conforms to common practice, and reports the actual number of ports present in the switch.

DS3 Interval Counters
DS3 interval counters did not report correct values. These counters now report the correct values for the current and preceding 95 intervals, and the total is also reported correctly.

_____ **Note** _____

Fixing these counters required a compatible change to both SCP and AGL code. To effect the change BOTH new versions must be used. If the old version of one and the new version of the other are run, then certain GET operations on these counters will result in a linecard crash.

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MIB2 Counters
MIB2 counters were not reported for AGL-2. These are now correctly reported.

Spanning Tree
The spanning tree forwarding delay was incorrectly reported by a factor of 2 under certain conditions. This is now correctly reported.

Spanning tree enable/disable SNMP object was not recorded in management memory. This object is now retained in management memory, and will be recalled on system reboot.

Multicast Frames
Certain multicast frames were not correctly transmitted. These frames now are transmitted properly.

Bridge PDUs
Certain nonstandard bridge PDUs were not being treated correctly. This has been fixed.

Root Claim
Under certain conditions a GIGAswitch system would incorrectly claim to be the root. This has been fixed.

Management Memory
A Management Memory bug has been fixed that could cause certain parameters to be incorrectly replayed.

_____ **Note** _____

Due to the above change Management Memory should be reset if there ever was, or is going to be, an AGL present in the switch.

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Large Forwarding Database
A linecard bug has been fixed which would occasionally cause corruption in the forwarding table with very large numbers of addresses.

Matrix Name and DECmcc
A bug in DECmcc which incorrectly deals with 16 character names could cause the switch to crash. The SCP now properly aborts an SNMP operation displaying this bug. It is not clear whether DECmcc properly handles the abort.

Spurious SCP Error Log Entry
A spurious error log entry indicating "lost of self-directed BPDUs", has been eliminated.

Known Bugs in V2.2

Cut Through

If SNMP is used to enable or disable cut through on a port the change will take effect immediately only if the port in question is active (i.e. is physically connected to the network). If the port is enabled, but not active, the setting will be saved in management memory, but will not take effect until the switch is rebooted.

Inserting a linecard into a running switch will not cause the cut through settings in management memory to be instantiated. Only a switch reboot will do so.

However, when the SNMP object is read, the values displayed for cut through will reflect what is in management memory - which (as indicated above) may not coincide with the actual settings on the port.

By default cut through in enabled on all ports.

This bug will be fixed in the next release.

AGL-2 Restrictions

The following restrictions in AGL-2 operation remain:

Connection Table

The **aglVCConnectionTableEntry** MIB object can be set with the following values:

Table 1–2 aglVCConnectionTableEntry MIB Object

Object	Values
aglVCConnectionTableEntryStatus	create (1) delete (2)
aglVCConnectionPortA	Sequential Port Number (1-10, 13-14, 17-18, 21-22, 25-26, 29-30, 33-36)
aglVCConnectionPortAVpi	0
aglVCConnectionPortAVci	32-1022
aglVCConnectionPortB	0
aglVCConnectionPortBVpi	0
aglVCConnectionPortBVci	0
aglVCConnectionTrafficType	FDDI-bridged (1)
aglVCConnectionAALType	aal5 (2)
aglVCConnectionAdminStatus	enable (1)

The following connection table MIB objects may NOT be set.

> **aglVCConnectionTrafficShaperPeakRate**
> **aglVCConnectionTrafficShaperAvgRate**
> **aglVCConnectionTrafficShaperMinGuaranteedRate**
> **aglVCConnectionTrafficShaperPriority**

OAM Disabled

The MIB Object **aglInterfaceATMOAMStatus** is permanently "disabled" in this release. It cannot be set to "enabled."

STS3-c vs STM1 Mode

If the two ends of a SONET link are set to different mode values, the PHY LED on the STM1 side will blink green indicating that the PHY is down and the link is not functional. In addition, some or all of the following counters will increment on the STM1 side:

- **aglsonetSectionCurrentESs**
- **aglsonetSectionCurrentSESs**
- **aglsonetSectionCurrentSEFSs**

- **aglsonetLineCurrentESs**
- **aglsonetLineCurrentSESs**
- **aglsonetLineCurrentUASs**

- **aglsonetPathCurrentESs**
- **aglsonetPathCurrentSESs**
- **aglsonetPathCurrentUASs**

The STS3-c side of the link may appear to be normal except that the following counters may increment:

- **aglsonetLineCurrentUASs**
- **aglsonetPathCurrentUASs**

Counters

The counters for AAL-5 CRC errors and ATM Header Error Check (HEC) errors are not accessible in this release.

The counters for per VCC cell transmitted are not accessible in this release.

UNI 3.0

The current release of AGL-2 does not support the ILMI portion of the UNI 3.0 specification.