



**Firmware Version:** V4.00.B063  
**Prom Code Version:** V1.00.010  
**Published:** 2014/08/26

These release notes include important information about D-Link DGS-6600 series firmware revisions. Please verify that these release notes are correct for your switch:

- If you are installing a new switch, please check the hardware version on the device label; make sure that your switch meets the system requirement of this firmware version. Please refer to [Revision History and System Requirement](#) for detailed firmware and hardware matrix.
- If the switch is powered on, you can check the hardware version by typing "show system" command or by checking the device information page on the web graphic user interface.
- If you plan to upgrade to the new firmware release, please refer to the [Upgrade Instructions](#) for the correct firmware upgrade procedure.

For more detailed information regarding DGS-6600 series switch products, please refer to [Related Documentation](#).

You can also download the switch firmware, D-View modules and technical documentation from <http://tsd.dlink.com.tw>.

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## Revision History and System Requirement

| Firmware Version | Date       | Chassis Model        | Control Module                | Hardware Version |
|------------------|------------|----------------------|-------------------------------|------------------|
| V1.00.031        | 2011/3/25  | DGS-6604             | DGS-6600-CM                   | A1               |
| V1.00.036        | 2011/5/3   | DGS-6604             | DGS-6600-CM                   | A1               |
| V2.00.022        | 2011/09/28 | DGS-6604             | DGS-6600-CM                   | A1               |
| V2.10.011        | 2012/2/13  | DGS-6604             | DGS-6600-CM                   | A1               |
| V3.00.080        | 2012/12/31 | DGS-6604<br>DGS-6608 | DGS-6600-CM<br>DGS-6600-CM-II | A1               |
| V4.00.056        | 2013/11/14 | DGS-6604<br>DGS-6608 | DGS-6600-CM<br>DGS-6600-CM-II | A1               |
| V4.00.B063       | 2014/08/26 | DGS-6604<br>DGS-6608 | DGS-6600-CM<br>DGS-6600-CM-II | A1               |

| Firmware Version | Supported Line Cards |                    |                 |                |
|------------------|----------------------|--------------------|-----------------|----------------|
| V1.00.031        | DGS-6600-48T         | DGS-6600-48S       | DGS-6600-48TS   | DGS-6600-8XG   |
| V1.00.036        | DGS-6600-48T         | DGS-6600-48S       | DGS-6600-48TS   | DGS-6600-8XG   |
| V2.00.022        | DGS-6600-48T         | DGS-6600-48S       | DGS-6600-48TS   | DGS-6600-8XG   |
|                  | DGS-6600-48P         |                    |                 |                |
| V2.10.011        | DGS-6600-48T         | DGS-6600-48S       | DGS-6600-48TS   | DGS-6600-8XG   |
|                  | DGS-6600-48P         | DGS-6600-24SC2XS   |                 |                |
| V3.00.080        | DGS-6600-48T         | DGS-6600-48S       | DGS-6600-48TS   | DGS-6600-8XG   |
|                  | DGS-6600-48P         | DGS-6600-24SC2XS   | DGS-6600-16XS-D |                |
| V4.00.056        | DGS-6600-48T         | DGS-6600-48S       | DGS-6600-48TS   | DGS-6600-8XG   |
|                  | DGS-6600-48P         | DGS-6600-24SC2XS   | DGS-6600-16XS-D | DGS-6600-48S-C |
|                  | DGS-6600-PWRD-C      | DGS-6600-24SC2XS-C |                 |                |
| V4.00.B063       | DGS-6600-48T         | DGS-6600-48S       | DGS-6600-48TS   | DGS-6600-8XG   |
|                  | DGS-6600-48P         | DGS-6600-24SC2XS   | DGS-6600-16XS-D | DGS-6600-48S-C |
|                  | DGS-6600-PWRD-C      | DGS-6600-24SC2XS-C |                 |                |

| Model Compatible   | DGS-6604 | DGS-6608 | Note                       |
|--------------------|----------|----------|----------------------------|
| DGS-6600-CM        | Yes      | No       | For single-CM support      |
| DGS-6600-CM-II     | Yes      | Yes      | Support dual-CM redundancy |
| DGS-6600-48T       | Yes      | Yes      | Without MPLS               |
| DGS-6600-48S       | Yes      | Yes      | Without MPLS               |
| DGS-6600-48TS      | Yes      | Yes      | Without MPLS               |
| DGS-6600-48P       | Yes      | Yes      | Without MPLS               |
| DGS-6600-8XG       | Yes      | No       | Without MPLS               |
| DGS-6600-24SC2XS   | Yes      | No       | Without MPLS               |
| DGS-6600-16XS-D    | Yes      | Yes      | With MPLS                  |
| DGS-6600-48S-C     | Yes      | Yes      | With MPLS                  |
| DGS-6600-24SC2XS-C | Yes      | Yes      | With MPLS                  |

|                 |     |     |  |
|-----------------|-----|-----|--|
| DGS-6600-PWR    | Yes | Yes |  |
| DGS-6600-PWRDC  | Yes | Yes |  |
| DGS-6600-FAN    | Yes | No  |  |
| DGS-6600-FAN-II | No  | Yes |  |
| DGS-6600-AF     | Yes | No  |  |
| DGS-6600-AF-II  | No  | Yes |  |

## Upgrade Instructions:

D-Link switches support firmware upgrade via TFTP server. You can download the firmware from D-Link web site <http://tsd.dlink.com.tw>, and copy the downloaded firmware to the TFTP server folder. Please make sure that the TFTP server is accessible from the switch via networks.

### Upgrade using CLI (serial port)

Connect a workstation to the switch console port and run any terminal program that can emulate a VT-100 terminal. The switch serial port default settings are as follows:

- ◆ Baud rate: **115200**
- ◆ Data bits: **8**
- ◆ Parity: **None**
- ◆ Stop bits: **1**

The switch will prompt the user to enter his/her username and password. It should be noted that upon the initial connection, there is no username and password by default.

To upgrade the switch firmware, execute the following commands:

| Command  | Function   |
|--|--|
| copy tftp:\\ IP-ADDRESS \<br>[ DIRECTORY \ ] FILENAME<br>DESTINATION-URL | Copy the specified file from the URL on the host to the equipment. |
| show boot  | Display the file name of current boot image and configuration.     |
| reboot   | Reboot the switch.   |

### Example:

```
DGS-6600:15#copy tftp:\\10.1.1.254\runtime.1.00.036_DGS-6600.had
flash:\images\runtime.1.00.029_DGS-6600.had
Copy from 10.1.1.254\runtime.1.00.029_DGS-6600.had to flash:\images\runtime.1.00.036_DGS-6600.had .....
.....done
DGS-6600:15#
-----
DGS-6600:15#
DGS-6600:15#configure terminal
```

```

DGS-6600:15(config)#boot image flash:\images\runtime.1.00.036_DGS-6600.had
Checking image at local flash:\images\runtime.1.00.036_DGS-6600.had ... Done.
Update bootlist ..... Done.

Success
DGS-6600:15(config)#
-----
DGS-6600:15(config)#
DGS-6600:15(config)#show boot
Boot loader version:1.00.005
Boot config:flash:\configurations\def_usr.conf
Boot image:flash:\images\runtime.1.00.036_DGS-6600.had,flash:\images\runtime.1.00.036_DGS-6600.had
DGS-6600:15(config)#
-----
DGS-6600:15(config)#
DGS-6600:15(config)#exit
DGS-6600:15#reboot

Warning: This command will cause system reboot.
Do you want to continue (y/n) [n]?y
Save log message before reboot(y/n) [n]?y
-----

```

## New Features

| Firmware Version | New Features  |
|------------------|---|
| V1.00.031        | First release, please refer to datasheet and manual for detail function supported   |
| V1.00.036        | None  |
| V2.00.022        | <ol style="list-style-type: none"> <li>1. Support DGS-6600-48P line card</li> <li>2. ERPS(Ethernet Ring Protection Switching)</li> <li>3. LBD (Loopback detection)</li> <li>4. RSPAN</li> <li>5. Voice VLAN</li> <li>6. Support BGP route redistribution</li> <li>7. Policy-based Route</li> <li>8. IP-MAC-Port Binding (IMPB)</li> <li>9. D-Link Safeguard Engine</li> <li>10. DHCP Server Screening</li> <li>11. DHCP Client Filtering</li> <li>12. Telnet Server</li> <li>13. sFlow</li> </ol> |

|            |  |
|------------|--|
|            | <ul style="list-style-type: none"> <li>14. System Log</li> <li>15. Network Load Balancing (NLB)</li> <li>16. SNMP over IPv6</li> <li>17. Syslog over IPv6</li> <li>18. LLDP/LLDP-MED</li> <li>19. Time-based PoE</li> </ul>  |
| V2.10.011  | <ul style="list-style-type: none"> <li>1. IPv6 long prefix</li> <li>2. TACACS+ user level assign</li> <li>3. DDM</li> </ul>  |
| V3.00.080  | <ul style="list-style-type: none"> <li>1. MPLS</li> <li>2. LDP</li> <li>3. VPWS</li> <li>4. VPLS</li> <li>5. Proxy ARP</li> <li>6. Super VLAN</li> <li>7. Loopback interface</li> <li>8. ECMP Load-Balance Algorithm</li> <li>9. Allow to import routes from BGP neighbor</li> <li>10. BGP Peer Number up to 64</li> <li>11. Graceful restart for RIP, OSPF, BGP, Multicast</li> <li>12. Extend maximum IPv6 route prefix length from original 0-64 to 0-128.</li> </ul>   |
| V4.00.056  | <ul style="list-style-type: none"> <li>1. SNMP for CPU utilization</li> <li>2. SFTP/FTP client</li> <li>3. Power budget optimization</li> <li>4. Support logging for PSU's FAN</li> <li>5. Support "no interface" command</li> <li>6. Support LDP graceful restart</li> <li>7. Enlarge the QinQ entry size</li> <li>8. Add two new match commands "match ip address" and "match ipv6 address" for BGP route map settings</li> <li>9. Support new CLI command "ospf/ospfv3 restart helper" in DGS-6604</li> </ul> |
| V4.00.B063 | None   |

## Changes of MIB & D-View Module

The new features of MIB file are also included in the corresponding D-View module. Please download the D-View module on <http://tsd.dlink.com.tw>. For detailed changes of MIB content, please refer to the modification history in each MIB file.

| Firmware Version           | MIB File  |
|----------------------------|---|
| V1.00.031                  | First release, please refer to datasheet for detail MIB supported |
| V1.00.036                  | None  |
| V2.00.022                  | OSPFV3-MIB  |
|                            | DLINK-SYSLOG-MIB  |
|                            | DLINK-PORT-SECURITY MIB   |
|                            | DLINK-SWITCHPORT-MIB  |
|                            | DLINK-PACKET-MONITORING-MIB                                       |
|                            | DLINK-TIME-CONFIGURATION-MIB                                      |
|                            | DLINK-SSH-MIB   |
| DLINK-BOOTP-DHCP-RELAY-MIB |   |

|           |   |
|-----------|---|
|           | DLINK-DHCP-SERVER-IPV4-MIB  |
|           | DOS-PREV-MIB  |
|           | DLINK-VLAN-TUNNEL-MIB   |
|           | DLINK-SUBNET-VLAN-MIB   |
|           | DLINK-MAC-BASED-VLAN-MIB  |
|           | DLINK-DHCP6-MIB   |
|           | DLINK-DHCP6-CLIENT-MIB  |
|           | SAFEGUARD-ENGINE-MIB  |
|           | DLINK-DHCP-FILTER-MIB   |
|           | DLINK-ERROR-DISABLE-MIB   |
|           | DLINK-LOOPBACK-DETECT-MIB   |
|           | DLINK-VOICE-VLAN-MIB  |
|           | DLINK-ERPS-MIB  |
|           | DLINK-PBR-MIB   |
|           | DLINK-ROUTEMAP-MIB  |
|           | DLINK-DYNAMIC-ARP-INSPECTION-MIB  |
|           | DLINK-DHCP-SNOOPING-MIB   |
|           | POWER-ETHERNET-MIB  |
|           | SFLOW-MIB   |
| V2.10.011 | None  |
| V3.00.080 | LLDP-EXT-DOT1-MIB<br>LLDP-EXT-DOT3-MIB<br>LLDP-EXT-MED-MIB<br>LLDP-MIB  |
| V4.00.056 | <p>MPLS MIB (standard):</p> <ul style="list-style-type: none"> <li>- PW-STD-MIB.mib</li> <li>- MPLS-LSR-STD-MIB.mib</li> <li>- MPLS-LDP-STD-MIB.mib</li> <li>- MPLS-LDP-GENERIC-STD-MIB.mib</li> <li>- MPLS-FTN-STD-MIB.mib</li> <li>- PW-ENET-STD-MIB.mib</li> <li>- PW-MPLS-STD-MIB.mib</li> </ul> <p>Private MIB:</p> <ul style="list-style-type: none"> <li>- DGS-6600-SYSTEM-INFO-MIB.mib</li> <li>- DGS-6600-EQUIPMENT-MIB.mib</li> <li>- DGS-6600-VPLS-GENERIC-MIB.mib</li> </ul> <p>Trap:</p> <ul style="list-style-type: none"> <li>- Cold start</li> <li>- Warm start</li> <li>- Link down</li> <li>- Link up</li> <li>- The snmp authentication Failure (RFC3418-SNMPv2-MIB)</li> <li>- MPLS/L2VPN MIB traps which support: pwDown, pwUp, pwDeleted, mplsXCUp, mplsXCDown</li> </ul> |

## Changes of Command Line Interface

The section below only shows command line changes that may bring backward compatibility issues with configuration settings for previous version of firmware. Any new feature commands that do not have backward compatibility issues are not included in the below section.

| Firmware Version | Changes   |
|------------------|---|
| V1.00.031        | First release   |
| V1.00.036        | None  |
| V2.00.022        | None  |
| V2.10.011        | Switch Port Command changed:<br>1. “duplex {full   half   auto} [copper]”, where [copper] is for combo port design.<br>2. “flowcontrol [send   receive] {on   off} [copper   fiber]”, where [copper   fiber] is for combo port configures on specific medium.<br>3. “speed {10   100   1000 [master slave]   auto} [copper fiber]”, where [copper fiber] is for combo port configures on specific medium. |
| V3.00.080        | None  |
| V4.00.056        | None  |

## Problem Fixed

| Firmware Version | Problems  |
|------------------|---|
| V1.00.031        | First release   |
| V1.00.036        | <ol style="list-style-type: none"> <li>1. Ping via DGS-6604 will loss when DGS-6604 receive IGMP report with DSCP value form one ping destination</li> <li>2. Wildcard bits is not working in RIP network configuration.</li> <li>3. Cannot set IP address success with valid address.</li> <li>4. Stop at “ExStart” state when modify the value “mtu” under the physical interface.</li> <li>5. The SPF algorithm is re-calculated every 10s for OSPF.</li> </ol>  |
| V2.00.022        | <ol style="list-style-type: none"> <li>1. The switch will prompt “% Invalid interface” when enter “ipv6 router rip” in VLAN interface.</li> <li>2. SSH session will be closed when DGS-6600 is attacked by hydra tool, a dictionary attack tool.</li> <li>3. DGS-6600 OSPF state is unstable after DGS-6600 is rebooted and re-learn a lot of IPv6 routes (e.g., more than 4000 entries of RIPng routes) at the same time.</li> <li>4. When DGS-6600 IGMP snooping is disabled but received IGMP packets (sent by DGS-1210), the FDB address learning maybe incorrect, causing PC ping DGS-1210 management IP failed. (<a href="#">DEUR20110407000006</a>)</li> <li>5. When creating ACL command but use “cursor left” key to add parameter (eg, ex), it will cause DGS-6600 to parse the command as an ambiguous result.</li> <li>6. When deleting an ACL rule that is not applied on the specified interface, DGS-6600 does not prompt the warning message.</li> <li>7. After assigning VLAN-trunk (4K VLAN entries) to the specified interfaces, it will spend more than 30 minutes if user resets the device to default configuration. After Improvement, it takes 7.5 minutes to complete it. (<a href="#">DI20110617000006</a>)</li> <li>8. Due to memory resource constraint, DGS-6600 limits the maximum number of ports which can be added in VLAN to 4094 VLANs x 96 ports (which is 393,024), but it does not limit in “port channel”. (<a href="#">DI20110621000008</a>)</li> <li>9. DGS-6600 cannot add a static Ipv6 neighbor entry except VLAN 1. (<a href="#">DI20110629000008</a>)</li> <li>10. The DGS-6600 re-calculates OSPF routing table every 10 seconds, causing network</li> </ol> |

|           |   |
|-----------|---|
|           | <p>unstable.</p> <p>11. DHCP relay function will stop running when DGS-6600 receives invalid header with DHCP packet.</p>   |
| V2.10.011 | <ol style="list-style-type: none"> <li>1. Reboot spontaneously caused by IP route entries (by static, OSPF, RIP, etc) adding and deleting for many times.</li> <li>2. Allow to configure the IP address having "255", e.g., 172.16.0.255/16, as its interface IP address.</li> <li>3. Ipv6 address mask of 128 bits prefix length is supported. (<a href="#">DRU2011102000001</a>)</li> <li>4. The result of "show erps erp" command is wrong. The ring port keep forwarding though the port link down. (<a href="#">DI20111115000003</a>)</li> <li>5. Cannot change ERPS blocking port to forwarding after un-plugging and then re-plugging the cable. (<a href="#">DI20111115000003</a>)</li> <li>6. Support user 4 levels (1, 2, 12&amp;15) from the TACACS+ server. (<a href="#">DRU20111121000002</a>)</li> </ol>  |
| V3.00.080 | <ol style="list-style-type: none"> <li>1. CPU utilization always high when receiving PIM join packets. (<a href="#">DRU20120210000006</a>, <a href="#">DRU20120604000003</a> )</li> <li>2. PBR packet will be filtered if it matches the patent of deny rule in ACL. (<a href="#">DRU20120305000004</a>)</li> <li>3. Generated SSH key is not preserved after switch reboots. (<a href="#">DEUR20120215000005</a>)</li> <li>4. Cannot set the PoE power value on manual mode. (<a href="#">DEUR20120507000005</a>)</li> <li>5. Blocks client's IGMP last-member-report packet. (<a href="#">DRU20120505000007</a>)</li> <li>6. IGMP control packet cannot be added double tag through QinQ. (<a href="#">DRU20120605000004</a>)</li> <li>7. Cannot clear SSH session after timeout or logout. (<a href="#">DRU20121108000005</a>)</li> </ol>  |
| V4.00.056 | <ol style="list-style-type: none"> <li>1. Fix the issue that the BGP Route-map on DGS-6600 doesn't support filtering by IP address. (<a href="#">DRU20130129000014</a>)</li> <li>2. Fix the issue that when DGS-6600 running BGP routing protocol with Cisco router, Cisco router will send a "Enhanced Route Refresh Capability(70)" message to DGS-6600 when there's a peer change happening in the network. DGS-6600 will break BGP session with Cisco. (<a href="#">DRU20130319000003</a>)</li> <li>3. Fix the issue that the DGS-6600 will not release the SSH or telnet session even if user terminates this session. (<a href="#">DRU20130312000002</a>)</li> <li>4. Fix the issue that the DGS-6600 will drop packets if user creates lots of VLANs and QinQ on each port interface. (<a href="#">for PODA project</a>)</li> <li>5. Fix the issue that the command "ospf restart helper" is not supported in DGS-6604, but supported in DGS-6608. (<a href="#">DI20130716000005</a>)</li> <li>6. Fix the Issue that when enabling debug commands on DGS-6600, the CPU utilization will remain high just because DGS-6600 keep on receiving many IGMP report packet. (<a href="#">DRU20130805000007</a>)</li> <li>7. Fix the Issue that If DGS-6600 works in IGMP V1 or V2 compatibility mode and receives IGMP V3 Block/Change-to-include report packet, it will cause DGS-6600 Rx process stop and cannot respond the Ping packet. (<a href="#">DRU20130805000007</a>)</li> <li>8. Fix the issue that whenever a PIM neighbour joins or leaves a multicast group, DGS-6600 will incorrectly change the state of multicast routing from forwarding to prune. (<a href="#">DEUR20130814000003</a>)</li> <li>9. Fix the issue that when receiving IGMP report about 600 pps, DGS-6600 CPU utilization will raise to 100%, and PC pings DGS-6600 will fail. (<a href="#">DRU20130829000003</a>)</li> </ol> |



|            |  |
|------------|--|
|            | 10. Fix the issue that if PC connects to DGS-6600-24SC2XS and continue to ping the IP interface on the line card, the ping will fail after reboot the DGS-6600 chassis. ( <a href="#">DEUR20130911000006</a> )   |
| V4.00.B063 | <ol style="list-style-type: none"> <li>1. Solve the power shut off problem of DGS-6608 caused by cannot recognize the DGS-6600-PWR with new I2C correctly. (<a href="#">KI076-Chassis System Interoperability Issue with DGS-6600-PWRA1</a>)</li> <li>2. Fix the issue that DGS-6600 cannot respond the unicast ARP for VRRP interface. (<a href="#">HQ20131210000006</a>)</li> <li>3. Fix the issue that after few hours of ping, unable to reach DGS-6600 mgmt-if from other vlans except vlan1. (<a href="#">HQ20140314000011</a>)</li> </ol> |

\* D-Link tracking number is enclosed in ()

## Known Issues

| Firmware Version | Issues   | Workaround   |
|------------------|--|--|
| V1.00.031        | None   |  |
| V1.00.036        | None   |  |
| V2.00.022        | None   |  |
| V2.10.011        | <ol style="list-style-type: none"> <li>1. [DDM] Lose some ddm configuration after execute "copy startup-config running-config" command.</li> <li>2. [TraceRoute] Ping OK to some ipv6 address but fail to traceroute it</li> </ol> | None   |
| V3.00.080        | 1. [NLB]When configuring LACP trunk on the DGS-6600-16XS-D ports which directly connect to Microsoft NLB server in multicast mode, the packet will drop 50%.   | None   |
|                  | 2. [CPU-protect] System will forward double IGMP packet to CPU when setting CPU protect for IGMP packet.   | Reduce the pps value of CPU-protection by 50%  |
|                  | 3. [VPLS] U-PE failed to form the backup peer with the alternative N-PE in H-VPLS.   | Instead of auto-backup peer, U-PE manually configuring an extra peer to alternative N-PE in advance. |
|                  | 4. [Mirror] System cannot mirror the non-unicast pkts with the multiple mirror session.  | None   |
| V4.00.056        | 1. [MPLS/LDP] After LDP graceful restart (hot-remove or reboot the active CPU card), sometimes it may cause some MPLS traffic lost, label error or forwarding entries lost.  | will be fixed in R4.1  |
|                  | 2. [VPLS] After LDP graceful restart (hot-remove or reboot the active CPU card), it may cause some VPLS traffic lost sometimes.  | will be fixed in R4.1  |
|                  | 3. [VPWS] After LDP graceful restart (hot-remove or reboot the active CPU card), it may cause some VPWS traffic lost sometimes.  | will be fixed in R4.1  |
| V4.00.B063       | [DGS-6600-PWR] The system may failed to display the  | None   |

power information of "Max Power", "Used Power", "Fan Speed" on CLI "show environment power".

## Related Documentation

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- DGS-6600 Series CLI Reference Guide Release v4.00
- DGS-6600 Series Hardware Installation Guide v4.00