



Firmware Version: 2.01.B042 Prom Code Version: v1.00.B008 Published: Nov 27, 2009

These release notes include important information about D-Link switch 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 switch" 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 <u>Upgrade</u> <u>Instructions</u> for the correct firmware upgrade procedure.

For more detailed information regarding our switch products, please refer to <u>Related Documentation</u>.

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

Content:

Revision History and System Requirement:	2
Upgrade Instructions:	2
Upgrade using CLI (serial port)Upgrade using Web-UI	2
New Features:	
Changes of MIB & D-View Module:	8
Changes of Command Line Interface:	10
Problem Fixed:	11
Known Issues:	13
Related Documentation:	13





Revision History and System Requirement:

Firmware Version	Date	Model	Hardware Version
	27-Nov-09	DES-3528	A1, A2, A3
		DES-3528DC	A1
Runtime: v2.01.B042 Prom: v1.00.B008		DES-3528P	A1
		DES-3552	A1, A2
		DES-3552P	A1
	08-June-09	DES-3528	A1, A2, A3
Runtime: v2.00.B033		DES-3528DC	A1
Prom: v1.00.B007		DES-3528P	A1
		DES-3552	A1, A2
	20-Mar-09	DES-3528	A1, A2, A3
Runtime: v1.03.B013		DES-3528DC	A1
Prom: v1.00.B007		DES-3528P	A1
		DES-3552	A1, A2
Runtime: v1.01B030 Prom: 1.00.B006	23-Apr-08	DES-3528	A1

Upgrade Instructions:

Caution: This version only supports direct firmware upgrade from v1.03. Direct upgrade from any version prior to v1.03 is not suggested and may result in unknown issues. Downgrade to any version prior to v.1.03 is not supported.

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If one of the switch images has the firmware version prior to v.1.03, then this image can not be selected as the boot up image.

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: 8Parity: NoneStop 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
download [firmware_fromTFTP < ipaddr>	Download firmware file from the TFTP
<pre><path_filename 64=""> {image_id <int 1-2="">}]</int></path_filename></pre>	server to the switch.





config firmware image_id <1-2> [delete | boot_up] Change the boot up image file. Display the information of current boot show firmware_information image and configuration. Reboot the switch. reboot **Example:** 1. DES-3528:5#download firmware_fromTFTP 10.90.90.91 R200B033.had image_id 2 Command: download firmware_fromTFTP 10.90.90.91 R200B033.had image_id 2 Connecting to server..... Done. Download firmware...... Done. Do not power off! Please wait, programming flash..... Done. 2. DES-3528:5#config firmware image_id 2 boot_up Command: config firmware image_id 2 boot_up Success. DES-3528:5#show firmware information Command: show firmware information ID Version Size(B) Update Time From User 1 1.03.B008 2450452 2009/02/04 17:00:26 10.90.90.91(R) Anonymous *2 2.00.B033 2730615 2009/08/05 02:25:85 10.90.90.91(R) Anonymous '*' means boot up firmware (R) means firmware update through Serial Port(RS232) (T) means firmware update through TELNET (S) means firmware update through SNMP (W) means firmware update through WEB (SSH) means firmware update through SSH (SIM) means firmware update through Single IP Management 4. DES-3528:5#reboot Command: reboot Are you sure you want to proceed with the system reboot?(y/n) y Please wait, the switch is rebooting... V1.00.B007 Boot Procedure Power On Self Test 100 % MAC Address : 00-1E-58-4F-F7-D0 H/W Version : A1

Upgrade using Web-UI

UART init

1. Connect a workstation installed with java SE runtime environment to any switch port of the

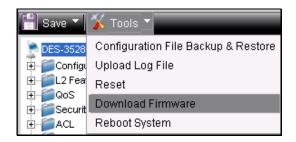
Please wait, loading V2.00.B033 Runtime image 100 %





device

- 2. Open the web browser from the workstation and enter the IP address of the switch. The switch's default IP address is 10.90.90.90.
- 3. Enter administrator's username and password when prompted. It should be noted that the username and password are blank by default.
- 4. To update switch's firmware or configuration file, select Tools > Download Firmware from the banner.





- 5. Enter the TFTP Server IP address.
- 6. Enter the name of the firmware file located on the TFTP server.
- 7. Select the Image ID you would like to store the firmware file.
- 8. Click "Download" button.
- 9. Wait until the "File Transfer" status reaches 100% and the "Program Firmware" status shows "completed".



10. To select the boot up image used for next reboot, click **Configuration > Firmware information** in the function tree. Click corresponding "**Set Boot**" button to specify the firmware that will be used for next and subsequent boot up.







- 11. To reboot the switch, select **Tools > Reboot System** from the banner.
- 12. Select "Yes" and click "Reboot" button to reboot the switch.

New Features:

Firmware Version	New Features
V2.01.B042	1. Support new model DES-3552P
V2.00.B033	 Cable Diagnostics MDI/MDIX function manual disablement IGMP Snooping enhancement Host-Based IGMP Snooping Fast Leave IGMP v3 source filter Allow unregistered multicast traffic (not in multicast table) being forwarded to the router port even when the multicast filtering mode is set to 'filter_unregistered_groups' Support the configuration of maximum allowed multicast groups. Responsive actions including drop or replacement can be triggered while the threshold is reached Support the setting of Limited IP Multicast profile on a per VLAN basis MLD v2 source filter Loopback detection: Support various traps for loopback detection status including loop_detected, loop_cleared and both 802.3ah Ethernet OAM 802.1ag CFM RSPAN (Remote SPAN) Time-based PoE Physical Stacking Architecture When under QinQ mode, the switch NNI port supports the manual selection between 802.1ad and 802.1d destination address formats for the GVRP packets flowing through it, providing better interoperability with legacy devices that only understand GVRP address in 802.1d format.





V2.00.B033

12. ISM VLAN enhancement

- IPv6 MLD snooping v1/v2
- Source ports can be untagged
- Support the modification of ISM VLAN's priority level for better traffic control
- Support the configuration of two ISM VLAN source ports on the switch.
 When working with STP, it will allow the forwarding of multicast stream using backup link in case the primary link goes down
- 13. Advanced QinQ functions that allow the insertion of customer VLAN tag and the configuration of inner TPID
- 14. Voice VLAN
- 15. Subnet-based VLAN
- 16. VLAN trunking
- 17. ARP entry's minimum aging time can be set to 30 sec. ARP entry's aging time can remain unaffected when being accessed by switch's internal process
- 18. Support 16 IP interfaces
- 19. Policy-based routing
- 20. Proxy ARP
- 21. SNMP trap and system log support for Gratuitous ARP events
- 22. Configurable user 802.1p priority on each port.
- 23. Scheduling mechanisms (strict or WRR) can be configured on a per port basis.
- 24. CoS Bandwidth Control that supports
 - Per egress queue bandwidth control
 - Per egress queue bandwidth guarantee
- 25. ACL function supports up to 14 profiles and 1792 rules per system
- 26. VLAN-based ACL
- 27. Allows the configuration of SSH port to any desired port number
- 28. Broadcast/Multicast Storm Control allows the configuration of 5 minutes recovery timer for shutdown ports
- 29. IMPB V3.5
 - Configurable threshold number for illegitimate entries that can be recorded in the FDB
- 30. Web-based Access Control (WAC) enhancement
 - Host-based authentication
 - Dynamic VLAN assignment based on the VLAN attribute dispatched from RADIUS server after successful authentication with RADIUS
 - Identity-driven QoS: Support the assignment of 1. Ingress/egress bandwidth attributes 2. 802.1p priority attribute - to the port based on the attributes dispatched from RADIUS server after successful authentication with RADIUS
- 31. MAC-based Access Control (MAC) enhancement
 - Port-based Authentication
 - Identity-driven QoS: Support the assignment of 1. Ingress/egress bandwidth attributes 2. 802.1p priority attribute - to the port based on the attributes dispatched from RADIUS server after successful authentication with RADIUS
 - Host-based Authentication: enlarge the number of supported users from 16 per port, 448 per switch, to 1000 per port, switch and stack.
 - Host-based Authentication supports the manual configuration of host numbers from 1 to 1000 on a per port basis





32.802.1X

- Identity-driven QoS: Support the assignment of 1. Ingress/egress bandwidth attributes 2. 802.1p priority attribute - to the port based on the attributes dispatched from RADIUS server after successful authentication with RADIUS
- Host-based Access Control: enlarge the number of supported users from 16 per port, 448 per switch, to 448 per port, switch and stack.
- Support "Reply Message" attribute from RADIUS server so the switch can forward the "Reply Message" attribute to 802.1x clients
- 33. Japanese Web-based Access Control (JWAC): Enhance the maximum number of on-line users from 256 per port/switch to 1000 per port/switch/stack
- 34. MAC filtering via FDB
- 35. L3 Control Packet Filtering: Support the filtering of DVMRP, PIM, IGMP Query, OSPF, RIP, or VRRP packets.
- 36. Multiple Authentication
- 37. Authentication database failover: Be able to switch to local database for authentication when RADIUS server fails.
- 38. Remove the display of MAC address information from "show log" switch command

V2.00.B033

- 39. Telnet Client
- 40. Trusted host that supports up to 10 IP addresses or subnet entries in total 41. SYSLOG
 - Support WAC/MAC event logging
 - Support storm control block mode logging
 - Support spoofing attack logging with IP, MAC address and corresponding port information
- 42. sFlow support
- 43. DHCP relay option 60, 61
- 44. DHCP relay option 82 with group ID support
- 45. DHCP Server enhancement: Support DHCP server configuration via Web GUI & SNMP
- 46. Add user IP information in admin ID/password change event logging
- 47. DNS Relay
- 48. Send trap and log when the switch temperature goes over 80 Degrees or downs under 75 Degrees
- 49. ARP Spoofing Attack Prevention
- 50. Show product serial number on Web GUI and CLI
- 51. Add BPDU Attack Protection supports in WEB and MIB
- 52. When using SNMP to command the switch to download a firmware file, send a trap while the firmware upgrade finishes
- 1. Support DES-3528DC, DES-3528P, DES-3552
- 2. DHCP Local Relay
- 3. PPPoE Circuit-ID Tag Insertion
- 4. DHCP Server (Only supports CLI. No Web GUI & SNMP)

v1.03.B013

- 5. BPDU Attack Protection (Only supports CLI. No Web GUI & SNMP)
- 6. Flash memory re-layout: allocate larger memory size for firmware images, allowing more features to be added in future releases. When upgrading to v1.03, new PROM code (v1.00.B007) that supports this will be installed to the switch automatically.

v1.01.B035

- 1. Support DES-3528 A2 hardware.
- 2. Support D-view 6.0 platform.

v1.01.B030

First release. For supported features, please refer to the product specification and manuals for details.





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 from http://tsd.dlink.com.tw. For detailed changes of MIB content, please refer to the modification history in each MIB file.

please refer to the modification history in each MIB file.					
Firmware	MIB File	New Features			
Version					
	L2mgmtDES3552P.mib L3mgmtDES3552P.mib	1. Support new model DES-3552P			
V2.01.B042	1. Release new D-View Modu	ule for DES-3552P			
	2. Release new D-View Module for DES-3528/28DC/28P/52 to support stacking with DES-3552P				
	ACL.mib	Support VLAN-based ACL			
		 Support IPv6-based ACL for TCP/UDP protocols Support up to 14 ACL profiles and 1792 ACL rules per system 			
	ARPSpoofingPrevention.mib	Support ARP Spoofing Attack Prevention feature			
	Auth.mib	 Support the display of 802.1X Host-based Access Control entries 			
		Support Authentication Database Failover feature			
		Support RADIUS Authorization feature that accepts the assignment of VLAN and QoS			
		values dispatched from RADIUS server after successful authentication with RADIUS			
	BPDUProtection.mib	 Add BPDU Attack Protection supports in WEB and MIB 			
	CableDiag.mib	1. Support Cable Diagnostics feature			
	DHCPRelay.mib	1. Support DHCP relay option 82 with group ID feature			
V2.00.B033		2. Support DHCP relay option 60, 61			
	DHCPServer.mib	Support DHCP Server feature			
	Equipment.mib	 Support the sending of trap and log when the switch temperature goes over 80 Degrees or downs under 75 Degrees 			
	Filtering.mib	1. Support L3 Control Packet Filtering feature			
	Genmgmt.mib	 Support SNMP trap notification when failing to access flash file system 			
		 When using SNMP to command the switch to 			
		download a firmware file, send a trap while the			
		firmware upgrade finishes			
	IPMacBind.mib	1. Support IMPB v3.5 configurable threshold			
		number for illegitimate entries that can be recorded in the FDB			
	Jwac.mib	Support JWAC update server state			
		Support Authentication Database Failover feature			
		Support RADIUS Authorization feature that accepts the assignment of VLAN and QoS			
		values dispatched from RADIUS server after successful authentication with RADIUS			





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	Jwac.mib	4. Support Local Authorization feature that accepts the assignment of VLAN value from local database after successful authentication with local database
	I2mgmtDES3528.mib, I2mgmtDES3528dc.mib, I2mgmtDES3528p.mib, I2mgmtDES3552.mib	 When under QinQ mode, the switch NNI port supports the manual selection between 802.1ad and 802.1d destination address formats for the GVRP packets flowing through it.
	I2mgmtDES3528.mib, I2mgmtDES3528dc.mib, I2mgmtDES3528p.mib, I2mgmtDES3552.mib, ie8021ag.mib	 Support 802.1ag CFM feature Support DHCP Local relay feature Support VLAN Trunking feature
	L3mgmtDES3528.mib, L3mgmtDES3528dc.mib, L3mgmtDES3528p.mib, L3mgmtDES3552.mib	 Support the setting of ARP entry's minimum aging time to 30 sec. ARP entry's aging time can remain unaffected when being accessed by switch's internal process Support DNS relay feature
V2.00.B033	mba.mib	 Support configurable aging time, hold-down time and port-based access control for MAC-based Access Control (MAC) Support Authentication Database Failover feature for MAC Support RADIUS Authorization feature that accepts the assignment of VLAN and QoS values dispatched from RADIUS server after successful authentication with RADIUS Support Local Authorization feature that accepts the assignment of VLAN value from local database after successful authentication with local database
	McastFilter.mib	 Support the configuration of maximum allowed multicast groups (IPv4 only) Support Limited IP Multicast profile per VLAN (IPv4 only)
	McastSnooping.mib; McastVLAN.mib	 Use McastSnooping.mib and McastVLAN.mib to replace the multicast features from L2mgmt.mib
	PoE.mib	Support Time-based PoE feature
	QinQ.mib	 Support advanced QinQ functions that allow the insertion of customer VLAN tag and the configuration of inner TPID
	Qos.mib	 Support configurable default 802.1p priority on each port. Scheduling mechanisms (strict or WRR) can be configured on a per port basis. (QoS related features have been removed from L2mgmt.mib)
	RSPAN.mib	Support RSPAN feature
	sFlow.mib	Support sFlow feature





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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
V2.01.B042	None
V2.00.B033	 Change the command "config dhcp pool dns_server_address" to "config dhcp pool dns_server" Change the command "show dhcp_binding" to "show dhcp binding" Change the command "clear dhcp_binding" to "clear dhcp binding" Change the command "delete jwac host" to "clear jwac auth_state" Change the command "Show jwac host" to "show jwac auth_state ports" Change the command "show mac_based_access_control auth_mac" to "show mac_based_access_control auth_state ports" Change the command "delete jwac host" to "clear jwac auth_state" Change the command "Show jwac host" to "show jwac auth_state ports" Change the command "Config igmp_snooping vlan" to "config



V2.00.B033	 10. igmp_snooping" with following parameter changes: Remove parameters: <vlan_name 32=""> all] {host_timeout <sec 1-16711450=""> router_timeout <sec 1-16711450=""> leave_timer <sec 1-16711450=""> state [enable disable]}</sec></sec></sec></vlan_name> Add Paramteres: <vlan_name 32=""> vlanid <vlanid_list> all] { state [enable disable] report_suppression [enable disable]}</vlanid_list></vlan_name> 11. Modify "config igmp_snooping multicast_vlan_group" command's parameters: Remove parameters: <vlan_name 32=""> [add <mcast_address_list> delete [<mcast_address_list> delete_all]]</mcast_address_list></mcast_address_list></vlan_name> Add Paramteres: <vlan_name 32=""> [add delete] profile_name profile_name 1-32>] </vlan_name> 12. Modify "config max_mcast_group" command's parameters Remove parameters: <portlist> max_group [<value 1-256=""> infinite]</value></portlist> Add Paramteres: <portlist> vlanid <vidlist>] {max_group [<value 1-1024=""> infinite] action [drop replace]}</value></vidlist></portlist>
v1.03.B013	None
v1.01.B035	None
v1.01.B030	First release

Problem Fixed:

Firmware Version	Problems Fixed
V2.01.B042	 IMPB ARP mode can not be set properly by D-View 6.0 with E2ES plug-in and there is no warning message returning to D-View 6 (DT20090604000001) Sometimes the switch can not be reset or the config can not be downloaded via WEB UI (DI20091029000008) (DI20091102000017) When backup master taking over the job of stacking master, the LACP channel's MAC address changes to the backup master's address and LACP takes 5~7 seconds to recover. (DI20090818000003) When creating two LACP groups and making the port of the LACP group ID 2 link down, the system interface goes down. (DI20090828000019) After manipulating VLAN settings and then resetting the switch configuration, the system interface goes down and pops up invalid messages. (DI20090901000003) When jwac udp_filtering is disabled, DHCP packets still can not pass through the switch. (DI20090731000013) When enabling LBD function and MAC-based Access Control with RADIUS at the same time, LBD will fail. (DI20090728000008) JWAC function will fail if client comes from tagged port. (DI20090710000006) QinQ and ISM-VLAN are not designed to be activated at the same time. However they can be enabled at the same time. (DI20090529000010) When using a particular command to create ACL, the switch will pop up the message "The profile name already exist.". but this profile name actually does not exist. All packets to the management interface was counted as 'dropped' (DI20090625000019)



DES-3528/52 Series Firmware Release Notes



V2.01.B042	 12. 2 OIDs for port security function do not allowed to be set simultaneously, which causes the following command failed: snmpset -c private -v 2c 10.77.0.126 1.3.6.1.2.1.17.7.1.3.1.1.3.141.0.0.0.0.0.22.0 x 800000000000000000 && snmpset -c private -v 2c 10.77.0.126 1.3.6.1.2.1.17.7.1.3.1.1.4.141.0.0.0.0.0.22.0 i 3 13. The switch cannot reply to the SNMP get request for "ifNumber:0" correctly. 14. Client can not get IP via the switch's DHCP relay function if the client resides on a VLAN that does not have an IP interface and system interface does not 		
	link up (DI20090427000014) 15. Default gateway configuration loses after switch rebooting. (DI20090713000009)		
V2.00.B033	 The switch will enter exception mode when opening a SSH login session to the switch using Open SSH 5.1. (DI20090317000025) The switch doesn't support the automatic assignment of ACL ID when users want to create an ACL rule through SNMP. (DI20090318000013) The switch's auto configuration function will fail when DHCP and TFTP servers are located on different computer devices. (DI20090331000006) In a Spanning-tree enabled network environment, no matter which switch port goes down and results in the STP topology change, the generated log message always indicates that the change comes from switch port1 as "Topology changed (Instance:0, port:1)". (DI20090403000010) The switch does not log user out even when "Idle Time" is set in JWAC function (i.e. one minute) and the user session has been idled for more than the specified idle time. (DI20090409000007) 		
v1.03.B013	 When the maximum number of DHCP snooping entries is configured, and the status of a DHCP snooping entry changes from 'inactive' to 'active' (eg. The corresponding port becomes link-up again), this entry will not be confined by the configured maximum number. (DI20081028000003) If a WAC client's IP address belongs to the trusted host list, WAC authentication window does not pop up on that client. (DT20081114000001) The ISM-VLAN function does not forward multicast traffic to a client if this client sends the IGMP V3 membership report to join the multicast group. (DEUR20081105000004) When Q-in-Q is not applied on Management VLAN, but other VLANs, traffic from Management VLAN will be double tagged at NNI port. (DI20081208000010) The switch will enter exception mode if a client tries to do WAC authentication and executes MSN 8.5 to login in the same time. (DT200812010000001) The switch does not display SIM topology correctly on FireFox 3.01 and JAVA 1.60_11B03. (DI20081218000018) The switch can not be managed by SIM when DES-3528 acts as the SIM member and DES-3526 as the SIM commander. (DI200811210000011) When a client connects to the switch, uses FTP to download data via PPPoE connection, the FTP session disconnects after running for 1 ~ 2 minutes. (DI20090111000004) 		
v1.01.B035	1. The Bandwidth Control and ACL Flow Meter (flow-based bandwidth control) are inaccurate at the 1st second of traffic transmission. The allowed traffic bandwidth is around double times to the configured value. (Known Issue of 1.01.B030)		
v1.01.B030	.01.B030 First release		

* D-Link tracking number is enclosed in ()





Known Issues:

Firmware Version	Issues	Workaround
v2.01.B042	None	None
V2.00.B033	 The web interface does not support user logout and automatic logout when using Apple's Safari web browser. The web interface will generate error message when configuring CFM loopback function through it. However it is working fine when configuring using CLI. 	None
v1.03.B013	 DES-3552 has following known issues due to chipset limitation: Per port mapping of 802.1p priority and class is not supported when packets flowing between block 1 (port 1~24/51/52) and block 2 (port 25~50), and across devices in the same physical stack. When this happens the switch will use default mapping instead of the configured class mapping. Flow control is not supported for packets flowing between block 1 (port 1~24/51/52) and block 2 (port 25~50), and across devices in the same physical stack. Traffic flowing between block 1 and block 2 does not reach line rate (max. 5% packet loss) when the packet size is between 64~97 bytes. The CPU handles control signals and the utilization will be 11~13% with default settings. When mirroring egress untagged packets in line speed, the mirrored packets can not reach line speed. 	None
v1.01.B035	No new Known Issues.	None
v1.01.B030	The Bandwidth Control and ACL Flow Meter (flow-based bandwidth control) are inaccurate at the 1st second of traffic transmission. The allowed traffic bandwidth is around double times to the configured value. Starting from 2nd second the allowed bandwidth becomes normal.	Upgrade to v1.01.B035 or above.

Related Documentation:

- DES-3528/52 Series User Manual
- DES-3528/52 Series CLI Manual

