# DWL-3500AP / 8500AP/8600AP Firmware Release Notes

**Firmware Version:** 3.0.0.12
**Published:** Jan 14, 2011

**Content:**

## Revision History and System Requirement:

| Firmware Version | Date | Model | Hardware Version |
|---|---|---|---|
| Runtime: V3.0.0.12 | 14-Jan-11 | DWL-3500AP | A1G, A2G, A3G |
| | | DWL-8500AP | A1G, A2G, A3G |
| | | DWL-8600AP | A1G |
| Runtime: V2.2.0.22 | 20-Dec-09 | DWL-3500AP | A1G, A2G, A3G |
| | | DWL-8500AP | A1G, A2G, A3G |
| Runtime: V2.2.0.17 | 20-July-09 | DWL-3500AP | A1G, A2G |
| | | DWL-8500AP | A1G, A2G |
| Runtime: V2.2.0.15 | 06-July-09 | DWL-3500AP | A1G, A2G |
| | | DWL-8500AP | A1G, A2G |
| Runtime: V2.2.0.12 | 20-Feb-09 | DWL-3500AP | A1G, A2G |
| | | DWL-8500AP | A1G, A2G |
| Runtime: V2.2.0.4 | 30-Oct-08 | DWL-3500AP | A1G, A2G |
| | | DWL-8500AP | A1G, A2G |
| Runtime: V2.1.0.10 | 30-April-08 | DWL-3500AP | A1G, A2G |
| | | DWL-8500AP | A1G, A2G |
| Runtime: V2.1.0.9 | 19-Feb-08 | DWL-3500AP | A1G, A2G |
| | | DWL-8500AP | A1G, A2G |
| Runtime: V2.0.0.6 (DWL-8500AP ONLY) | 30-Sept-07 | DWL-8500AP | A1G, A2G |
| Runtime: V1.0.2.3. | 14-May-07 | DWL-3500AP | A1G |
| | | DWL-8500AP | A1G |
| Runtime: V1.0.1.5 | 27-Oct-06 | DWL-3500AP | A1G |
| | | DWL-8500AP | A1G |
| Runtime: V1.0.0.5 | 16-Aug-06 | DWL-3500AP | A1G |
| | | DWL-8500AP | A1G |

## New Features:

| Firmware Version | New Features |
|---|---|
| V3.0.0.12 | 1. Keep Management Parameters after Factory Reset: The APs support a CLI "factory-reset keepmanagement" command for the APs preserved certain configured parameters after the factory-defaults reset.<br><br>2. AP Hidden Page support: The AP Web UI supports a hidden page that can be accessed from the URL http://<AP address>/version.txt. This page displays some AP information including the AP firmware version and MAC address.<br><br>3. Default SSID values: The default values of the 16 SSIDs for each radio are dlink1-dlink16 (DWL-8600AP) and dlink1-dlink8 (DWL-x500AP).<br><br>4. Support secondary RADIUS server for wireless client authentication.<br><br>5. RADIUS server Failover support: a secondary or backup RADIUS server can be defined for wireless client authentication. If the primary RADIUS server is not available, the secondary RADIUS server will act as a "failover" server for wireless client authentication.<br><br>6. RADIUS server Fail-through support: In WPA/WPA2-Enterprise security, if the authentication is failed at primary RADIUS server, switch can pass wireless client information to secondary or backup RADIUS server for |

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| | authentication. |
| | 7.  SNMP Support: DWL-3500AP, 8500AP, and 8600AP are now accessible for management through SNMP interface that supports SNMPv1, SNMPv2c and SNMPv3 in standalone mode. |
| | 8.  WDS Support: Wireless Distribution System (WDS) links are now supported between standalone DWL-3500AP and DWL-8500AP. They are also supported between standalone DWL-8600APs. But they are not supported between a DWL-x500AP and a DWL-8600AP. The WDS configuration, whether among DWL-8600APs or among DWL-x500APs, is supported via Web UI and CLI but not through SNMP. |
| V2.2.0.22 | 1.  Add Brazil country code (BR) |
| V2.2.0.17 | 1.  Added detailed upgrade warning message in AP CLI, GUI and Switch GUI. |
| V2.2.0.15 | 1.  (DWL-8500AP ONLY) Added new Country Code for Russia.  Russian regulation requires that all channels from 5.35GHz to 5.65GHz be disabled. |
| V2.2.0.12 | 1.  (DWL-8500AP ONLY) Updated 802.11a regulatory information as well as power output for the following countries:<br><br>TW (Taiwan)– modified the channels to 52,56,60,64,149,153,157,161,165<br>SG (Singapore)– modified the channels to 36,40,44,48, 52,56,60,64,149, 153, 157, 161, 165<br>EC (Ecuador) – modified the channels to 36,40,44,48, 52,56,60,64, 149, 153, 157, 161, 165<br>CR (Costa Rica) – modified the channels to 36,40,44,48, 52,56,60,64, 149, 153, 157, 161, 165<br>RO (Romania) – modified the channels to 36, 40, 44, 48<br>MY (Malaysia) – modified the channels to 36, 40, 44, 48<br>PK (Pakistan) – modified the channels to 36, 40, 44, 48<br><br>2.  Added Brazil Domain to conform to FCC2 regulation |
| V2.2.0.4 | 1.  (DWL-8500AP ONLY) Conforms to US Regulation (DFS-2) by blocking the related wireless channels<br><br>2.  Creates a new factory reset option that retains the information needed to keep the AP in the same network and reachable.  New CLI options added to factory reset called "keepmanagement"<br><br>When the command "factory-reset keepmanagement" is issued, the following parameters on the AP will not be reset:<br><br>system country<br>management vlan-id<br>management static-ip<br>management static-mask<br>management dhcp-status<br>static-ip-route destination<br>static-ip-route mask<br>static-ip-route gateway<br>untagged-vlan vlan-id<br>untagged-vlan status<br><br>Note: keepmanagement will not show up using "tab" key in CLI to ensure privacy.<br><br>3.  Hosapd debug is sent to the syslog server when syslog is enabled on the AP. |

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| | This allows capturing bug information in the field. |
| | 4. AP now allows 240 VLANs total instead of 64 concurrently |
| V2.1.0.10 | None, firmware version increment to synchronize with DWS-3000 Series |
| V2.1.0.9 | 1. Supports Unified AP: Can work as Managed mode (managed by DWS-3000 series Unified Switch) or Standalone mode (without Unified Switch)<br><br>2. Supports Station Isolation under Managed and Standalone mode.<br><br>3. Supports Antenna Diversity configurability<br><br>4. Enhance client association trap & syslog – following pieces of information are added: SSID, Authentication method (none / static wep / wep_8021x / WAP_personal / WPA_enterprise)<br><br>5. Better MTU management – Dynamically change the MSS (Maximum Segment Size) field in the TCP SYN messages transmitted by wired clients into the tunneled VAPs as well as messages transmitted by wireless clients from the tunneled VAPs<br><br>6. Supports Path MTU Discovery (RFC 1191)<br><br>7. Reveals 'factory-reset' command in the managed mode<br><br>8. Provides Hardware Reset button functionality (button pressed for <2 seconds – reboot, button pressed for >= 5 seconds – factory reset)<br><br>9. (DWL-8500AP ONLY) Enables 2 radios on each 1 antenna<br><br>10. (DWL-8500AP ONLY) Disables W56 channels for Japan |
| V2.0.0.6 | DWL-8500AP ONLY, not supported by DWL-3500AP<br><br>1. Supports Path MTU Discovery (RFC 1191)<br><br>2. DWL-8500AP supports Unified AP: DWL-8500AP can work as Managed mode (managed by DWS-3000 series Unified Switch) or Standalone mode (without Unified Switch)<br><br>3. Reveals 'factory-reset' command in the managed mode<br><br>4. Provide hardware reset button functionality (button pressed < 2 seconds – reboot. Button pressed for >= 5 seconds – factory reset.)<br><br>5. Support Station Isolation under Standalone mode |
| V1.0.2.3 | 1. (DWL-8500AP ONLY) Supports the new Japan 5GHz (W52, W53, W56) regulation |
| V1.0.1.5 | 1. In Sentry mode the Access Point scans all channels independent of the switch profile configuration |
| V1.0.0.5 | 1. First Release, please refer to External Specification for S/W features |

## Problems Fixed:

| Firmware Version | Problems Fixed |
|---|---|
| V3.0.0.12 | 1. The View Neighboring Access Points page on the DWL-8600AP does not show all available APs [DEUR20100819000006]<br><br>2. The DWL-x500APs do not support the "space" as encryption key within the WPA/WPA2 encryption key, but "space" is included in ASCII support. [DEUR20100827000005].<br><br>3. When Syslog is set to display messages of Debug level and higher on DWL-3500AP, the error messages such as the following appear: "map_proc.c:504:map_proc_collect_client_ association_stats - Error in opening -- /proc/net/ieee80211/wlan1/sta/ 00:11:22:33:44:55" [DEUR20100720000007]<br><br>4. The management VLAN cannot be changed from the web interface on DWL-8600AP [DI20100413000001].<br><br>5. Attempts to compile the dlinkap MIB by using D-View are unsuccessful in DWL-8600AP. [DI20100326000001]<br><br>6. Gateway disappeared after uploading the configuration in DWL-8500AP [DI20100610000005] |
| V2.2.0.22 | 1. AP would keep sending packets to client who do not respond, taking up AP's bandwidth and causing poor wireless connection [DI20090914000006]<br><br>2. The Serial Number information in AP's GUI is not correct. The Serial Number field in AP basic setup page and AP CLI show commands are removed to fix this problem. |
| V2.2.0.17 | 1. AP would timeout when upgrading firmware on via Web GUI exceeds 7 minutes<br><br>2. An unnecessary configuration save during AP startup was causing the AP to reboot and corrupt configuration |
| V2.2.0.15 | 1. Sometimes RF Scan does not san other channels<br><br>2. AP hangs when two gateways are set for DHCP server |
| V2.2.0.12 | None |
| V2.2.0.4 | 1. Dynamic VLAN Assignment did not work properly.<br><br>2. AP reboots automatically due to memory leak |
| V2.1.0.10 | 1. (DWL-8500AP ONLY) If DWL-8500AP is operating with its 802.11a radio turned on in a country that requires radar detection for 802.11a channel selection (eg. GB, JP), sometimes the AP incorrectly becomes unmanaged |
| V2.1.0.9 | 1. The APs become "Connection Failed Access Points" occasionally<br><br>2. Wireless clients cannot access AP after the AP starts up for several days<br><br>3. A large ping packet to the L3 tunnel will be dropped<br><br>4. The DHCP packets are dropped by the AP occasionally<br><br>5. In the presence of high amounts of traffic the user experiences high ping-loss rate<br><br>6. Sometimes when a new client associates with the AP, the Switch (DWS-3000) displays a 'roam' trap message<br><br>7. AP Throughput is low. |
| V2.0.0.6 | DWL-8500AP FIRMWARE ONLY, not supported by DWL-3500AP |

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| | 1. Sometimes, when a new client associates with the AP, the switch (DWS-3000) displays a 'roam' trap message<br>2. The throughput is low under channel 11 of 802.11g band |
| V1.0.2.3 | 1. Fixed the EIRP value in some countries/regions<br>2. Fixed the issue that no 802.11a channels on UAE & Russia<br>3. Fixed WPA2 EAP-TLS |
| V1.0.0.5 | None |

## Known Issues:

| Firmware Version | Issues |
|---|---|
| V3.0.0.12 | 1. When WPA-Enterprise security is enabled, first-time roams between x500 APs and 8600 APs may require a new session to be established from the RADIUS server.<br>-The PMK exchanges between the x500 and 8600 APs failed due to the different size and structure of the PMK data on the x500 and 8600 APs. So the first client roaming between the x500 and 8600 APs is not a fast roaming.<br><br>2. (DWL-8600AP ONLY) DWL-8600AP client QoS feature works well for UDP-based applications but not for TCP-based applications.<br><br>3. WLAN Visualization feature only support IE6 or IE7 now. It might not work correctly with Internet Explorer 8. |
| V2.2.0.22<br><br>V2.2.0.17<br><br>V2.2.0.15<br><br>V2.2.0.12<br><br>V2.2.0.4<br><br>V2.1.0.10 | 1. Using TKIP/RC4 encryption with WPA2 results in roughly 30% lower throughput than using AES encryption due to a hardware limitation<br><br>2. Turbo / superG mode does not increase traffic rate significantly<br><br>3. The hardware encryption for WEP is used only when a single BSSID is active on the radio. A second VAP precludes the use of hardware encryption causing low throughput<br><br>4. The APs support manual antenna selection on a per-radio basis. Automatic antenna selection is not supported<br><br>5. Tunneling is not expected to work with port-based routing interfaces. All tunneled routing interfaces must be VLAN routing interfaces. APs should not be attached to the switch via port-based routing interfaces as well<br><br>6. If the PoE cable is suddenly removed from an AP, the associated clients fail over to other APs after 6 ping losses. The roaming functionality works properly if the AP is rebooted or the radio is turned down<br><br>7. If a captive portal instance is associated with a disabled VAP, re-enabling the VAP does not automatically enable the captive portal instance<br><br>8. Channel 14 is not supported for 802.11g band for Japan country code<br><br>9. (DWL-3500AP ONLY) A watchdog timer has been introduced to stop the AP from hanging up occasionally<br><br>10. (Firmware v2.2.0.22 ONLY) The Firmware version showed in WEB UI is 0.0.0, not 2.2.0.22. This issue will be fixed in next formal release. |
| V2.1.0.9 | 1. (DWL-8500AP ONLY) If DWL-8500AP is operating with its 802.11a radio turned on in a country that requires radar detection for 802.11a channel selection (eg. GB, JP), sometimes the AP incorrectly becomes unmanaged. A patch that fixes this problem has been provided in 2.1.0.10<br><br>2. An AP with firmware v2.1.0.9 may have problem cooperating with a switch with firmware v1.0.2.3 or below. Be sure the switch and the AP are both upgraded to v2.1.0.9 |
| V2.0.0.6 | 1. A switch with firmware v2.0.0.6 may have problem cooperating with an AP with firmware v1.0.2.6 or below. Be sure the switch and the AP are both upgraded to v2.0.0.6. (Only DWL-8500AP supports v2.0.0.6. DWL-3500AP does not support v2.0.0.6 at this moment. In an environment with DWL-3500AP, it is suggested to use v1.0.2.3 firmware for the switch |
| V1.0.2.3 | None |

| V1.0.1.5 | |
| V1.0.0.5 | |

## Related Documentation:

- DWS-3000 Series User Manual
- DWS-3000 Series CLI Manual
- DWL-3500AP & DWL-8500AP & DWL-8600AP Unified AP Guide