LAIRD WB45NBT EVENTS

Application Note   *v2.0*

INTRODUCTION

The goal of this document includes the following:

- List all events that are supported by the WB45NBT.
- List all applicable SDC_E_DISCONNECT reasons.
- List all applicable SDC_E_CMDERROR reasons.

EVENTS

The following table (Table 1) displays events that are supported by the WB45NBT.

Note: Events not included in the following list are not supported by the WB45NBT.

Table 1: WB45NBT Events

Event	Description
SDC_E_DHCP	A change to the DHCP leases file has been made.
SDC_E_READY	Indicates the wireless device is ready. Sent once after a power on or reset.
SDC_E_CONNECT_REQ	Indicates a request to connect to a network.
SDC_E_CONNECT	Indicates a connection to a network has occurred. It is considered a roam event if another connection event occurs without a disconnect event first occurring.
SDC_E_RECONNECT_REQ	Indicates a request to reconnect to a network to which the device was previously connected.
SDC_E_DISCONNECT_REQ	Indicates a request to disconnect from a network.
SDC_E_DISCONNECT	Indicates the device has lost connectivity to a network. See SDC_ATH_DISCONNECT_REASON for more information.
SDC_E_SCAN_REQ	Indicates a request to initiate a scan.
SDC_E_SCAN	Indicates an attempted scan is complete. Check status field for scan success or failure.
SDC_E_REGDOMAIN	Indicates the firmware's regulatory domain has changed.
SDC_E_CMDERROR	Indicates a firmware error. This is a fatal error and the should be reset.
SDC_E_ROAM	Indicates a roam has occurred. The MAC address field is the AP to which the device roamed. This should be seen along with SDC_E_CONNECT.
SDC_E_ASSOC	Indicates that the device has associated. This should be seen along with SDC_E_CONNECT.
SDC_E_DISASSOC	Indicates that the device has disassociated. This should be seen along with SDC_E_DISCONNECT.
SDC_E_AUTH	Indicates that the device has authenticated.

SDC_E_DISCONNECT REASONS

The following table (Table 2) describes applicable SDC_E_DISCONNECT Reasons (SDC_ATH_DISCONNECT_REASON).

Table 2: SDC_E_DISCONNECT Reasons

Reason	Description
NO_NETWORK_AVAIL	Unable to find the desired network.
LOST_LINK	Unable to maintain a link with desired network.
DISCONNECT_CMD	A Disconnect request was processed.
BSS_DISCONNECTED	The network explicitly disconnected the device.
AUTH_FAILED	802.11 authentication failed.
ASSOC_FAILED	802.11 association failed.
NO_RESOURCES_AVAIL	The AP has insufficient resources to complete the connection.
CSERV_DISCONNECT	The firmware has decided to disconnect from network. This can occur from host-influenced settings such as marking an AP as 'bad'.
INVALID_PROFILE	An attempt was made to reconnect to a network that no longer matches the current profile.
DOT11H_CHANNEL_SWITCH	The AP sent a 802.11h Channel Switch Announcement.
PROFILE_MISMATCH	The AP has changed its profile.
CONNECTION_EVICTED	The module was evicted from the network.
IBSS_MERGE	The station has merged with another IBSS.

SDC_E_CMDERROR REASONS

The following table (Table 3) describes applicable SDC_E_CMDERROR Reasons (SDC_ATH_CMDERROR_REASON).

Table 3: SDC_E_CMDERROR Reasons

Reason	Description
INVALID_PARAM	An invalid parameter was sent to the firmware.
ILLEGAL_STATE	The firmware is in an illegal state.
INTERNAL_ERROR	An internal error has occurred in the firmware.

REVISION HISTORY

Revision	Date	Description	Initiated By
1.0	22 July 2014	Initial Release	John Imboden
2.0	24 Oct 2014	Standardized formatting, added introduction	Sue White