

WL1271 ini File Description and Parameters User's Guide



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Revision History

Version	Date	Description
1.0	January 2010	Release

Reference Documents

The documents listed below provide complementary specifications and information for the device:

- NONE

About This Document

This document describes the WiLink 6.1 *.ini file and its parameters.

The document contains the following chapters:

- **Chapter 1, Overview**, page 6, introduces the WiLink ini file.
- **Chapter 2, Ini File Parameters**, page 8, provides a summary and a detailed table describing each parameter.

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Introduction

The *.ini file configures driver behavior and is loaded upon driver initialization, in order to customize its behavior to best meet customer needs.

Parameters in the *.ini file may be changed by editing the *.ini file entries using a text editor. Parameter changes take effect during the following driver load.

The *.ini file is located under the /WiLink/platforms/ps/linux directory.

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1.1 Synopsis

Each *.ini line item adheres to the following convention:

Param = Value

Ini File Parameters

Unless otherwise noted, parameters are referenced to the Front End Module's (FEM's) single-ended RFANT port (without the band-pass filter at the FEM output).

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2.1 Short Description

Table 1: Ini File Parameters

Parameter	Description	Detailed Description
SmeConnectMode	Connection scan initiator	2.2.1
WME_Enable	QoS support	2.2.2
dot11NetworkType	802.11 mode	2.2.3
SmeScanGChannelList	Channel list to be scanned when working in G band	2.2.4
SmeScanAChannelList	Channel list to be scanned when working in A band	2.2.5
BeaconListenInterval	Number of N-beacons to wake up	2.2.6
DtimListenInterval	Number of N-DTIMs to wake up	2.2.7
dot11PowerMode	Default Power mode profile of the station	2.2.8
PowerMgmtHangOverPeriod	Station awake time after sending a frame to the AP	2.2.9
AutoPowerModeDozeMode	Default Doze mode	2.2.10
AutoPowerModeActiveTh	Number of frames per second for moving from Doze mode to Active mode	2.2.11
AutoPowerModeDozeTh	Number of frames per seconds for moving from Active mode to Doze mode	2.2.12
defaultPowerLevel	Default power level when station not connected	2.2.13
PowerSavePowerLevel	Default power level when station connected	2.2.14
TxPower	Default transmission power	2.2.15
dot11FragmentationThreshold	Minimum frame size for fragmentation	2.2.16
dot11RTSThreshold	Frame size to send Request To Send frame	2.2.17
WPAMixedMode	WPA and the WPA2 support	2.2.18
RSNPreAuthentication	Preauthentication support	2.2.19
AllowedChannelsTable24	Allowed channels in 2.4 GHz radio band	2.2.20
AllowedChannelsTable5	Allowed channels in in 5.0 GHz radio band	2.2.21
SpectrumManagement	802.11h standard support	2.2.22
RxBroadcastInPs	Reception of broadcast frames while in PS support	2.2.23
RatePolicyUserShortRetryLimit	Number of transmission retries for short frames	2.2.24
RatePolicyUserLongRetryLimit	Number of transmission retries for long frames	2.2.25
BeaconReceiveTime	Time to wait for the beacon	2.2.26
desiredPsMode	Global power-save delivery protocol support	2.2.27
QOS_wmePsModeBE	Power-save delivery protocol for Best Effort access	2.2.28
QOS_wmePsModeBK	Power-save delivery protocol for Background access	2.2.29
QOS_wmePsModeVI	Power-save delivery protocol for Video access	2.2.30
QOS_wmePsModeVO	Power-save delivery protocol for Voice access	2.2.31
Clshr_Type	Packet classification type	2.2.32
NumOfDstIPPortClassifiers	Number of classifiers	2.2.33
IPPortClassifier00_IPAddress	IP address and IP port for mapping to user priority	2.2.34
IPPortClassifier00_Port	IP port for mapping to user priority	2.2.35
IPPortClassifier00_DTag	IP port classifier for mapping to user priority	2.2.36

Parameter	Description	Detailed Description
NumOfCodePoints	Number of classifiers	2.2.37
DSCPClassifier00_CodePoint	Code point for mapping to user priority	2.2.38
DSCPClassifier00_DTag	Classifier for mapping to user priority	2.2.39
STRdot11MaxReceiveLifetime	Time to maintain a frame fragment before dropping it	2.2.40

2.2 Detailed Description

2.2.1 *SmeConnectMode*

If set to AUTO, the driver initiates a SCAN automatically, based on the configuration, and selects an appropriate BSSID. If set to MANUAL, the driver does not initiate a SCAN operation and does not select a BSSID. Instead, the application initiates the scan.

Values: **0:** AUTO
 1: Manual

Default: 1

2.2.2 *WME_Enable*

This parameter defines whether or not quality of service is supported.

Values: **0:** Disabled
 1: Enabled

Default: 1

2.2.3 *dot11NetworkType*

This parameter defines the 802.11 mode.

Values: **1:** B mode
 2: A mode
 3: G mode
 4: A/G Dual mode

Default: 3

2.2.4 *SmeScanGChannelList*

This parameter provides the list of channels to be scanned when working in G band.

Values: List of channels in G band, from 1 to 14

Default: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

2.2.5 *SmeScanAChannelList*

This parameter provides the list of channels to be scanned when working in A band.

Values: List of channels in A band, from 36 to 64

Default: 36, 40, 44, 48, 52, 56, 60, 64

2.2.6 ***BeaconListenInterval***

This parameter defines the number of N-beacons to wake up. It is used when working in Short Doze mode.

Values: 1 - 50

Default: 1

2.2.7 ***DtimListenInterval***

This parameter defines the number of N-DTIMs to wake up. It is used when working in Long Doze mode.

Values: 1 - 50

Default: 1

2.2.8 ***dot11PowerMode***

This parameter defines the default Power mode profile of the station.

Values: **0:** Auto. The Power mode toggles between Active mode and the defined Doze mode.

1: Always active.

2: Short doze.

3: Long doze.

Default: 0

2.2.9 ***PowerMgmtHangOverPeriod***

This parameter defines the time, in milliseconds, during which the station will remain awake after sending a frame to the AP, indicating that the station is going into Power Save.

Values: 5 - 255

Default: 10

2.2.10 ***AutoPowerModeDozeMode***

This parameter defines the default Doze mode (short or long) that Auto mode uses when toggling between doze and active.

Values: **2:** Short doze

3: Long doze

Default: 2

2.2.11 ***AutoPowerModeActiveTh***

This parameter specifies the number of frames per seconds for moving from Doze mode to Active mode, if Power mode is set to Auto.

Values: 2 - 30,000

Default: 15

2.2.12 AutoPowerModeDozeTh

This parameter specifies the number of frames per seconds for moving from Active mode to Doze mode, if Power mode is set to Auto.

Values: 1 - 30,000

Default: 8

2.2.13 defaultPowerLevel

This parameter specifies the default power level to be used when the station is not connected.

Values: 0: ELP

1: Power down

2: Awake

Default: 0

2.2.14 PowerSavePowerLevel

This parameter specifies the default power level to be used when the station is connected.

Values: 0: ELP

1: Power down

2: Awake

Default: 0

2.2.15 TxPower

This parameter specifies the default transmission power, in dBm * 10.

Values: 0 - 250

Default: 205

2.2.16 dot11FragmentationThreshold

This parameter specifies the minimum frame size, in bytes, used for fragmentation.

Values: 256 - 4,096 (must be a multiple of 256)

Default: 4,096

2.2.17 dot11RTSThreshold

This parameter specifies the threshold of the frame size, in bytes, to send Request To Send frame.

Values: 0 - 4,096

Default: 4,096

2.2.18 **WPAMixedMode**

This parameter defines whether both the WPA and the WPA2 are supported.

Values: **0:** Only the WPA is supported.

1: Both the WPA and WPA2 are supported.

Default: 1

2.2.19 **RSNPreAuthentication**

This parameter defines if Preauthentication is supported.

Values: **0:** Not supported

1: Supported

Default: 1

2.2.20 **AllowedChannelsTable24**

When working in 2.4 GHz radio band, this parameter defines the following for each channel:

- **Bit 7:** Whether it is allowed to be scanned
- **Bit 6:** Whether it is allowed to be scanned in Active mode
- **Bits 0-4:** The maximum Tx power allowed when scanning

Each byte correlates to one channel in sequential order.

Values: 00-FF for each channel

Default: FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF

2.2.21 **AllowedChannelsTable5**

When working in 5.0 GHz radio band, this parameter defines the following for each channel:

- **Bit 7:** Whether it is allowed to be scanned
- **Bit 6:** Whether it is allowed to be scanned in Active mode
- **Bits 0-4:** The maximum Tx power allowed when scanning

Each byte correlates to one channel in sequential order.

Values: 00-FF for each channel

Default: FF000000FF000000FF000000FF000000FF000000FF000000
FF000000FF00
00FF000000FF000000
FF000000FF000000FF000000FF000000FF000000FF000000
FF000000FF000000FF0000000000000000FF000000FF0000
00FF000000FF000000FF000000000000000000000000000000

2.2.22 ***SpectrumManagement***

This parameter defines if the 802.11h standard is supported.

Values: **0:** Not supported

1: Supported

Default: 0

2.2.23 ***RxBroadcastInPs***

This parameter defines whether or not the reception of broadcast frames while in PS is enabled.

Values: **0:** Disabled

1: Enabled

Default: 1

2.2.24 ***RatePolicyUserShortRetryLimit***

This parameter specifies the number of transmission retries for short frames (less than or equal to dot11RTSThreshold).

Values: 1 - 255

Default: 10

2.2.25 ***RatePolicyUserLongRetryLimit***

This parameter specifies the number of transmission retries for long frames (greater than dot11RTSThreshold).

Values: 1 - 255

Default: 10

2.2.26 ***BeaconReceiveTime***

This parameter defines how much time, in milliseconds (msecs), to wait for the beacon, before going back into power save.

Values: 10 - 1,000 msecs

Default: 50 msecs

2.2.27 ***desiredPsMode***

This parameter defines the global power-save delivery protocol.

Values: **0 – Standard PS:** The station sends a PsPoll frame in order to retrieve the data buffered at the AP. As a result, the AP sends only one frame to the station.

1 – UPSD: The station sends a data frame in order to retrieve the data buffered at the AP. As a result, the AP sends data frames according to the service period indicated by the station.

Default: 1

2.2.28 QOS_wmePsModeBE

This parameter defines the power-save delivery protocol for the Best Effort access category.

Values: 0 - 1 (For exact values, refer to the desiredPsMode field.)

Default: 0

2.2.29 QOS_wmePsModeBK

This parameter defines the power-save delivery protocol for the Background access category.

Values: 0 - 1 (For exact values, refer to the desiredPsMode field.)

Default: 0

2.2.30 QOS_wmePsModeVI

This parameter defines the power-save delivery protocol for the Video access category.

Values: 0 - 1 (For exact values, refer to the desiredPsMode field.)

Default: 0

2.2.31 QOS_wmePsModeVO

This parameter defines the power-save delivery protocol for the Voice access category.

Values: 0 - 1 (For exact values, refer to the desiredPsMode field.)

Default: 1

2.2.32 Clsfr_Type

This parameter defines the packet classification type. The classified packet is mapped to one of the QoS user priorities and is transmitted over the WLAN using the corresponding access category.

Values: **0:** Classification according to 802.1d tag
 1: Classification according to Diffserv control service point
 2: Classification according to IP port
 3: Classification according to IP port and IP address

Default: 3

2.2.33 NumOfDstIPPortClassifiers

This parameter defines the number of classifiers when the classification type is based on the IP port and IP address.

Values: 0 - 16

Default: 0

2.2.34 **IPPortClassifier00_IPAddress**

Frames destined to this IP address and to the IP port defined in IPPortClassifier00_Port are mapped to the user priority defined in IPPortClassifier00_DTag and are transmitted over the WLAN using the corresponding access category.

Values: 0 0 0 0 – 0xFF 0xFF 0xFF 0xFF

Default: 0a 03 01 C9 (IP address 10.3.1.201)

2.2.35 **IPPortClassifier00_Port**

Refer to *Section 2.2.34, IPPortClassifier00_IPAddress*, for more information.

Values: 1 - 65,535

Default: 5,004

2.2.36 **IPPortClassifier00_DTag**

Refer to *Section 2.2.34, IPPortClassifier00_IPAddress*, for more information.

Values: 0 - 7

Default: 0

There are 16 IP address and IP port classifiers:

- IPPortClassifier00_IPAddress – IPPortClassifier15_IPAddress
- IPPortClassifier00_Port – IPPortClassifier15_Port
- IPPortClassifier00_DTag – IPPortClassifier15_DTag

2.2.37 **NumOfCodePoints**

This parameter defines the number of classifiers when the classification type is based on the Diffserv control service point.

Values: 0 - 16

Default: 0

2.2.38 **DSCPClassifier00_CodePoint**

Frames with this code point are mapped to the user priority defined in DSCPClassifier00_DTag and are transmitted over the WLAN using the corresponding access category.

Values: 0 - 63

Default: 0

2.2.39 DSCPClassifier00_DTag

Refer to *Section 2.2.38, DSCPClassifier00_CodePoint*, for more information.

Values: 0 - 7

Default: 0

There are 16 DSCP classifiers:

- DSCPClassifier00_CodePoint – DSCPClassifier00_CodePoint
- DSCPClassifier15_DTag – DSCPClassifier15_DTag

2.2.40 STRdot11MaxReceiveLifetime

This parameter specifies the maximum time to keep a fragment of a frame that was not reassembled yet, before deciding to drop it.

Values: 0 - 0xFFFFFFFF

Default: 512 msecs