



WCNSS Android Parameters Configuration Guide

80-Y0476-5 Rev. D

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Revision history

Revision	Date	Description
A	May 2013	Initial release
B	May 2013	Updated Config Param on page 13
C	May 2014	Updated table in Section 2.1; added Sections 2.2-2.7
D	July 2014	Updated table in Section 2.1-2.7; merged glossary in the tables

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1 Introduction

1.1 Purpose

This document describes how to configure and operate the Qualcomm[®] WCNSS host device driver on the Android platform and the Qualcomm MSM8960/8974 solution.

1.2 Scope

This document is intended for customers who use or who plan to use the WCNSS solution in their Android phone designs.

1.3 Conventions

Function declarations, function names, type declarations, and code samples appear in a different font, e.g., #include.

1.4 References

Reference documents, which may include Qualcomm documents, standards, and resources, are listed in [Table 1-1](#). Reference documents that are no longer applicable are deleted from this table; therefore, reference numbers may not be sequential.

Table 1-1 Reference documents and standards

Ref.	Document	
Qualcomm		
Q1	<i>Application Note: Software Glossary for Customers</i>	CL93-V3077-1
Q2	<i>WCNSS Android Configuration Guide</i>	80-N8140-1
Q3	<i>WCN36X0(A) Training WLAN Tx CLPC Characterization Using QSPR Tools</i>	80-WL300-25
Q4	<i>QCA WCN36x0 WLAN Power Optimization Guide</i>	80-Y0513-3
Q5	<i>QCA WCN36x0 Software Architecture</i>	80-Y0513-1
Standards		
S1	<i>Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications Amendment 4: Enhancements for Higher Throughput</i>	IEEE P802.11n/D7.0, Sep 2008
S2	<i>Codes for the Representation of Names of Countries and Their Subdivisions – Part 1: Country Codes</i>	ISO/IEC 3166-1

1.5 Technical assistance

For assistance or clarification on information in this guide, submit a case to Qualcomm CDMA Technologies at <https://support.cdmatech.com/>.

If you do not have access to the CDMA Tech Support Service website, register for access or send email to support.cdmatech@qualcomm.com.

1.6 Acronyms

For definitions of terms and abbreviations, see [Q1](#).

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2 System Configuration

2.1 STA

Config. Param.	Description	Min	Max	Default
gTxBFEnable	Enable/disable Tx beam forming	0	1	0
gTxBFCsnValue	Certain TxBF capability APs have an issue: When pronto advertises the CSN value as 3, it uses the 2 antenna in the NDPA packet, but is supposed to use the 3 antenna in the NDPA packet. If the CSN value is advertised as 2, it uses 3 antennas in the NDPA packet. INI configuration is needed for setting the CSN value.	0	3	2
gVhtChannelWidth	Channel width for VHT mode: 1 – 20 MHz and 40 MHz 2 – 80 MHz	0	2	2
gVhtRxMCS	VHT Rx MCS values: Valid values are 0, 1, 2. If commented out, the default value is 0. 0=MCS0-7 1=MCS0-8 2=MCS0-9	0	2	0
gVhtTxMCS	VHT Tx MCS values: Valid values are 0, 1, 2. If commented out, the default value is 0. 0=MCS0-7 1=MCS0-8 2=MCS0-9	0	2	0
gDisableLDPCWithTxbfAP	Disable the LDPC when the AP is TxBF-capable. This is a workaround for a throughput issue from the AP test firmware.	0	1	1
gPNOScanSupport	Advertise PNO driver capability: 0 – Disable driver PNO capability 1 – Enable driver PNO capability	1	0	1
gPNOScanTimerRepeatValue	The driver gets only one timer interval, which is hard-coded in the supplicant for 10000 ms. Until the PNO is disabled, the firmware repeats the PNO scan every 10 sec. Taking power consumption into account, 6 timers will be used; the timer value is increased exponentially, i.e., to 10, 20, 40, 80,160, 320 sec. The number of scan cycles for each timer is configurable through INI parameter gPNOScanTimerRepeatValue. If it is set to 0, only one timer will be used and the PNO scan cycle will be repeated after each interval specified by the supplicant until PNO is disabled.	6	0	0xffffffff
gRoamingTime	CSR roaming enable (1), disable (0)	0	4294967 UL	10
gEnableFastRoamInConcurrence	Enable legacy fast roaming (LFR) on the STA link during concurrent sessions.	0	1	1
gRssiFilterPeriod	Increased this value for the non-CCX AP. This is caused by firmware RSSI monitoring the consumer of this value that is on by default. To impact power numbers this is set to a high value.	0	255	5
gImmediateRoamRssiDiff	RSSI delta to allow STA to immediately roam to a qualified AP without registering for the reassociation threshold. A value of 0 means to do an immediate roam if any qualified AP is found from scanning.	0	125	0

Config. Param.	Description	Min	Max	Default
gSelect5GHzMargin	Prefer connecting to 5G AP even if the RSSI is lower by gSelect5GHzMargin dBm than 2.4G AP. This feature requires the dependent cfg.ini gRoamPrefer5GHz to be set to 1	0	60	0
gNeighborScanTimerPeriod	CCX support and fast transition, the time between individual channels in scan.	3	300	200
gNeighborLookupThreshold	0 indicates the host is to calculate the adaptive threshold based on the minimum supported data rate, and the RSSI threshold triggers a background scan to find potential roam candidates.	0	120	0
gNeighborScanChannelMaxTime	Minimum dwell time for scan.	3	300	30
gNeighborReassocThreshold	RSSI threshold to trigger roam (this threshold is registered only if there are candidates found after the scan)→obsolete from LFR2.0	10	125	82
gNeighborScanChannelMinTime	Minimum dwell time for scan.	10	40	20
gMaxNeighborReqTries	Maximum retrial counter for reassociating REQ during roaming.	1	4	3
gNeighborScanRefreshPeriod	Refresh interval between background scans [ms]	1000	60000	20000
gEmptyScanRefreshPeriod	Periodic background scanning interval if no candidate is found [ms].	0	60000	0
gRrmEnable	This flag controls the capabilities (11 k) included in the capabilities field. This field controls whether the station supports 11 k.	0	1	0
gRrmOperChanMax	Section 11.10.3 IEEE std. 802.11k-2008 Maxduration = $2^{(maxDuration - 4)} * bcnIntvl$, max duration = $2^{-1} * bcnIntvl$ (50% of bcn intvl)	0	8	3
gRrmNonOperChanMax	Section 11.10.3 IEEE std. 802.11k-2008 max duration = $2^{(max duration - 4)} * bcnIntvl$, max duration = $2^{-1} * bcnIntvl$ (50% of bcn intvl).	0	8	3
gRrmRandnIntvl	If defined, WLAN_FEATURE_VOWIFI.	10	100	100
gRoamPrefer5GHz	When both APs (2.4 GHz and 5 GHz) are reported on the same bucket, 5 GHz is selected first when gRoamPrefer5GHz=1 is set in the INI file.	0	1	1
gRoamIntraBand	To disable, set gRoamIntraBand=0 (roaming across band, if defined (WLAN_FEATURE_VOWIFI_11R) defined (FEATURE_WLAN_CCX) defined (FEATURE_WLAN_LFR)). To enable, set gRoamIntraBand=1 (roaming within band).	0	1	0
FastTransitionEnabled	This flag controls fast transition in case of 11r and CCX. With this the whole neighbor roam, pre-authorization, reassociation can be turned on or off. With this turned off, 11r will not work. For 11r, this flag has to be on. For CCX, fast roam will not work.	0	1	0
RoamRssiDiff	This parameter is used to decide whether to roam. AP1 is the currently associated AP and AP2 is chosen for roaming. The roaming will occur only if AP2 has a better signal quality and it has an RSSI better than AP1 in terms of RoamRssiDiff and RoamRssiDiff is the number of units (typically measured in dB), and AP2 is better than AP1. This check is not done if the value is zero. Check whether the AP to which you are roaming is better than current AP in terms of RSSI. Checking is disabled if set to zero. Otherwise, it will use this value to determine to how much better the RSSI of the new/roamable AP should be for roaming.	0	30	5
gWESModeEnabled	This parameter is used to set Wireless Extended Security Mode, if defined as (WLAN_FEATURE_VOWIFI_11R) defined (FEATURE_WLAN_CCX) defined (FEATURE_WLAN_LFR).	0	1	0
gRoamScanNProbes	If defined as (WLAN_FEATURE_VOWIFI_11R) defined (FEATURE_WLAN_CCX) defined (FEATURE_WLAN_LFR).	1	10	2
gRoamScanHomeAwayTime	To determine the time between consecutive channel scans, if defined as (WLAN_FEATURE_VOWIFI_11R) defined (FEATURE_WLAN_CCX) defined (FEATURE_WLAN_LFR).	3	300	3
FastRoamEnabled	Enable/disable legacy (non-CCX, non-802.11r) Fast Roaming Support.	0	1	0

Config. Param.	Description	Min	Max	Default
MAWCEnabled	Enable/disable MAWC (Motion Added Wi-Fi Connectivity) feature.	0	1	0
gRoamScanOffloadEnabled	Enable/disable Roam Scan Offload.	0	1	1
CcxEnabled	Enable/disable CCX feature.	0	1	0
InfraInactivityInterval	Setting inactivity interval for AddTspec communication	0	4294967295UL	0
ImplicitQosIsEnabled	Enable/disable the driver to initiate ADDTS REQ/RSP to get the traffic stream admitted to AP in case the phone is trying to transmit an AC frame that has ACM set by the AP.	0	1	1
gOperatingChannel	IBSS operating channel	0	14	1
gEnforce11dChannel	Whether to limit the channels to the ones set in Csr11dInfo. If true, the operational channels are limited to the default channel list. It is an "AND" operation between the default channels and the channels in the 802.11d IE.	0	1	0
gEnforceCountryCodeMatch	When true, an AP with an unknown country code will not be seen. "Unknown country code" means either the AP does not have 11d IE or a domain for the country code in its 11d IE cannot be found.	0	1	0
gEnforceDefaultDomain	When true, only APs in the default domain can be seen. If the AP has "unknown country code", or the domain of the country code doesn't match the default domain, the AP is not acceptable.	0	1	0
gHeartbeat24	The number of beacon misses that the connected AP would consider as out of range.	0	65535	40
gPowerUsage	Determine the profile to use for IMPS sleep time and BMPS listen interval values.	Min	Max	Mod
gImpsMinSleepTime, gImpsModSleepTime, gImpsMaxSleepTime	Sleep time when the device is in idle state. An increase in the sleep duration (seconds) during IMPS 0 implies no periodic wake up from IMPS. Periodic wakeup is unnecessary if idle scan is disabled.	0	65535	5, 10, 15
gBmpsMinListenInterval, gBmpsModListenInterval, gBmpsMaxListenInterval	The listen interval of the STA for each power usage profile.	1	65535	1
gAutoBmpsTimerValue	Traffic measure period for BMPS timer.	1000	4294967295UL	1000
gMaxRxAmpduFactor	Maximum value of Rx AMPDU factory defined in HT Capability IE.	0	3	3
gScanResultAgeCount	Aging count for BSS entry maintained in the driver scan result table. If the driver cannot find the BSS for the amount of scans, it would remove the entry from the scan result table	1	100	3
gScanResultAgeNCNPS, gScanResultAgeNCPS, gScanResultAgeCNPS, gScanResultAgeCPS	Scan result aging time thresholds in different states: (i) Not connect, no power save (ii) Not connect, power save (iii) Connect, no power save (iv) Connect, power save	10	10000	50, 300, 150, 600
gRssiCatGap	Configure bin size to categorize candidates found from scan into RSSI bin group.	5	100	5
gShortPreamble	Enable/disable short preamble capability.	0	1	1
gAutolbssBssid	BSSID in IBSS.	0	1	1
80211elsEnabled	Enable/disable 802.11e support.	0	1	0
UapsdMask	The ACs to set up U-APSD for at association.	0x00	0xFF	0x00
PktClassificationBasis	0 - DSCP 1 - 802.1Q	0	1	0
InfraDirAcVo	WMM parameters for VO, WLAN_QCT_CUST_WMM_TSDIR_BOTH	0	3	3
InfraNomMsduSizeAcVo	WMM parameters for VO	0x0	0xFFFF	0x80D0

Config. Param.	Description	Min	Max	Default
InfraMeanDataRateAcVo	WMM parameters for VO	0x0	0xFFFFFFFF	0x14500
InfraMinPhyRateAcVo	WMM parameters for VO	0x0	0xFFFFFFFF	0x5B8D80
InfraSbaAcVo	WMM parameters for VO	0x2001	0xFFFF	0x2001
InfraDirAcVi	WMM parameters for VI, WLAN_QCT_CUST_WMM_TSDIR_BOTH	0	3	3
InfraNomMsduSizeAcVi	WMM parameters for VI	0x0	0xFFFF	0x85DC
InfraMeanDataRateAcVi	WMM parameters for VI	0x0	0xFFFFFFFF	0x57E40
InfraMinPhyRateAcVi	WMM parameters for VI	0x0	0xFFFFFFFF	0x5B8D80
InfraSbaAcVi	WMM parameters for VI	0x0	0xFFFF	0x2001
InfraDirAcBe	WMM parameters for BE, WLAN_QCT_CUST_WMM_TSDIR_BOTH	0	3	3
InfraNomMsduSizeAcBe	WMM parameters for BE	0x0	0xFFFF	0x85DC
InfraMeanDataRateAcBe	WMM parameters for BE	0x0	0xFFFFFFFF	0x493E0
InfraMinPhyRateAcBe	WMM parameters for BE	0x0	0xFFFFFFFF	0x5B8D80
InfraSbaAcBe	WMM parameters for BE	0x2001	0xFFFF	0x2001
InfraDirAcBk	WMM parameters for BK, WLAN_QCT_CUST_WMM_TSDIR_BOTH	0	3	3
InfraNomMsduSizeAcBk	WMM parameters for BK	0x0	0xFFFF	0x85DC
InfraMeanDataRateAcBk	WMM parameters for BK	0x0	0xFFFFFFFF	0x493E0
InfraMinPhyRateAcBk	WMM parameters for BK	0x0	0xFFFFFFFF	0x5B8D80
InfraSbaAcBk	WMM parameters for BK	0x2001	0xFFFF	0x2001
InfraDirAcBe	WMM parameters for BE, WLAN_QCT_CUST_WMM_TSDIR_BOTH	0	3	3
InfraNomMsduSizeAcBe	WMM parameters for BE	0x0	0xFFFF	0x85DC
InfraMeanDataRateAcBe	WMM parameters for BE	0x0	0xFFFFFFFF	0x493E0
InfraMinPhyRateAcBe	WMM parameters for BE	0x0	0xFFFFFFFF	0x5B8D80
InfraSbaAcBe	WMM parameters for BE	0x2001	0xFFFF	0x2001
InfraDirAcBk	WMM parameters for BK, WLAN_QCT_CUST_WMM_TSDIR_BOTH	0	3	3
InfraNomMsduSizeAcBk	WMM parameters for BK	0x0	0xFFFF	0x85DC
InfraMeanDataRateAcBk	WMM parameters for BK	0x0	0xFFFFFFFF	0x493E0
InfraMinPhyRateAcBk	WMM parameters for BK	0x0	0xFFFFFFFF	0x5B8D80
InfraSbaAcBk	WMM parameters for BK	0x2001	0xFFFF	0x2001
WfqBkWeight, WfqBeWeight, WfqViWeight, WfqVoWeight	AC weights	1	0xFF	1, 3, 5, 7
burstSizeDefinition	WMM TSPEC burst size	0	1	0
tsInfoAckPolicy	WMM info ACK policy	0x00	0x01	0x00
SingleTIDRC	Single RC for all TID: 0 – Separate replay counter for all TID 1 – Single replay counter for all TID	0	1	1

Config. Param.	Description	Min	Max	Default
gAddTSWhenACMIsoff	Flag to allow STA to send AddTspec even when ACM is Off instead of reassoc; to send ADDTS/DELTS even when ACM is off for that AC 1; and to send AddTs even when ACM is not set for the AC.	0	1	0
gValidateScanList	channelPowerInfoList24 has been corrupted. Set this flag to true while trying to detect when it happens. This is being added into the code because it cannot be reproduced easily. It is not known when it happens.	0	1	0
gReportMaxLinkSpeed	Indicates whether actual (0) or max (1) or max scaled (2) RSSI is to be reported.	0	2	2
gLinkSpeedRssiHigh	Threshold value to report the maximum possible speed with RSSI scaling.	-127	0	-55
gLinkSpeedRssiMed	Threshold value to report the moderate possible speed with RSSI scaling.	-127	0	-65
gLinkSpeedRssiLow	Threshold value to report the least possible speed with RSSI scaling.	-127	0	-80
gEnableFirstScan2GOnly	Enable/disable the first scan for 2.4G channels only after Wi-Fi is turned on.	0	1	0
gNumBuffAdvert	Number of buffers to be advertised during ADDBA negotiation.	0	128	64
gEnableLpwrImgTransition	Enable/disable LPWR image (cMEM uBSP) transition.	0	1	1
gFragmentationThreshold	Fragmentation threshold	256	8000	8000
RTSThreshold	RTS threshold (depends on maximum frame size)	0	2347	2347
WmmIsEnabled	WMM is enabled: 1 – Enable, QoS only 2 – Enable, but not QoS 0 – Auto, join any AP	0	2	0
gThermalMitigationEnable	Enable thermal mitigation	0	1	0
gPassiveMaxChannelTime	Maximum dwell time on each channel for passive scanning	0	10000	110
gPassiveMinChannelTime	Minimum dwell time on each channel for passive scanning	0	10000	60
gActiveMaxChannelTime	Maximum dwell time on each channel for active scanning	0	10000	40
gActiveMinChannelTime	Minimum dwell time on each channel for active scanning	0	10000	20
g11dSupportEnabled	Enable/disable 11d support.	0	1	1
g11hSupportEnabled	Enable/disable 11h support.	0	1	1
gCountryCodePriority	Driver can retrieve the runtime country code from either the AP 11d IE or from the framework over a private IOCTL command. This flag gives priority to one of them. 0 – Country code from AP 11d IE has higher priority. 1 – Country code from framework over private IOCTL command has higher priority.	0	1	0
gEnableSuspend	Enable suspend or not: 1 – Enable standby 2 – Enable deep sleep 3 – Enable Multicast/Broadcast filter	0	3	1
gEnableDriverStop	0 – No support for suspend 2 – Map to deep sleep	0	2	0
gWowlPattern	set Wowl pattern as format of gWowlPattern=<pattern>[;<pattern>]. each pattern is "hex ascii" of the form: PP:QQ:RR:SS PP: pattern size -- 2 hex ascii digits, 01-80 (i.e. 1-128) QQ: mask size -- 2 hex ascii digits, 01-80 (i.e. 1-128) RR: pattern -- 2*PP hex ascii digits SS: mask -- 2*QQ hex ascii digits			
gEnableImps	Enable IMPS or not. See Q4 for details.	0	1	1
gEnableBmps	Enable BMPS or not. See Q4 for details.	0	1	1

Config. Param.	Description	Min	Max	Default
gEnableAdaptRxDrain	Configuration added to enable/disable CTS2SELF in adaptive Rx drain feature.	0	1	1
gEnableOxygenNwk	Configuration to enable/disable oxygen feature. SS-specific only. No need to mention in document.	0	1	0
gDot11Mode	Phy Mode (auto, b, g, n, etc/) Valid values are 0-9, with 0 = Auto, 4 = 11n, 9 = 11ac	0	7(without 11ac), 9(with 11ac)	4(without 11ac), 9(with 11ac)
gChannelBondingMode24GHz	2.4 GHz channel bonding	0	10	0
gChannelBondingMode5GHz	5 GHz channel bonding	0	10	0
gFixedRate	Fix transmit data rate; 0 means automatic rate adaptation.	0	44	0
glbssBssid	BSSID to be used when creating IBSS.	000000 000000	ffffffff	000AF5040506
Intf0MacAddress	Assigned MAC addresses – Used until NV items are in place. Each byte of the MAC address is represented in the hex format as XX.	000000 000000	ffffffff	000AF5898980
Intf1MacAddress	Assigned MAC addresses – Used until NV items are in place. Each byte of the MAC address is represented in the hex format as XX.	000000 000000	ffffffff	000AF5898981
Intf2MacAddress	Assigned MAC addresses – Used until NV items are in place. Each byte of the MAC address is represented in hex format as XX.	000000 000000	ffffffff	000AF5898982
Intf3MacAddress	Assigned MAC addresses – Used until NV items are in place. Each byte of the MAC address is represented in hex format as XX.	000000 000000	ffffffff	000AF5898983
gAPCntryCode	Set country code in SoftAP mode.	USI	USI	FFF
gEnableApProt	Enable/disable 802.11n protection.	0	1	1
gApProtection	With gEnableApProt enabled: bit 0 – 11b bit 1 – 11g bit 2 – ht20 bit 3 – Green field bit 4 – L-SIG bit 5 – RIFS bit 6 – Reserved bit 7 – Reserved	0x0	0xFFFF	0xBFFF
gEnableApOBSSProt	Enable/disable OBSS protection.	0	1	1
gDisableIntraBssFwd	Intra-BSS forward	0	1	0

Config. Param.	Description	Min	Max	Default
gEnablePhyAgcListenMode	Listen Energy Detect Mode configuration Valid values: 0-128 128 means disable Energy Detect feature 0-9 are threshold codes and 7 is the recommended value from the system if the feature is to be enabled. 10-128 are reserved. The EDET threshold mapping is as follows in 3 dB steps: 0 = -60 dBm 1 = -63 dBm 2 = -66 dBm ... 7 = -81 dBm 8 = -84 dBm 9 = -87 dBm Note: Any of these settings are valid. Setting 0 yields the highest power saving (in a noisy environment) at the cost of more range. The range impact is approximately calculated as: Range loss (dB) = EDET threshold level (dBm) + 97 dBm.	0	128	128
gAPAutoShutOff	Enable/disable Auto Shutdown Value in seconds.	0	42949672 95UL	0
gMinFramesProcThres	N/A	0	39	0
gDisablePacketFilter	Enable/disable the packet filter feature: 0 – Enable 1 – Disable	0	0x1	0
gApKeepAlivePeriod	For a certain period of seconds, if there is no activity from the connected STA, the SAP will disconnect the STA. Applies what WCN is running as SAP.	0	255	20
gGoKeepAlivePeriod	gGoKeepAlivePeriod/gApKeepAlivePeriod is the time spent checking whether the frames are sending or not. Hence, the total effective detection time is gGoLinkMonitorPeriod+ gGoKeepAlivePeriod/gApLinkMonitorPeriod+ gApKeepAlivePeriod.	3	20	5
gGoLinkMonitorPeriod	gGoLinkMonitorPeriod is the period during which the link is idle and where the NULL frame is sent.	3	50	10
gEnableIdleScan	Enable/disable Idle Scan.	0	1	1
gTxPowerCap	Do not use CFG default; if there is no registry setting, this is ignored by SME.	0	128	27
gIgnoreDtim	Setting the enforced Listen Interval. See Q4 for details.	0	1	0
gMaxLIModulatedDTIM	Maximum LI value for modulated DTIM. See Q4 for details.	1	10	10
gNumRxAnt	Make 1x1 the default antenna configuration.	1	2	2
gDataInactivityTimeout	Data Inactivity Timeout when in power save (in milliseconds).	1	255	20
gNthBeaconFilter	Beacon filtering frequency (unit in beacon intervals). Every Nth beacon is checked for change in content of the beacon frame. If there are changes in the beacon frame, the frame is forwarded to the host.	0	255	10
gStaKeepAlivePeriod	Enable Keep Alive with nonzero period value.	0	65535	0
InfraUapsdVoSrvIntv	UAPSD service interval for VO(Voice) traffic Unscheduled Automatic Power Save Delivery is applicable only when the station is connected to the AP. It is primarily driven by QoS-aware applications, e.g., VoIP. Applicable abbreviations are: .. BK – Background .. BE – Best Effort .. VI – Video ..	0	42949672 95UL	20
InfraUapsdVoSuspIntv	UAPSD service interval for VO,VI, BE, BK traffic	0	42949672 95UL	2000

Config. Param.	Description	Min	Max	Default
InfraUapsdVlSrvIntv	UAPSD service interval for VO,VI, BE, BK traffic	0	42949672 95UL	300
InfraUapsdBkSusplntv	UAPSD service interval for VO,VI, BE, BK traffic	0	42949672 95UL	2000
telescopicBeaconTransListenInterval	Parameter for Telescopic DTIM feature. See Q4 for details.	0	7	3
telescopicBeaconTransListenIntervalNumIdleBcns	Parameter for Telescopic DTIM feature. See Q4 for details.	5	255	10
telescopicBeaconMaxListenInterval	Parameter for Telescopic DTIM feature. See Q4 for details.	0	7	5
telescopicBeaconMaxListenIntervalNumIdleBcns	Parameter for Telescopic DTIM feature. See Q4 for details.	5	255	15
beaconEarlyTerminationWakeInterval	Parameter for Beacon Early Termination feature. See Q4 for details. With BET, since no FCS check is done when TIM is seen as being clear, RXP does not update the TSF using the timestamp from the beacon. This can lead to drift over time when no traffic for STA. This configuration periodically and temporarily suspends BET in order to allow a TSF re-sync by allowing a full beacon to be received with FCS check and RXP update of TSF.	2	255	3
McastBcastFilter	Flags to filter Multicast and Broadcast Rx packets Values: 0 – No filtering 1 – Filter all Multicast 2 – Filter all Broadcast 3 – Filter all Multicast and Broadcast	0	3	0
gTelescopicBeaconWakeupEn	Enable/disable Telescopic DTIM feature. See Q4 for details.	0	1	0
hostArpOffload	Enable/disable HostARPOffload feature to offload ARP reply to firmware. See Q4 for details.	0	1	0
hostNSOffload	Enable/disable offload handling Neighbor Solicitation to firmware.	0	1	0
gEnableBtAmp	Enable/disable Bluetooth Alternate MAC Phy (BT AMP).	0	1	0
BandCapability	Preferred band (0: Both or 1: 2.4G only or 2: 5G only)	0	2	1
enableBeaconEarlyTermination	Enable/disable Beacon Early Termination BET allows us to power down as soon as the TIM bit is seen as being clear without waiting for entire beacon to be received and FCS checked. The actual power savings depends on beacon size and placement of the TIM IE within the beacon. For a specific use case (150-byte beacon and Cisco 1252 AP), the active receive duration shrinks from 1.3 ms to 800 µs with BET enabled.	0	1	0
gEnableCloseLoop	0 – OLPC 1 – CLPC/SCPC	0	44	0
gEnableDFSSChnlScan	Enable/disable DFS channel scan.	0	1	1

Config. Param.	Description	Min	Max	Default
vosTraceEnableBAP, vosTraceEnableTL, vosTraceEnableWDI, vosTraceEnableHDD, vosTraceEnableSME, vosTraceEnablePE, vosTraceEnablePMC, vosTraceEnableWDA, vosTraceEnableSYS, vosTraceEnableVOSS, vosTraceEnableSAP, vosTraceEnableHDDSAP	VOS Trace Enable Control Note: The MIN/MAX/DEFAULT values apply for all modules; the DEFAULT value is outside the valid range. If the DEFAULT value is not overridden, no change will be made to the "built-in" default values compiled into the code values that are bitmaps indicating which log levels are to be enabled (must match order of vos_trace_level enumerations). 00000001 FATAL 00000010 ERROR 00000100 WARN 00001000 INFO 00010000 INFO HIGH 00100000 INFO MED 01000000 INFO LOW 10000000 DEBUG Hence, a value of 0xFF would set all bits (enable all logs).	0	0xff	0xffff
wdiTraceEnableDAL, wdiTraceEnableCTL, wdiTraceEnableDAT, wdiTraceEnablePAL	WDI Trace Enable Control Note: The MIN/MAX/DEFAULT values apply for all modules. The DEFAULT value is outside the valid range. If the DEFAULT value is not overridden, no change will be made to the "built in" default values compiled into the code values that are bitmaps indicating which log levels are to be enabled (must match order of wpt_tracelevel enumerations). 00000001 FATAL 00000010 ERROR 00000100 WARN 00001000 INFO 00010000 INFO HIGH 00100000 INFO MED 01000000 INFO LOW Hence, a value of 0x7F would set all bits (enable all logs).	0	0x7f	0xfffffff
isAndroidPsEn	BMPS Logic: 1 – Then Host driver and above layers control the PS mechanism 0 – Diver/Core Stack internally controls the power-saving mechanism	0	1	0
gEnableDynamicDTIM	Enable Dynamic DTIM 0 – Disable DynamicDTIM 1 to 5 – SLM will switch to DTIM specified here when host suspends and switch DTIM1 when the host resumes.	0	5	0
gEnableFirstScan2GOnly	Enable First Scan 2G only: 0 – Disable first scan 2G option. 1 – Enable first scan 2G option.	0	1	0
gEnableAutomaticTxPower Control	Enable/disable Automatic Tx Power Control.	0	1	1
gShortGI20Mhz	Enable Short Guard Interval for HT40 in 5 GHz.	0	1	1
gShortGI40Mhz	Enable/disable Short Guard Interval.	0	1	1
gEnableModulatedDTIM	Enable/disable Modulated DTIM feature	0	5	0
gMCAAddrListEnable	Enable/disable Multicast MAC Address List feature	0	1	0
gEnableRXSTBC	Enable/disable Rx STBC feature. See Q4 for details.	0	1	1
gEnableVhtFor24GHzBand	Parameter to control VHT support in 2.4 GHz band.	0	1	0
gMaxMediumTime	Valid values are 2048, 4096, 8192, etc. Do not use other values.	0	65525	2048
gEnableDirectedScanOffload	Enable/disable SCAN Offload.	0	1	0
gFlexConnectPowerFactor	Enable/disable FlexConnectPowerFactor parameter.	0	9	0
gEnableIbssHeartBeatOffload	Enable heart beat monitoring offload to firmware.	0	1	1
gAntennaDiversity	Enable/disable Antenna Diversity feature.	0	3	0

Config. Param.	Description	Min	Max	Default
gEnableDynSplitScan	Macro to enable/disable dynamic timer.	0	1	1
gSplitScanTxRxThreshold	Macro to monitor the packet count.	10	100	50
gSplitScanTxRxTimer	Macro to handle the monitor timer value in milliseconds.	1000	10000	5000
gAmsduSupportInAMPDU	Enable/disable AMSDU in AMPDU. Keep this disabled until this feature is supported.	0	1	0
gScanAgingTime	Scan Aging Timeout value in seconds.	0	200	60
gTxLdpcEnable	Config parameter to enable the txLdpc capability: 0 – Disable 1 – HT LDPC enable 2 – VHT LDPC enable 3 – HT and VHT LDPC enable */ See Q5 for details.	0	3	0
gAthDisable	Enable/disable Qualcomm proprietary algorithm for improving throughput in short range in a noisy environment.	0	1	0
gEnableMemoryDebug	Enable Memory Debug.	0	1	0
BtAmpPreferredChannel	Preferred channel to start BT AMP AP mode (0 means, any channel).	1	11	1
OkcEnabled	Enable/disable OKC feature.	0	1	1

2.2 P2P and Concurrency

Config Param	Description	Min	Max	Default
gPassiveMaxChannelTimeConc	Maximum channel time for passive scan, ifdef WLAN_AP_STA_CONCURRENCY	0	10000	110
gPassiveMinChannelTimeConc	Minimum channel time for passive scan, ifdef WLAN_AP_STA_CONCURRENCY	0	10000	60
gActiveMaxChannelTimeConc	Maximum channel time for active scan, ifdef WLAN_AP_STA_CONCURRENCY	0	10000	40
gActiveMinChannelTimeConc	Maximum channel time for passive scan, ifdef WLAN_AP_STA_CONCURRENCY	0	10000	20
gNumStaChanCombinedConc	Number of STA scanning channel perf gRestTimeConc, ifdef WLAN_AP_STA_CONCURRENCY	1	255	3
gNumP2PChanCombinedConc	Number of P2P scanning channel perf gRestTimeConc, ifdef WLAN_AP_STA_CONCURRENCY	1	255	1
gRestTimeConc	Time in milliseconds. In a concurrency session, the split scan is performed (refer to the description on gNumChanCombinedConc) and takes longer to finish a scan on all channels as WCN needs to come back home from time to time. There is a chance that before the WCN completes the full set of channel scans using split scan, a new scan request comes in. Rest time is added here to avoid triggering another split scan right after the previous set of split scan completes to provide better data performance. https://www.codeaurora.org/gitweb/external/wlan/?p=prima.git;a=commit;h=4ff9cd6939eb76dcbfbd8fef943d4717498a9a59	0	1000	100
gEnableMCCAdaptiveScheduler	Enable/disable the MCC adaptive scheduler feature.	0	1	1

Config Param	Description	Min	Max	Default
gAllowMCCGODiffBI	Allow GO in MCC mode to accept different beacon intervals than STAs. Added for Wi-Fi Cert. 5.1.12 Default: gAllowMCCGODiffBI = 2 gAllowMCCGODiffBI = 1 // Set to 1 for WFA certification. GO Beacon interval is not changed. MCC-GO does not work well in an optimized way. In a worst-case scenario, it may invite STA disconnection. gAllowMCCGODiffBI = 2 //If set to 2, workaround 1 disassociates all the clients and updates the beacon interval. gAllowMCCGODiffBI = 3 //If set to 3, tear down the P2P link in auto/nonautonomous-GO case. gAllowMCCGODiffBI = 4 //If set to 4, do not disconnect the P2P client in autonomous/non-autonomous-GO case; update the BI dynamically.	0	4	4
gMccAllowCfgModif	Allow MCC to modify the configuration.	0x0000	0x01ff	0x000C
gEnableMCCMode	Enable MCC mode.	0	1	0
gDebugP2pRemainOnChannel	Enable debug for remaining on channel issues. Setting this flag triggers marker frames in air at start and end of remain on channel.	0	1	0
gSkipDfsChannelInP2pSearch	Skip the DFS Channel in case of P2P search: 0 – Do not skip DFS channel in case of P2P search. 1 – Skip DFS channel in case of P2P search.	0	1	1
gIgnoreDynamicDtimInP2pMode	Ignore Dynamic DTIM in case of P2P: 0 – Consider Dynamic DTIM in case of P2P. 1 – Ignore Dynamic DTIM in case of P2P.	0	1	0
isP2pDeviceAddrAdministrated	Derive the P2P MAC address from the primary MAC address.	0	1	1
gSapAllowAllChannel	The driver allows all Wi-Fi channels as operating channels in SAP and P2P-GO mode. It is the responsibility of the user space application not to violate regulatory domain settings.	0	1	0
gEnableTrafficMonitor	SAP/P2P-GO mode traffic monitor	0	1	0
gTrafficIdleTimeout	SAP/P2P-GO mode traffic monitor	3000	10000	5000
gPassiveMaxChannelTimeConc	Maximum channel time for passive scan, ifdef WLAN_AP_STA_CONCURRENCY	0	10000	110

2.3 TDLS

Config. Param.	Description	Min	Max	Default
gEnableTDLSSupport	Enable/disable the TDLS feature.	0	1	0
gEnableTDLSPlicitTrigger	Enable/disable the implicit trigger; for implicit trigger to work, both gEnableTDLSSupport and gEnableTDLSPlicitTrigger must be enabled.	0	1	0

Config. Param.	Description	Min	Max	Default
gTDLSTxStatsPeriod	Time period (in milliseconds) to evaluate whether the number of Tx packets exceeds the TDLS TxPacketThreshold and triggers a TDLS setup request.	10	429496729 5UL	5000
gTDLSTxPacketThreshold	Number of Tx packets during the period of gTDLSTxStatsPeriod; when exceeded, a TDLS setup request is triggered.	0	429496729 5UL	100
gTDLSDiscoveryPeriod	Time period (in milliseconds) to initiate a TDLS discover request for a peer.	5000	429496729 5UL	2000
gTDLSTxMaxDiscoveryAttempt	Number of failures of discover request; when exceeded, the peer is assumed not to be TDLS-capable, and no further request will be made.	1	100	3
gTDLSTxIdleTimeout	Time period (in milliseconds) for which the TDLS link is idle; when exceeded, a TDLS teardown is triggered.	2000	40000	5000
gTDLSTxIdlePacketThreshold	Number of Tx/Rx packets, below which within the last gTDLSTxIdleTimeout period is considered an idle condition.	0	40000	5
gTDLSTxRssiHysteresis	Difference (in dB) between the AP RSSI and the peer RSSI; when exceeded, a TDLS teardown is triggered.	0	100	100
gTDLSTxRssiTriggerThreshold	Absolute value (in dB) of the peer RSSI, below which a TDLS setup request will be triggered.	-120	0	-75
gTDLSTxRssiTeardownThreshold	Absolute value (in dB) of the peer RSSI; when exceeded, a TDLS teardown will be triggered.	-120	0	-75
gTDLSTxUapsdMask	ACs to set up U-APSD for TDLS STA.	0	15	0
gEnableTDLSBufferSta	Enable buffer STA capability of the TDLS DUT.	0	1	1
gTDLSTxPuapsdInactivityTime	Criteria for entering into power save: As soon as the TDLS link is established, the host will send a TDLS_LINK_ESTABLISHED message to the firmware. As part of handling this message the firmware starts a timer with the interval configured from cfg.ini (gTDLSTxPuapsdInactivityTime). The firmware maintains the Tx and Rx packet count, per STA. When the inactivity timer expires the firmware checks whether the previous TxRx packet count is the same as the current TxRx packet count, then sends the PM1 frame to the TDLS peers. If there is a change in the previous TxRx packet count, restart the timer.	0	10	0
gTDLSTxPuapsdRxFrameThreshold	Criteria for exiting from power save: If sleep STA receives the frame more than a value configured from cfg.ini (gTDLSTxPuapsdRxFrameThreshold) in a single service period, then the sleep STA comes out of the power save because there is more traffic coming from the buffer STA.	10	20	10
gTDLSTxExternalControl	Dictates the driver to initiate the TDLS setup requests for only configured TDLS MAC entries.	0	1	0

2.4 BTC and CoEx

Config. Param.	Description	Min	Max	Default
btcActiveWlanLen	WLAN interval length during BT OPP	0	250000	60000

Config. Param.	Description	Min	Max	Default
btActiveBtLen	BT interval length during BT OPP	0	250000	90000
btSapActiveWlanLen	SAP WLAN interval length during BT OPP	0	250000	60000
btSapActiveBtLen	SAP BT interval length during BT OPP	0	250000	90000
BtcExecutionMode	<p>Parameter to adjust BT vs WLAN preference:</p> <ul style="list-style-type: none"> ▪ [Balanced] value: 0 – Optimized for best BT and WLAN performance. ▪ [A2DP] value: 5 – Optimized for best BT audio quality (A2DP) in heavy interference at the cost of WLAN throughput. ▪ The BTC execution modes are: <ul style="list-style-type: none"> ▫ 0 – BTC_SMART_COEXISTENCE – BTC mapping layer decides what is best ▫ 1 – BTC_WLAN_ONLY – WLAN takes all modes ▫ 2 – BTC_PTA_ONLY – Allow only 3-wire protocol in hardware ▫ 3 – BTC_SMART_MAX_WLAN – BTC mapping layer decides what is best; WLAN weighted ▫ 4 – BTC_SMART_MAX_BT – BTC mapping layer decides what is best; Bluetooth-weighted ▫ 5 – BTC_SMART_BT_A2DP – BTC mapping layer decides what is best; balanced + Bluetooth A2DP weight ▫ 6 – BT_BT_EXEC_MODE_MAX – This and beyond are invalid values. 	0	5	0
BtcConsBtSlotToBlockDuringDhcp	<p>Ensure WLAN IP address delivery via DHCP in which SCO is active:</p> <ul style="list-style-type: none"> ▪ [0]: No protection (default) ▪ [1]: Best WLAN DHCP protection ▪ [255]: Least protection for DHCP ▪ [8]: Default ▪ SCO-specific parameter, introduced to improve Wi-Fi DHCP connection timing when a BT SCO call is ongoing, e.g., consider the following case: <ul style="list-style-type: none"> ▫ When the flag is set to value 2 – Every alternate Bluetooth SCO reserved slot will be blocked for WLAN, i.e., $\frac{1}{2} * 100 = 50\%$ Bluetooth blockage. This improves Wi-Fi DHCP connection timings but impacts SCO voice quality. ▫ When the flag is set to value 4 – Every alternate 4th Bluetooth SCO reserved slot will be blocked for WLAN, i.e., $\frac{1}{4} * 100 = 25\%$ Bluetooth blockage. ▫ Lowering the value is better for WLAN connection time, but Bluetooth audio quality is impacted. ▫ The ideal value of this flag is 8, i.e., $\frac{1}{8} * 100 = 12.5\%$ Bluetooth blockage. 	0	0xFF	0

Config. Param.	Description	Min	Max	Default
BtcA2DPDhcpProtectLevel	Ensure WLAN IP address delivery via DHCP while A2DP is active: <ul style="list-style-type: none"> ▪ [0]: Protect WLAN DHCP best to [15]: Protect A2DP best ▪ [7]: Default ▪ A2DP-specific parameter; improves Wi-Fi DHCP connection timing when a Bluetooth A2DP call is ongoing. The valid value of the flag is in the range of 0 to 7. <ul style="list-style-type: none"> ▫ When the flag is 0, no Bluetooth A2DP intervals will be blocked for Wi-Fi DHCP completion. ▫ When the flag is 7, the WLAN DHCP connection time will be fastest, but there is an impact on A2DP audio quality. ▫ The ideal value of the flag is 3. 	0	0xFF	7
btcStaticLenInqBt	BT interval length during BT inquiry [5 ms/500 ms/120 ms]	5000	500000	120000
btcStaticLenPageBt	BT interval length during BT paging	5000	500000	120000
btcStaticLenConnBt	BT interval length during BT connection setup	5000	500000	120000
btcStaticLenLeBt	BT interval length during BT LE scan	5000	500000	120000
btcStaticLenInqWlan	WLAN interval length during BT inquiry	0	500000	30000
btcStaticLenPageWlan	WLAN interval length during BT paging	0	500000	30000
btcStaticLenConnWlan	WLAN interval length during BT connection setup	0	500000	30000
btcStaticLenLeWlan	WLAN interval length during BT LE scan	0	500000	30000
btcDynMaxLenBt	Dynamically adjusts BT interval during ACL active (A2DP/OPP).	25000	500000	250000
btcDynMaxLenWlan	Dynamically adjusts WLAN interval during ACL active (A2DP/OPP).	15000	500000	45000
btcMaxScoBlockPerc	Maximum SCO skipping percentage	0	100	1
btcDhcpProtOnA2dp	Ensure DHCP reliability during A2DP	0	1	1
btcDhcpProtOnSco	Ensure DHCP reliability during SCO	0	1	0
mwsCoexVictim1WANFreq	LTE Coex victim table (up to 10): LTE frequency: <ul style="list-style-type: none"> ▪ [15 : 0] WAN start center frequency in MHz ▪ [31 : 16] WAN end center frequency in MHz Start freq < center freq <= end freq	0	0xFFFFFFFF	0
mwsCoexVictim1WLANFreq	LTE Coex victim table (up to 10): WLAN frequency <ul style="list-style-type: none"> ▪ [31] 1: 5 GHz, 0: 2.4 GHz ▪ [13 : 0] For 2.4 GHz, maps to channel 1-14. Bit 0 is ch 1. ▪ [13 : 0] For 5 GHz, start WLAN frequency in MHz ▪ [29 : 16] For 5 GHz, end WLAN frequency in MHz. 	0	0xFFFFFFFF	0

Config. Param.	Description	Min	Max	Default
mwsCoexVictim1Config, mwsCoexVictim1Config2	LTE power limit, Rx protect enable/disable (up to 10 victim table) <ul style="list-style-type: none"> [28:0] Must be set to 0 [29] LTE power limit [30] LTE Rx protect 	0	0xFFFFFFFF	0
mwsCoexModemBackoff	LTE power backoff value in dBm	0	0xFFFFFFFF	0
mwsCoexConfig1	Enable/disable LTE Coex configuration: <ul style="list-style-type: none"> Default: 0 Disable TDM: 1 Disable WLAN backoff: 2 Disable modem backoff: 4 TDM always on: 8 Disable SAR: 16 Disable Rel AB: 32 Disable QMI Lite: 64 	0	0xFFFFFFFF	0
gActiveMaxChannelTimeBtc	<ul style="list-style-type: none"> Maximum channel dwell time when WLAN is in scan mode during coex. 	0	10000	120
gActiveMinChannelTimeBtc	<ul style="list-style-type: none"> Minimum channel dwell time when WLAN is in scan mode during coex. 	0	10000	60

2.5 SoftAP (SAP)

Config Param	Description	Min	Max	Default
gEnableApRandomBssid	To create a random BSSID in SoftAP mode to meet the Android requirement.	0	1	0
gBeaconInterval	Beacon interval for SoftAP	0	65535	100
gEnableApUapsd	Enable/disable UAPSD for SoftAP	0	1	1
gAPChannelSelectStartChannel	SoftAP channel range selection	0	0xFF	0
gAPChannelSelectEndChannel	SoftAP channel range selection	0	0xFF	11
gAPChannelSelectOperatingBand	SoftAP channel range selection operating band: <ul style="list-style-type: none"> 0 – 2.4 GHz 1 – Low-5 GHz 2 – Mid-5 GHz 3 – High-5 GHz 4 – 4.9 GHz band 	0	0x4	0

Config Param	Description	Min	Max	Default
gApAutoChannelSelection	SAP auto channel enable Note: Auto channel selection for SAP configuration: <ul style="list-style-type: none"> ▪ 0 – Disable auto channel ▪ 1 – Enable auto channel selection in auto mode. When auto channel is enabled, the channel provided by the supplicant will be ignored. Default configuration: Auto channel is disabled.	0	1	0
gEnableVSTASupport	Enable/disable VSTA based on max assoc limit. Enable to have maximum 32 STA (P2P GC) on DUT as P2P GO or SAP.	0	1	0

2.6 11ac and PNO

Config Param	Description	Min	Max	Default
gTxBFEnable	Enable/Disable Tx beamforming ifdef WLAN_FEATURE_11AC	0	1	0
gTxBFCsnValue	Certain TxBF capability AP has an issue that when pronto advertise the csn value as 3 it uses the 2 antenna in the NDPA packet but it is supposed to use the 3 antenna in the NDPA packet. If we advertise the csn value as 2 then it uses 3 antennas in the NDPA packet. We need to have ini configuration for setting the csn value.	0	3	2
gVhtChannelWidth	Channel width for VHT mode. 1 - 20 and 40MHz, 2 - 80MHz	0	2	2
gVhtRxMCS	VHT Rx MCS values Valid values are 0,1,2. If commented out, the default value is 0. 0=MCS0-7, 1=MCS0-8, 2=MCS0-9	0	2	0
gVhtTxMCS	VHT Tx MCS values Valid values are 0,1,2. If commented out, the default value is 0. 0=MCS0-7, 1=MCS0-8, 2=MCS0-9	0	2	0
gDisableLDPCWithTxbfAP	Disable LDPC when AP is TXBF capable. This is a workaround for Throughput issue from AP's test firmware. ifdef WLAN_FEATURE_11AC	0	1	1
gPNOScanSupport	Advertise PNO driver capability. 0 - disable driver PNO capability. 1 - enable driver PNO capability ifdef FEATURE_WLAN_SCAN_PNO	1	0	1
gPNOScanTimerRepeatValue	Driver gets only one timer interval which is hardcoded in supplicant for 1000ms. So until PNO is disabled, firmware repeats PNO scan for every 10 secs. Taking power consumption into account 6 timers will be used, Timervalue is increased exponentially i.e 10,20,40, 80,160,320 secs. And number of scan cycle for each timer is configurable through INI param gPNOScanTimerRepeatValue. If it is set to 0 only one timer will be used and PNO scan cycle will be repeated after each interval specified by supplicant till PNO is disabled.	6	0	0xffffffff

2.7 Roam, LFR, VOICE, 11r and CCX

Config. Param.	Description	Min	Max	Default
gRoamingTime	CSR Roaming Enable(1) Disable(0)	0	4294967UL	10
gEnableFastRoamInConcurrency	Enable legacy fast roaming (LFR) on STA link during concurrent sessions	0	1	1
gRssiFilterPeriod	Increased this value for Non-CCX AP. This is cause FW RSSI Monitoring the consumer of this value is ON by default. So to impact power numbers we are setting this to a high value.	0	255	5
gImmediateRoamRssiDiff	RSSI delta to allow STA to immediately roam to a qualified AP without registering for reassoc threshold. Value of 0 means to do immediate roam if there is any qualified AP found from scanning. Following a scan and if potential roam candidate(s) are found, then determine whether to register for reassoc threshold or roam immediately based on this configuration parameter. If the RSSI of any available candidate is better than the currently associated AP by at least gImmediateRoamRssiDiff, then being to roam immediately. NOTE: Value of 0 means that immediate roaming is enabled by default	0	125	0
gSelect5GHzMargin	Prefer connecting to 5G AP even if its RSSI is lower by gSelect5GHzMargin dBm than 2.4G AP. This feature requires the dependent cfg.ini "gRoamPrefer5GHz" set to 1	0	60	0
gNeighborScanTimerPeriod	CCX Support and fast transition, Time between individual channels in scan.	3	300	200
gNeighborLookupThreshold	0 indicates the host to calculate Adaptive threshold based on the minimum supported data rate, RSSI threshold to trigger background scan to find potential roam candidates.	0	120	0

Config. Param.	Description	Min	Max	Default
gNeighborScanChannelList	Channel list provided by user to scan to perform background scan after the RSSI of current AP falls below gNeighborLookupThreshold for non-11r associations. For 11r associations, roaming algorithm sends neighbor report request and based on the neighbor report from AP, algorithm dynamically generates the channel list. If there is no suitable candidates in the neighbor report from AP, algorithm falls back to background scan with this channel list., ifdef WLAN_FEATURE_NEIGHBOR_ROAMING			
gNeighborScanChannelMaxTime	Minimum dwell time for scan, ifdef WLAN_FEATURE_NEIGHBOR_ROAMING	3	300	30
gNeighborReassocThreshold	RSSI threshold to trigger roam (this threshold is registered only if there are candidates found after the scan) -> obsolete from LFR2.0 ifdef WLAN_FEATURE_NEIGHBOR_ROAMING	10	125	82
gNeighborScanChannelMinTime	Minimum dwell time for scan, ifdef WLAN_FEATURE_NEIGHBOR_ROAMING	10	40	20
gMaxNeighborReqTries	Max retrial counter for Reassoc REQ during roaming, ifdef WLAN_FEATURE_NEIGHBOR_ROAMING	1	4	3
gNeighborScanRefreshPeriod	Refresh interval between background scans [ms], ifdef WLAN_FEATURE_NEIGHBOR_ROAMING	1000	60000	20000
gEmptyScanRefreshPeriod	Periodic background scanning interval if no candidate is found [ms], ifdef WLAN_FEATURE_NEIGHBOR_ROAMING	0	60000	0
gRrmEnable	This flag controls the capabilities(11k) included in capabilities field. Basically, this field controls if station supports 11k or not. if defined WLAN_FEATURE_VOWIF	0	1	0
gRrmOperChanMax	section 11.10.3 IEEE std. 802.11k-2008 Maxduration = $2^{(maxDuration - 4)} * bcnIntvl$, max duration = $2^{-1} * bcnIntvl$ (50% of bcn intvl)	0	8	3
gRrmNonOperChanMax	section 11.10.3 IEEE std. 802.11k-2008 Maxduration = $2^{(maxDuration - 4)} * bcnIntvl$, max duration = $2^{-1} * bcnIntvl$ (50% of bcn intvl)	0	8	3
gRrmRandIntvl	if defined WLAN_FEATURE_VOWIFI	10	100	100
gRoamPrefer5GHz	When both APs(2.4GHz and 5Ghz) are reported on same bucket, 5Ghz is selected first when gRoamPrefer5GHz=1 set in INI file. if defined (WLAN_FEATURE_VOWIFI_11R) defined (FEATURE_WLAN_CCX) defined(FEATURE_WLAN_LFR)	0	1	1

Config. Param.	Description	Min	Max	Default
gRoamIntraBand	To disable, set gRoamIntraBand=0 (Roaming across band, if defined (WLAN_FEATURE_VOWIFI_11R) defined (FEATURE_WLAN_CCX) defined(FEATURE_WLAN_LFR) To enable, set gRoamIntraBand=1 (Roaming within band)	0	1	0
FastTransitionEnabled	This flag will control fasttransition in case of 11r and ccx. Basically with this the whole neighbor roam, pre-auth, reassoc can be turned ON/OFF. With this turned OFF 11r will completely not work. For 11r this flag has to be ON. For CCX fastroam will not work.	0	1	0
RoamRssiDiff	This parameter is used to decide whether to Roam or not. AP1 is the currently associated AP and AP2 is chosen for roaming. The Roaming will happen only if AP2 has better Signal Quality and it has a RSSI better than AP1 in terms of RoamRssiDiff, and RoamRssiDiff is the number of units (typically measured in dB) AP2 is better than AP1. This check is not done if the value is Zero. Check if the AP to which we are roaming is better than current AP in terms of RSSI. Checking is disabled if set to Zero. Otherwise it will use this value as to how better the RSSI of the new/roamable AP should be for roaming.	0	30	5
gWESModeEnabled	This parameter is used to set Wireless Extended Security Mode, if defined (WLAN_FEATURE_VOWIFI_11R) defined (FEATURE_WLAN_CCX) defined(FEATURE_WLAN_LFR)	0	1	0
gRoamScanNProbes	if defined (WLAN_FEATURE_VOWIFI_11R) defined (FEATURE_WLAN_CCX) defined(FEATURE_WLAN_LFR)	1	10	2
gRoamScanHomeAwayTime	To determine the time between consecutive channel scans, if defined (WLAN_FEATURE_VOWIFI_11R) defined (FEATURE_WLAN_CCX) defined(FEATURE_WLAN_LFR)	3	300	3
FastRoamEnabled	Enable/Disable Legacy (non-CCX, non-802.11r) Fast Roaming Support ifdef FEATURE_WLAN_LFR	0	1	0
MAWCEnabled	Enable/Disable MAWC (Motion Added Wi-Fi Connectivity) feature	0	1	0
gRoamScanOffloadEnabled	Enable/Disable Roam Scan Offload ifdef WLAN_FEATURE_ROAM_SCAN_OFFLOAD	0	1	1
CcxEnabled	Enable/Disable CCX feature	0	1	0
InfrainactivityInterval	Setting inactivity interval for AddTspec communication	0	4294967295UL	0
ImplicitQosIsEnabled	Enable/Disable driver to initiate ADDTS REQ/RSP to get traffic stream admitted to AP in case phone is trying to transmit an AC frame which has ACM set by AP	0	1	1
gRetryLimitZero	Primary rate of maximum retransmission number	0	15	5
gRetryLimitOne	Secondary rate of maximum retransmission number	0	15	10

Config. Param.	Description	Min	Max	Default
gRetryLimitTwo	Tertiary rate of maximum retransmission number	0	15	15

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