SOFTWARE SECURITY REQUIREMENTS FOR U-NII DEVICES

Date: August 2, 2023

FCC ID:2AU3BU9W37;ISED: 25625-U9W37,

Subject: Attestation Letter regarding UNII devices

Software security questions and answers per KDB 594280 D02 v01r03:

General Description	
1	Describehowanysoftware/firmwareupdatesforelements that canaffectthedevice'sRF parameters will be obtained, downloaded, validated and installed. For software that is accessedthroughmanufacturer'swebsiteordevice'smanagementsystem,describethe different levels of security asappropriate. There is no downloadable software provided by the manufacturer that can modify critical radiotransmitterparameters.AllcriticalparametersareprogrammedinChipmemoryatthe factory and cannot be modified or overridden by third parties.
2	DescribetheRFparametersthataremodifiedbyanysoftware/firmwarewithoutany hardwarechanges.Aretheseparametersinsomewaylimitedsuchthatanyother software/firmware changes will not allow the device to exceed the authorized RF characteristics? TherearenoRFparametersthatcanbemodified.AllRFparametersareprogrammedin Chipmemoryatthefactoryandcannotbemodifiedoroverriddenbythirdparties.
3	Describeindetailtheauthenticationprotocolsthatareinplacetoensurethatthesourceof theRF-relatedsoftware/firmwareisvalid.DescribeindetailhowtheRF-relatedsoftwareis protected againstmodification. Thefirmwareinthefactoryhasbeenfixedintochip,can'tchange,sothereisneedfor validation.Driverunderitoperatingsystemprovidesadigitalcertificateauthentication.
4	Describeindetailanyencryptionmethodsusedtosupporttheuseoflegitimate RF-related software/firmware. Thefirmwareinthefactoryhasbeenfixedinchip,can'tbechanged,thereisnoneedfor validation.Driverisinbinaryform, it is ownclosure,noneedforverification.
5	Foradevicethatcanbeconfiguredasamasterandclient(withactiveorpassivescanning), explainhowthedeviceensurescomplianceforeachmode?Inparticularifthedeviceactsas masterinsomebandofoperationandclientinanother;howiscomplianceensuredineach band ofoperation? Notapplicable,thisdeviceonlysupportsclient.TheRFparameters hasbeenfixedinthewifimodulefirmwareandcannotbealtered,sotheuserhasnowaytobreak the compliance on the device.
Third-Party Access Control	
1	ExplainifanythirdpartieshavethecapabilitytooperateaU.S.-solddeviceonanyother regulatorydomain,frequencies,orinanymannerthatmayallowthedevicetooperatein violationofthedevice'sauthorizationifactivatedintheU.S. Thirdpartiesdonothavethecapabilitytooperateinanymannerthatisviolationofthe certification in theU.S

2	Describe,ifthedevicepermitsthird-partysoftwareorfirmwareinstallation,whatmechanisms areprovidedbythemanufacturertopermitintegrationofsuchfunctionswhileensuringthat theRFparametersofthedevicecannotbeoperatedoutsideitsauthorizationforoperationin the U.S. In the description include what controls and/or agreements are in place with providers of third-party functionality to ensure the devices' underlying RF parameters are unchanged and how the manufacturer verifies thefunctionality. RFparametersareprogrammedintoChipmemoryatthefactoryandcannotbe reprogrammed or re-flashed by thirdparties.
3	For Certified Transmitter modular devices, describe how the module grantee ensures that hostmanufacturersfullycomplywiththesesoftwaresecurityrequirementsforU-NIIdevices. If the module is controlled through driver software loaded in the host, describe how the driversarecontrolledandmanagedsuchthatthemodulartransmitterRFparametersarenot modified outside the grant ofauthorization. TherearenoRFparametersthatcanbemodified.AllRFparametersareprogrammedin Chip memory at the factory and cannot be modified or overridden by third parties. The moduleisnotcontrolledbydriversoftwareonthehostandcannotoverridecriticalRFparameters stored in module Chip memory.
USER CONFIGURATION GUIDE	
1	DescribetheuserconfigurationspermittedthroughtheUI.Ifdifferentlevelsofaccessare permitted for professional installers, system integrators or end-users, describe the differences. No UI provided.
	a)Whatparametersareviewableandconfigurablebydifferentparties? None
	b)Whatparametersareaccessibleormodifiablebytheprofessionalinstallerorsystem integrators? None
	1)Aretheparametersinsomewaylimited,sothattheinstallerswillnotenterparametersthat exceed thoseauthorized? Themodulemicro-code readstheparametersfromthemoduleChipmemory.These parameterscannotbemodifiedoroverriddenbySWdrivers.
	2)Whatcontrolsexistthattheusercannotoperatethedeviceoutsideitsauthorizationinthe U.S.? All the parameters are set in the factory so that the operation of this module is always FCC compliant and within the authorization in the U.S. and no UI is provided for modification of this parameters.
	c) What parameters are accessible or modifiable by the end-user? None
	1) Are the parameters in some way limited, so that theinstallers will not enter parameters that exceed those authorized? Themodulemicro-codereadstheparametersfromthemoduleChipmemory. These parameterscannotbemodifiedoroverriddenbySWdrivers.
	2)Whatcontrolsexistsothattheusercannotoperatethedeviceoutsideitsauthorizationin theU.S.? All the parameters are set in the factory so that the operation of this module is alwaysFCCcompliantand no UI is provided for modification of this parameters.
	d) Is the country code factory set? Can it be changed in the UI? Default country code is set in the factory and no UI is provided for modification.
	1)Ifitcanbechanged,whatcontrolsexisttoensurethatthedevicecanonlyoperatewithin its authorization in theU.S.? It cannot be changed because no UI is provided for modification.

	e)Whatarethe default parameterswhenthedeviceis restarted? Always FCCcompliant
2	Cantheradiobeconfiguredinbridgeormeshmode?Ifyes,anattestationmayberequired. FurtherinformationisavailableinKDBPublication905462D02. No, it can't work in the bridge or the mesh mode
3	Foradevicethatcanbeconfiguredasamasterandclient(withactiveorpassivescanning), ifthisisuserconfigurable,describewhatcontrolsexist,withintheUI,toensurecompliance foreachmode.Ifthedeviceactsasamasterinsomebandsandclientinothers,howisthis configured to ensurecompliance? It can only work in client mode, and cannot be configured.
4	Foradevicethatcanbeconfiguredasdifferenttypesofaccesspoints,suchaspoint-to-point or point-to-multipoint, and use different types of antennas, describe what controls exist to ensure compliance with applicable limits and the proper antenna is used for each mode of operation. (See Section15.407(a)) Thisdeviceisnotanaccesspoint.

Signature:

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