

Test Logs

FCC ID: H8N60156A

Test Model: NR xCell 60156A

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Applicant: ASKEY COMPUER CORP.

Address: 10F, NO. 199, JIANKANG RD., ZHONGHE DIST., NEW TAIPEI CITY
23585, TAIWAN, R.O.C.

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

Test Location: No. 70, Wenming Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)

**FCC Registration/
Designation Number:** 281270 / TW0032

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```
    "antennaBeamwidth": 60,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 10,
    "latitude": 62.5,
    "height": 10.0,
    "verticalAccuracy": 3
  },
  "fcclId": "H8N60156A",
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2024-03-19T11:30:00Z",
    "cpild": "cpi9001"
  },
  "cbsdSerialNumber": "G1E5S005517"
}
2024-05-12T05:37:45.676Z - INFO - verified signature on cpiSignatureData
2024-05-12T05:37:45.683Z - INFO - cpiSignatureData data successfully validated against jsonschema
2024-05-12T05:37:45.684Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T05:37:47.005Z - INFO - arrived to nstep starting question answer session with the technician
2024-05-12T05:37:47.006Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2024-05-12T05:37:48.844Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2024-05-12T05:37:49.115Z - INFO - The final result of the test : WINNF.FT.C.REG.5 is - passed
```



```
    "height": 10.0,
    "verticalAccuracy": 3
  },
  "fcclId": "H8N60156A",
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2024-03-19T11:30:00Z",
    "cpild": "cpi9001"
  },
  "cbsdSerialNumber": "G1E5S005517"
}
2024-05-12T05:57:28.619Z - INFO - verified signature on cpiSignatureData
2024-05-12T05:57:28.624Z - INFO - cpiSignatureData data successfully validated against jsonschema
2024-05-12T05:57:28.625Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T05:57:32.132Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "inquiredSpectrum": [
        {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      ]
    }
  ]
}
2024-05-12T05:57:32.150Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000.0,
            "lowFrequency": 3550000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T05:57:36.234Z - INFO - grant request from CBRS : {
  "grantRequest": [
```

```
{
  {
    "cbsdId": "H8N60156AMock-SASG1E5S005517",
    "operationParam": {
      "maxEirp": 19.0,
      "operationFrequencyRange": {
        "highFrequency": 3590000000.0,
        "lowFrequency": 3550000000.0
      }
    }
  }
}
]
}
2024-05-12T05:57:36.246Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "channelType": "GAA",
      "grantExpireTime": "2024-05-19T05:57:36Z",
      "grantId": "499148764",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T05:57:40.012Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "499148764",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2024-05-12T05:57:40.026Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "499148764",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T06:01:00Z"
    }
  ]
}
2024-05-12T05:58:41.936Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "499148764",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
}
```

2024-05-12T05:58:41.937Z - INFO - Time interval between two heartbeat request messages is: 61.923, limit is: 65.0

2024-05-12T05:58:41.947Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "H8N60156AMock-SASG1E5S005517",
    "grantId": "499148764",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2024-05-12T06:02:01Z"
  }
]
```

2024-05-12T05:59:30.598Z - INFO - relinquishment request from CBRS : {

```
"relinquishmentRequest": [
  {
    "cbsdId": "H8N60156AMock-SASG1E5S005517",
    "grantId": "499148764"
  }
]
```

2024-05-12T05:59:30.615Z - INFO - engine sent successfully, the response to CBRS : {

```
"relinquishmentResponse": [
  {
    "cbsdId": "H8N60156AMock-SASG1E5S005517",
    "grantId": "499148764",
    "response": {
      "responseCode": 0
    }
  }
]
```

2024-05-12T05:59:34.174Z - INFO - deregistration request from CBRS : {

```
"deregistrationRequest": [
  {
    "cbsdId": "H8N60156AMock-SASG1E5S005517"
  }
]
```

2024-05-12T05:59:34.188Z - INFO - engine sent successfully, the response to CBRS : {

```
"deregistrationResponse": [
  {
    "cbsdId": "H8N60156AMock-SASG1E5S005517",
    "response": {
      "responseCode": 0
    }
  }
]
```

2024-05-12T05:59:35.500Z - INFO - arrived to nstep starting question answer session with the technician
 2024-05-12T05:59:35.500Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or Deregistration request at Test Harness? please choose one of the answers :

2024-05-12T05:59:39.757Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or Deregistration request at Test Harness? , the user choose y

2024-05-12T05:59:40.397Z - INFO - The final result of the test : WINNF.FT.C.REG.7 is - passed

1.3 WINNF.FT.C.REG.8

2024-05-12T06:00:39.187Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2024-05-12T06:00:39.190Z - INFO - the selected test from the user : WINNF.FT.C.REG.8 is starting now

2024-05-12T06:00:55.296Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "NR"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "0.47.4.100",
      "hardwareVersion": "REV4",
      "model": "SCU2050",
      "softwareVersion": "v2.1.012.8.1.6190",
      "vendor": "Askey Corporation"
    },
    "cbsdSerialNumber": "G1E5S005517",
    "cpiSignatureData": {
      "digitalSignature":

```

```
"nqarOly2bKwN3ytao64Os_oRhjGh74aswl-J_ocbNDEATqYr3NQ-zLgia4m1OtNRgdKHSk3K_MV9HoERt8
XFJU6AxAa0pjWCaVEyT8V4HER5sowyQ7n6ZwfrfenMcB0LIqiyGowRQtQ7DTEf7uaZGDRtOwAY0mJgLvE
TiCMuCGXPH6wTLAsr00M2RZAicZzlyObN2rhhhd5JgQiRH0FJVMTqznG3NAW2EYNBrk0Vnyye9zJa9Ulc6S
ySNC6TBqfe1USpanpEX08oXUc39GdpD9BTdOz1zJ83XOOj44Yy_JmKMvWj1v0Zba9Y5B6E9plcY-zOVAor
k0uDZR0a0E0byA",
```

```
"encodedCpiSignedData":
```

```
"ewogICJmY2NJZCI6Ikg4TjYwMTU2QSIsCiAgImNic2RTZXJpYWxOdW1iZXliOiJHMUU1UzAwNTUxNyIsCi
AgImIuc3RhbGxhdGlvbGlBhcmF1IjogewogICAgImxhdGloZWRlljo2Mi41LAogICAgImxvbmVmdpdHVkZSI6LTE1N
S41LAogICAgImhlaWdodCI6MTAucwKICAgICJoZWlnaHRUeXBlljoiQUdMliwKICAgICJhbnRlbn5hR2Fpbi
I6NiwiKICAgICJob3Jpem9udGFsQWNjdXJhY3kiOiAzLAogICAgInZlcnRyY2FsQWNjdXJhY3kiOiAzLAogICAg
ImFudGVubmFEb3dudGlsdCI6IDEwLAogICAgImFudGVubmFCZWZtd2lkdGgiOiA2MCwKICAgICJhbnRlbn5h
hQXppbXV0aCI6IDMwLAogICAgImVpcnBDYXBhYmVmlsaXR5IjozMywKICAgICJpbmRvb3JEZXBs3ltZW50Ijp
mYWxzZQogIH0sCiAgInByb2Zlc3Npb25hbEluc3RhbGxlc3RhdGEiOiB7CiAgICAiY3BpSWQIoiJjcGk5MDAxli
wKICAgICJjcGLOYW11IjoiQlYgSW5zdGFsbGVyIENicnRzmljYXRlliwKICAgICJpbmN0YWxsQ2VydGlmawWN
hdGlvbGRpbWUiOiIyMDI0LTAzLTE5VDE5OjMwOjAwWlkiB9Cn0",
```

```
"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
```

```
},
"fccId": "H8N60156A",
"measCapability": [],
"userId": "AskeyUserId-000001"
}
]
```

2024-05-12T06:00:55.341Z - INFO - Registration message contains cpiSignatureData

2024-05-12T06:00:55.342Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2024-05-12T06:00:55.342Z - INFO - encodedCpiSignedData contents = {

```
"installationParam": {
  "eirpCapability": 33,
  "antennaAzimuth": 30,
  "heightType": "AGL",
  "longitude": -155.5,
  "antennaGain": 6,
  "indoorDeployment": false,
  "antennaBeamwidth": 60,
  "horizontalAccuracy": 3,
  "antennaDowntilt": 10,
  "latitude": 62.5,
  "height": 10.0,
```

```
    "verticalAccuracy": 3
  },
  "fcclId": "H8N60156A",
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2024-03-19T11:30:00Z",
    "cpild": "cpi9001"
  },
  "cbbsdSerialNumber": "G1E5S005517"
}
2024-05-12T06:00:55.450Z - INFO - verified signature on cpiSignatureData
2024-05-12T06:00:55.457Z - INFO - cpiSignatureData data successfully validated against jsonschema
2024-05-12T06:00:55.460Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "response": {
        "responseCode": 102
      }
    }
  ]
}
2024-05-12T06:00:57.197Z - INFO - arrived to nstep starting question answer session with the technician
2024-05-12T06:00:57.198Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2024-05-12T06:00:59.015Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2024-05-12T06:00:59.308Z - INFO - The final result of the test : WINNF.FT.C.REG.8 is - passed
```

1.4 WINNF.FT.C.REG.10

2024-05-12T06:06:29.671Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2024-05-12T06:06:29.671Z - INFO - the selected test from the user : WINNF.FT.C.REG.10 is starting now

2024-05-12T06:06:48.779Z - INFO - registration request from CBRS : {

```

"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "NR"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "0.47.4.100",
      "hardwareVersion": "REV4",
      "model": "SCU2050",
      "softwareVersion": "v2.1.012.8.1.6190",
      "vendor": "Askey Corporation"
    },
    "cbsdSerialNumber": "G1E5S005517",
    "cpiSignatureData": {
      "digitalSignature":

```

```

"nqarOly2bKwN3ytao64Os_oRhjGh74aswl-J_ocbNDEATqYr3NQ-zLgia4m1OtNRgdKHSK3K_MV9HoERT8
XFJU6AxAa0pjWCaVEyT8V4HER5sowyQ7n6ZwfrfenMcB0LIqiyGowRQtQ7DTEf7uaZGDRtOWAY0mJgLve
TiCMuCGXPH6wTLAsr00M2RZAicZzlyObN2rhhd5JgQiRH0FJVMTqznG3NAW2EYNBrk0Vnyye9zJa9Ulc6S
ySNC6TBqfe1USpanpEX08oXUc39GdpD9BTdOz1zJ83XOOj44Yy_JmKMvWj1v0Zba9Y5B6E9plcY-zOVAor
k0uDZR0a0E0byA",

```

```

      "encodedCpiSignedData":

```

```

"ewogICJmY2NJZCI6Ikg4TjYwMTU2QSIsCiAgImNic2RTZXJpYWxOdW1iZXliOiJHMUU1UzAwNTUxNyIsCi
AgImIuc3RhbGxhdGlvbGlBhcmFtIjogewogICAgImxhdGl0dWRlljo2Mi41LAogICAgImxvbmddpdHVkZSI6LTE1N
S41LAogICAgImhlaWdodCI6MTAuMCAwKICAgICJoZWlnaHRUeXBlljoiQUdMliwKICAgICJhbnRlbn5hR2Fpbi
I6NiwiKICAgICJob3Jpem9udGFsQWNjdXJhY3kiOiAzLAogICAgInZlcnRyY2FsQWNjdXJhY3kiOiAzLAogICAg
ImFudGVubmFEb3dudGlscCI6IDEwLAogICAgImFudGVubmFCZWZtd2lkdGgiOiA2MCwKICAgICJhbnRlbn5h
hQXppbXV0aCI6IDMwLAogICAgImVpcnBDYXBhYm9sYXR5IjozMywKICAgICJpbmRvb3JEZXBSb3ltZW50Ijpw
mYWxzZQogIH0sCiAgInByb2Zlc3Npb25hbEluc3RhbGxlckRhGEiOiB7CiAgICAgI3BpSWQIOiJjcGk5MDAxIjw
KICAgICJjcGLOiYwY1IjoiQlYgSW5zdGFsbGVyIENlcnRyZmljYXRlliwKICAgICJpbmN0YWxsQ2VydgGImaWN
hdGlvbGlRpbWUiOiIyMDI0LTAzLTE5VDE5OjMwOjAwWlkiB9Cn0",

```

```

      "protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"

```

```

    },
    "fccId": "H8N60156A",
    "measCapability": [],
    "userId": "AskeyUserId-000001"
  }
]
}

```

2024-05-12T06:06:48.811Z - INFO - Registration message contains cpiSignatureData

2024-05-12T06:06:48.811Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2024-05-12T06:06:48.812Z - INFO - encodedCpiSignedData contents = {

```

"installationParam": {
  "eirpCapability": 33,
  "antennaAzimuth": 30,
  "heightType": "AGL",
  "longitude": -155.5,
  "antennaGain": 6,
  "indoorDeployment": false,
  "antennaBeamwidth": 60,
  "horizontalAccuracy": 3,
  "antennaDowntilt": 10,
  "latitude": 62.5,

```

```
    "height": 10.0,  
    "verticalAccuracy": 3  
  },  
  "fcclId": "H8N60156A",  
  "professionalInstallerData": {  
    "cpiName": "BV Installer Certificate",  
    "installCertificationTime": "2024-03-19T11:30:00Z",  
    "cpilId": "cpi9001"  
  },  
  "cbsdSerialNumber": "G1E5S005517"  
}  
2024-05-12T06:06:48.904Z - INFO - verified signature on cpiSignatureData  
2024-05-12T06:06:48.907Z - INFO - cpiSignatureData data successfully validated against jsonschema  
2024-05-12T06:06:48.910Z - INFO - engine sent successfully, the response to CBRS : {  
  "registrationResponse": [  
    {  
      "response": {  
        "responseCode": 200  
      }  
    }  
  ]  
}  
2024-05-12T06:06:50.680Z - INFO - arrived to nstep starting question answer session with the technician  
2024-05-12T06:06:50.681Z - INFO - the question is : Were there RF transmissions from the CBS1 during  
the test? please choose one of the answers :  
2024-05-12T06:07:02.269Z - INFO - for the question : Were there RF transmissions from the CBS1 during  
the test? , the user choose n  
2024-05-12T06:07:02.532Z - INFO - The final result of the test : WINNF.FT.C.REG.10 is - passed
```

1.5 WINNF.FT.C.REG.12

2024-05-12T06:11:30.887Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2024-05-12T06:11:30.888Z - INFO - the selected test from the user : WINNF.FT.C.REG.12 is starting now

2024-05-12T06:11:51.818Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "NR"

},

"cbsdCategory": "B",

"cbsdInfo": {

"firmwareVersion": "0.47.4.100",

"hardwareVersion": "REV4",

"model": "SCU2050",

"softwareVersion": "v2.1.012.8.1.6190",

"vendor": "Askey Corporation"

},

"cbsdSerialNumber": "G1E5S005517",

"cpiSignatureData": {

"digitalSignature":

"nqarOly2bKwN3ytao64Os_oRhjGh74aswl-J_ocbNDEATqYr3NQ-zLgia4m1OtNRgdKHS3K3K_MV9HoERT8
 XFJU6AxAa0pjWCaVEyT8V4HER5sowyQ7n6ZwfrfenMcB0LIqiyGowRQtQ7DTEf7uaZGDRtOWAY0mJgLv
 TiCMuCGXPH6wTLAsr00M2RZAicZzlyObN2rhhhd5JgQiRH0FJVMTqznG3NAW2EYNBrk0Vnyye9zJa9Ulc6S
 ySNC6TBqfe1USpanpEX08oXUc39GdpD9BTdOz1zJ83XOOj44Yy_JmKMvWj1v0Zba9Y5B6E9plcY-zOVAor
 k0uDZR0a0E0byA",

"encodedCpiSignedData":

"ewogICJmY2NJZCI6Ikg4TjYwMTU2QSIsCiAgImNic2RTZXJpYWxOdW1iZXliOiJHMUU1UzAwNTUxNyIsCi
 AgImIuc3RhbGxhdGlvbIhBcmFtIjogewogICAgImxhdGloZWVlIjo2Mi41LAogICAgImxvbmVmdpdHVkZSI6LTE1N
 S41LAogICAgImhlaWdodCI6MTAuMCwKICAgICJoZWlnaHRUeXBlljoiQUdMliwKICAgICJhbnRlbn5hR2Fpbi
 I6NiwiKICAgICJob3Jpem9udGFsQWNjdXJhY3kiOiAzLAogICAgInZlcnRyY2FsQWNjdXJhY3kiOiAzLAogICAg
 ImFudGVubmFEb3dudGlsdCI6IDEwLAogICAgImFudGVubmFCZWVtd2lkdGgiOiA2MCwKICAgICJhbnRlbn5
 hQXppbXV0aCI6IDMwLAogICAgImVpcnBDYXBhYmVmlsaXR5IjozMywKICAgICJpbmRvb3JEZXBSb3ltZW50Ijp
 mYWxzZQogIH0sCiAgInByb2Zlc3Npb25hbEluc3RhbGxlc3RhdGEiOiB7CiAgICAgI3BpSWQIOiJjcGk5MDAxI
 wKICAgICJjcGLOiYwY1IjojoiQIYgSW5zdGFsbGVyIENicnRyZmljYXRlliwKICAgICJpbmN0YWxsQ2VydGlmawN
 hdGlvbIhRpbWUiOiIyMDI0LTAzLTE5VDE5OjMwOjAwWlkiB9Cn0",

"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"

},

"fccId": "H8N60156A",

"measCapability": [],

"userId": "AskeyUserId-000001"

}

]

}

2024-05-12T06:11:51.845Z - INFO - Registration message contains cpiSignatureData

2024-05-12T06:11:51.846Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2024-05-12T06:11:51.846Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 33,

"antennaAzimuth": 30,

"heightType": "AGL",

"longitude": -155.5,

"antennaGain": 6,

"indoorDeployment": false,

"antennaBeamwidth": 60,

"horizontalAccuracy": 3,

"antennaDowntilt": 10,

"latitude": 62.5,

```
    "height": 10.0,  
    "verticalAccuracy": 3  
  },  
  "fcclId": "H8N60156A",  
  "professionalInstallerData": {  
    "cpiName": "BV Installer Certificate",  
    "installCertificationTime": "2024-03-19T11:30:00Z",  
    "cpiId": "cpi9001"  
  },  
  "cbsdSerialNumber": "G1E5S005517"  
}  
2024-05-12T06:11:51.914Z - INFO - verified signature on cpiSignatureData  
2024-05-12T06:11:51.917Z - INFO - cpiSignatureData data successfully validated against jsonschema  
2024-05-12T06:11:51.918Z - INFO - engine sent successfully, the response to CBRS : {  
  "registrationResponse": [  
    {  
      "response": {  
        "responseCode": 103  
      }  
    }  
  ]  
}  
2024-05-12T06:11:53.901Z - INFO - arrived to nstep starting question answer session with the technician  
2024-05-12T06:11:53.903Z - INFO - the question is : Were there RF transmissions from the CBSD1 during  
the test? please choose one of the answers :  
2024-05-12T06:13:18.279Z - INFO - for the question : Were there RF transmissions from the CBSD1 during  
the test? , the user choose n  
2024-05-12T06:13:18.460Z - INFO - The final result of the test : WINNF.FT.C.REG.12 is - passed
```



```
    "height": 10.0,  
    "verticalAccuracy": 3  
  },  
  "fcclId": "H8N60156A",  
  "professionalInstallerData": {  
    "cpiName": "BV Installer Certificate",  
    "installCertificationTime": "2024-03-19T11:30:00Z",  
    "cpiId": "cpi9001"  
  },  
  "cbsdSerialNumber": "G1E5S005517"  
}  
2024-05-12T06:19:12.282Z - INFO - verified signature on cpiSignatureData  
2024-05-12T06:19:12.286Z - INFO - cpiSignatureData data successfully validated against jsonschema  
2024-05-12T06:19:12.286Z - INFO - engine sent successfully, the response to CBRS : {  
  "registrationResponse": [  
    {  
      "response": {  
        "responseCode": 101  
      }  
    }  
  ]  
}  
2024-05-12T06:19:14.282Z - INFO - arrived to nstep starting question answer session with the technician  
2024-05-12T06:19:14.282Z - INFO - the question is : Were there RF transmissions from the CBSD1 during  
the test? please choose one of the answers :  
2024-05-12T06:21:49.571Z - INFO - for the question : Were there RF transmissions from the CBSD1 during  
the test? , the user choose n  
2024-05-12T06:21:49.756Z - INFO - The final result of the test : WINNF.FT.C.REG.14 is - passed
```


1.7 WINNF.FT.C.REG.16

2024-05-12T06:27:06.947Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2024-05-12T06:27:06.947Z - INFO - the selected test from the user : WINNF.FT.C.REG.16 is starting now

2024-05-12T06:27:41.329Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "NR"

},

"cbsdCategory": "B",

"cbsdInfo": {

"firmwareVersion": "0.47.4.100",

"hardwareVersion": "REV4",

"model": "SCU2050",

"softwareVersion": "v2.1.012.8.1.6190",

"vendor": "Askey Corporation"

},

"cbsdSerialNumber": "G1E5S005517",

"cpiSignatureData": {

"digitalSignature":

"nqarOly2bKwN3ytao64Os_oRhjGh74aswl-J_ocbNDEATqYr3NQ-zLgia4m1OtNRgdKHS3K3K_MV9HoERT8XFJU6AxAa0pjWCaVEyT8V4HER5sowyQ7n6ZwfrfenMcB0LIqiyGowRQtQ7DTEf7uaZGDRtOWAY0mJgLvVeTiCMuCGXPH6wTLAsr00M2RZAicZzlyObN2rhhd5JgQiRH0FJVMTqznG3NAW2EYNBrk0Vnyye9zJa9Ulc6S ySNC6TBqfe1USpanpEX08oXUc39GdpD9BTdOz1zJ83XOOj44Yy_JmKMvWj1v0Zba9Y5B6E9plcY-zOVAork0uDZR0a0E0byA",

"encodedCpiSignedData":

"ewogLCJmY2NJZCI6Ikg4TjYwMTU2QSIsCiAgImNic2RTZXJpYWxOdW1iZXliOiJHMUU1UzAwNTUxNyIsCiAgImIuc3RhbGxhdGlvbiBhcmFtIjogewogICAgImxhdGloZWVlIjo2Mi41LAogICAgImxvbmVmdpdHVkZSI6LTE1NS41LAogICAgImhlaWdodCI6MTAuMCwKICAgICJoZWlnaHRUeXBlljoiQUdMliwKICAgICJhbnRlbn5hR2Fpbil6NiwiKICAgICJob3Jpem9udGFsQWNjdXJhY3kiOiAzLAogICAgInZlcnRyY2FsQWNjdXJhY3kiOiAzLAogICAgImFudGVubmFEb3dudGlsdCI6IDEwLAogICAgImFudGVubmFCZWVtd2lkdGgiOiA2MCwKICAgICJhbnRlbn5hQXppbXV0aCI6IDMwLAogICAgImVpcnBDYXBhYmVmlsaXR5IjozMywKICAgICJpbmRvb3JEZXBSb3ltZW50IjpmYWxzZQogIH0sCiAgInByb2Zlc3Npb25hbEluc3RhbGxlckRhGEiOiB7CiAgICAgI3BpSWQIiOiJjcGk5MDAxIiwKICAgICJjcGLOYW11IjoiQlYgSW5zdGFsbGVyIENlcnRyZmljYXRlliwKICAgICJpbmN0YWxsQ2VydgGImaWNhdGlvbiRpbWUiOiIyMDI0LTAzLTE5VDE5OjMwOjAwWlkiB9Cn0",

"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"

},

"fccId": "H8N60156A",

"measCapability": [],

"userId": "AskeyUserId-000001"

}

]

}

2024-05-12T06:27:41.357Z - INFO - Registration message contains cpiSignatureData

2024-05-12T06:27:41.358Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2024-05-12T06:27:41.358Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 33,

"antennaAzimuth": 30,

"heightType": "AGL",

"longitude": -155.5,

"antennaGain": 6,

"indoorDeployment": false,

"antennaBeamwidth": 60,

"horizontalAccuracy": 3,

"antennaDowntilt": 10,

"latitude": 62.5,

```
    "height": 10.0,  
    "verticalAccuracy": 3  
  },  
  "fcclId": "H8N60156A",  
  "professionalInstallerData": {  
    "cpiName": "BV Installer Certificate",  
    "installCertificationTime": "2024-03-19T11:30:00Z",  
    "cpild": "cpi9001"  
  },  
  "cbsdSerialNumber": "G1E5S005517"  
}  
2024-05-12T06:27:41.424Z - INFO - verified signature on cpiSignatureData  
2024-05-12T06:27:41.427Z - INFO - cpiSignatureData data successfully validated against jsonschema  
2024-05-12T06:27:41.430Z - INFO - engine sent successfully, the response to CBRS : {  
  "registrationResponse": [  
    {  
      "response": {  
        "responseCode": 100  
      }  
    }  
  ]  
}  
2024-05-12T06:27:42.967Z - INFO - arrived to nstep starting question answer session with the technician  
2024-05-12T06:27:42.967Z - INFO - the question is : Were there RF transmissions from the CBSD1 during  
the test? please choose one of the answers :  
2024-05-12T06:28:04.302Z - INFO - for the question : Were there RF transmissions from the CBSD1 during  
the test? , the user choose n  
2024-05-12T06:28:04.543Z - INFO - The final result of the test : WINNF.FT.C.REG.16 is - passed
```



```
    "height": 10.0,  
    "verticalAccuracy": 3  
  },  
  "fcclId": "H8N60156A",  
  "professionalInstallerData": {  
    "cpiName": "BV Installer Certificate",  
    "installCertificationTime": "2024-03-19T11:30:00Z",  
    "cpilId": "cpi9001"  
  },  
  "cbsdSerialNumber": "G1E5S005517"  
}  
2024-05-12T06:48:48.286Z - INFO - verified signature on cpiSignatureData  
2024-05-12T06:48:48.292Z - INFO - cpiSignatureData data successfully validated against jsonschema  
2024-05-12T06:48:48.296Z - INFO - engine sent successfully, the response to CBRS : {  
  "registrationResponse": [  
    {  
      "response": {  
        "responseCode": 201  
      }  
    }  
  ]  
}  
2024-05-12T06:48:49.963Z - INFO - arrived to nstep starting question answer session with the technician  
2024-05-12T06:48:49.963Z - INFO - the question is : Were there RF transmissions from the CBSD1 during  
the test? please choose one of the answers :  
2024-05-12T06:48:52.743Z - INFO - for the question : Were there RF transmissions from the CBSD1 during  
the test? , the user choose n  
2024-05-12T06:48:53.075Z - INFO - The final result of the test : WINNF.FT.C.REG.18 is - passed
```

2 CBSD Spectrum Grant Process

2.1 WINNF.FT.C.GRA.1

2024-05-12T06:52:28.282Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
 2024-05-12T06:52:28.282Z - INFO - the selected test from the user : WINNF.FT.C.GRA.1 is starting now
 2024-05-12T06:52:45.437Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "NR"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "0.47.4.100",
      "hardwareVersion": "REV4",
      "model": "SCU2050",
      "softwareVersion": "v2.1.012.8.1.6190",
      "vendor": "Askey Corporation"
    },
    "cbsdSerialNumber": "G1E5S005517",
    "cpiSignatureData": {
      "digitalSignature":
```

```
"nqarOly2bKwN3ytao64Os_oRhjGh74aswl-J_ocbNDEATqYr3NQ-zLgia4m1OtNRgdKHSk3K_MV9HoERT8
XFJU6AxAa0pjWCaVEyT8V4HER5sowyQ7n6ZwfrfenMcB0LIqiyGowRQtQ7DTEf7uaZGDRtOwAY0mJgLve
TiCMuCGXPH6wTLAsr00M2RZAicZzlyObN2rhhd5JgQiRH0FJVMTqznG3NAW2EYNBrk0Vnyye9zJa9Ulc6S
ySNC6TBqfe1USpanpEX08oXUc39GdpD9BTdOz1zJ83XOOj44Yy_JmKMvWj1v0Zba9Y5B6E9plcY-zOVAor
k0uDZR0a0E0byA",
```

```
"encodedCpiSignedData":
```

```
"ewogICJmY2NJZCI6Ikg4TjYwMTU2QSIsCiAgImNic2RTZXJpYWxOdW1iZXIiOiJHMUU1UzAwNTUxNyIsCi
AgImImluc3RhbGxhdGlvbGlBhcmFtIjogewogICAgImxhdGl0dWRlljo2Mi41LAogICAgImxvbmVmdpdHVkZSI6LTE1N
S41LAogICAgImhlaWdodCI6MTAuMCwKICAgICJoZWlnaHRUeXBlljoiQUdMliwKICAgICJhbnRlbn5hR2Fpbi
I6NiwKICAgICJob3Jpem9udGFsQWNjdXJhY3kiOiAzLAogICAgInZlcnRyY2FsQWNjdXJhY3kiOiAzLAogICAg
ImFudGVubmFEb3dudGlsdCI6IDEwLAogICAgImFudGVubmFCZWZtd2lkdGgiOiA2MCwKICAgICJhbnRlbn5h
hQXppbXV0aCI6IDMwLAogICAgImVpcnBDYXBhYmlsaXR5IjozMywKICAgICJpbmRvb3JlZlZBsb3ltZW50Ijp
mYWxzZQogIH0sCiAgInByb2Zlc3Npb25hbEluc3RhbGxlcRhdGEiOiB7CiAgICAiY3BpSWQiOiJjcGk5MDAxI
wKICAgICJjcGLOYw11IjoiQiYgSW5zdGFsbGVyIENicnRyZmljYXRlliwKICAgICJpbmN0YVxsQ2VydGlmawN
hdGlvbIRpbWUiOiilyMDIOLTazLTE5VDEsOjMwOjAwWilkICB9Cn0",
```

```
"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
```

```
},
"fccId": "H8N60156A",
"measCapability": [],
"userId": "AskeyUserId-000001"
```

```
]
}
```

2024-05-12T06:52:45.512Z - INFO - Registration message contains cpiSignatureData
 2024-05-12T06:52:45.513Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
 2024-05-12T06:52:45.513Z - INFO - encodedCpiSignedData contents = {

```
"installationParam": {
  "eirpCapability": 33,
  "antennaAzimuth": 30,
  "heightType": "AGL",
  "longitude": -155.5,
  "antennaGain": 6,
  "indoorDeployment": false,
  "antennaBeamwidth": 60,
  "horizontalAccuracy": 3,
```

```

    "antennaDowntilt": 10,
    "latitude": 62.5,
    "height": 10.0,
    "verticalAccuracy": 3
  },
  "fcclId": "H8N60156A",
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2024-03-19T11:30:00Z",
    "cpild": "cpi9001"
  },
  "cbsdSerialNumber": "G1E5S005517"
}
2024-05-12T06:52:45.624Z - INFO - verified signature on cpiSignatureData
2024-05-12T06:52:45.631Z - INFO - cpiSignatureData data successfully validated against jsonschema
2024-05-12T06:52:45.632Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T06:52:49.221Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "inquiredSpectrum": [
        {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      ]
    }
  ]
}
2024-05-12T06:52:49.230Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000.0,
            "lowFrequency": 3550000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

2024-05-12T06:52:53.385Z - INFO - grant request from CBRS : {

```
"grantRequest": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "operationParam": {  
      "maxEirp": 19.0,  
      "operationFrequencyRange": {  
        "highFrequency": 3590000000.0,  
        "lowFrequency": 3550000000.0  
      }  
    }  
  }  
]
```

}
2024-05-12T06:52:53.392Z - INFO - engine sent successfully, the response to CBRS : {

```
"grantResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "response": {  
      "responseCode": 400  
    }  
  }  
]
```

}
2024-05-12T06:52:55.293Z - INFO - arrived to nstep starting question answer session with the technician

2024-05-12T06:52:55.295Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2024-05-12T06:53:07.039Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2024-05-12T06:53:07.247Z - INFO - The final result of the test : WINNF.FT.C.GRA.1 is - passed


```

    "verticalAccuracy": 3
  },
  "fcclId": "H8N60156A",
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2024-03-19T11:30:00Z",
    "cpild": "cpi9001"
  },
  "cbsdSerialNumber": "G1E5S005517"
}
2024-05-12T06:56:30.382Z - INFO - verified signature on cpiSignatureData
2024-05-12T06:56:30.388Z - INFO - cpiSignatureData data successfully validated against jsonschema
2024-05-12T06:56:30.391Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T06:56:33.967Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "inquiredSpectrum": [
        {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      ]
    }
  ]
}
2024-05-12T06:56:33.977Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000.0,
            "lowFrequency": 3550000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T06:56:37.927Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {

```

```
"cbsdId": "H8N60156AMock-SASG1E5S005517",
"operationParam": {
  "maxEirp": 19.0,
  "operationFrequencyRange": {
    "highFrequency": 3590000000.0,
    "lowFrequency": 3550000000.0
  }
}
]
}
2024-05-12T06:56:37.938Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 401
      }
    }
  ]
}
2024-05-12T06:56:39.464Z - INFO - arrived to nstep starting question answer session with the technician
2024-05-12T06:56:39.466Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2024-05-12T06:57:52.331Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2024-05-12T06:57:52.490Z - INFO - The final result of the test : WINNF.FT.C.GRA.2 is - passed
```

3 CBSD Heart Beat Process

3.1 WINNF.FT.C.HBT.1

2024-05-12T08:18:26.782Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2024-05-12T08:18:26.783Z - INFO - the selected test from the user : WINNF.FT.C.HBT.1 is starting now

2024-05-12T08:19:16.065Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "NR"

},

"cbsdCategory": "B",

"cbsdInfo": {

"firmwareVersion": "0.47.4.100",

"hardwareVersion": "REV4",

"model": "SCU2050",

"softwareVersion": "v2.1.012.8.1.6190",

"vendor": "Askey Corporation"

},

"cbsdSerialNumber": "G1E5S005517",

"cpiSignatureData": {

"digitalSignature":

"nqarOly2bKwN3ytao64Os_oRhjGh74aswl-J_ocbNDEATqYr3NQ-zLgia4m1OtNRgdKHSk3K_MV9HoERt8XFJU6AxAa0pjWCaVEyT8V4HER5sowyQ7n6ZwfrfenMcB0LIqiyGowRQtQ7DTEf7uaZGDRtOwAY0mJgLveTiCMuCGXPH6wTLAsr00M2RZAicZzlyObN2rhhhd5JgQiRH0FJVMTqznG3NAW2EYNBrk0Vnyye9zJa9Ulc6S ySNC6TBqfe1USpanpEX08oXUc39GdpD9BTdOz1zJ83XOOj44Yy_JmKMvWj1v0Zba9Y5B6E9plcY-zOVAork0uDZR0a0E0byA",

"encodedCpiSignedData":

"ewogICJmY2NJZCI6Ikg4TjYwMTU2QSIsCiAgImNic2RTZXJpYWxOdW1iZXliOiJHMUU1UzAwNTUxNyIsCiAgImIuc3RhbGxhdGlvbiBhcmFtIjogewogICAgImxhdGloZWVlIjo2Mi41LAogICAgImxvbmVmdpdHVkZSI6LTE1NS41LAogICAgImhlaWdodCI6MTAUMCwKICAgICJoZWlnaHRUeXBlljoiQUdMliwKICAgICJhbnRlbn5hR2FpbiI6NiwiKICAgICJob3Jpem9udGFsQWNjdXJhY3kiOiAzLAogICAgInZlcnRyY2FsQWNjdXJhY3kiOiAzLAogICAgImFudGVubmFEb3dudGlsdCI6IDEwLAogICAgImFudGVubmFCZWVtd2lkdGgiOiA2MCwKICAgICJhbnRlbn5hQXppbXV0aCI6IDMwLAogICAgImVpcnBDYXBhYmVsaXR5IjozMywKICAgICJpbmRvb3JEZXBSb3ltZW50IjpmYWxzZQogIH0sCiAgInByb2Zlc3Npb25hbEluc3RhbGxlcXkRhdGEiOiB7CiAgICAgI3BpSWQIoiJjcGk5MDAxIiwKICAgICJjcGloYXV1IjoiQlYgSW5zdGFsbGVyIENicnRyZmljYXRlliwKICAgICJpbmN0YWxsQ2VydGlmawNhdGlvbiRpbWUiOiIyMDI0LTAzLTE5VDE5OjMwOjAwWlkiB9Cn0",

"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"

},

"fccId": "H8N60156A",

"measCapability": [],

"userId": "AskeyUserId-000001"

}

]

}

2024-05-12T08:19:16.105Z - INFO - Registration message contains cpiSignatureData

2024-05-12T08:19:16.105Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2024-05-12T08:19:16.105Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 33,

"antennaAzimuth": 30,

"heightType": "AGL",

"longitude": -155.5,

"antennaGain": 6,

"indoorDeployment": false,

"antennaBeamwidth": 60,

"horizontalAccuracy": 3,

"antennaDowntilt": 10,

"latitude": 62.5,

```

    "height": 10.0,
    "verticalAccuracy": 3
  },
  "fcclId": "H8N60156A",
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2024-03-19T11:30:00Z",
    "cpild": "cpi9001"
  },
  "cbsdSerialNumber": "G1E5S005517"
}
2024-05-12T08:19:16.207Z - INFO - verified signature on cpiSignatureData
2024-05-12T08:19:16.213Z - INFO - cpiSignatureData data successfully validated against jsonschema
2024-05-12T08:19:16.216Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T08:19:19.678Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "inquiredSpectrum": [
        {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      ]
    }
  ]
}
2024-05-12T08:19:19.688Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000.0,
            "lowFrequency": 3550000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T08:19:23.835Z - INFO - grant request from CBRS : {
  "grantRequest": [

```

```

    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "operationParam": {
        "maxEirp": 19.0,
        "operationFrequencyRange": {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      }
    }
  ]
}
2024-05-12T08:19:23.839Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "channelType": "GAA",
      "grantExpireTime": "2024-05-19T08:19:23Z",
      "grantId": "25517990",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T08:19:27.681Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "25517990",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2024-05-12T08:19:27.690Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "25517990",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T08:22:47Z"
    }
  ]
}
2024-05-12T08:20:29.552Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "25517990",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}

```

2024-05-12T08:20:29.552Z - INFO - Time interval between two heartbeat request messages is: 61.87, limit is: 65.0

2024-05-12T08:20:29.559Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "25517990",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2024-05-12T08:23:49Z"  
  }  
]
```

}
2024-05-12T08:21:30.506Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "25517990",  
    "grantRenew": false,  
    "operationState": "AUTHORIZED"  
  }  
]
```

}
2024-05-12T08:21:30.506Z - INFO - Time interval between two heartbeat request messages is: 60.954, limit is: 65.0

2024-05-12T08:21:30.512Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "25517990",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2024-05-12T08:24:50Z"  
  }  
]
```

}
2024-05-12T08:22:31.493Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "25517990",  
    "grantRenew": false,  
    "operationState": "AUTHORIZED"  
  }  
]
```

}
2024-05-12T08:22:31.496Z - INFO - Time interval between two heartbeat request messages is: 60.988, limit is: 65.0

2024-05-12T08:23:32.608Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "25517990",  
    "grantRenew": false,  
    "operationState": "AUTHORIZED"  
  }  
]
```

```
]
}
2024-05-12T08:23:32.609Z - INFO - Time interval between two heartbeat request messages is: 61.115, limit
is: 65.0
2024-05-12T08:23:32.615Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "25517990",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T08:26:52Z"
    }
  ]
}
}
2024-05-12T08:24:33.575Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "25517990",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
}
2024-05-12T08:24:33.578Z - INFO - Time interval between two heartbeat request messages is: 60.967, limit
is: 65.0
2024-05-12T08:24:33.585Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "25517990",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T08:27:53Z"
    }
  ]
}
}
2024-05-12T08:24:35.322Z - INFO - arrived to nstep starting question answer session with the technician
2024-05-12T08:24:35.323Z - INFO - the question is : Did CBSD1 transmit power prior to AUTHORIZED state
(first successful HBT response)? please choose one of the answers :
2024-05-12T08:25:05.486Z - INFO - for the question : Did CBSD1 transmit power prior to AUTHORIZED state
(first successful HBT response)? , the user choose n
2024-05-12T08:25:05.489Z - INFO - the question is : Did CBSD1 transmit only within the frequency range
specified in its grantRequest message? please choose one of the answers :
2024-05-12T08:25:06.155Z - INFO - for the question : Did CBSD1 transmit only within the frequency range
specified in its grantRequest message? , the user choose y
2024-05-12T08:25:06.513Z - INFO - The final result of the test : WINNF.FT.C.HBT.1 is - passed
```

3.2 WINNF.FT.C.HBT.3

2024-05-12T08:26:25.655Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2024-05-12T08:26:25.657Z - INFO - the selected test from the user : WINNF.FT.C.HBT.3 is starting now

2024-05-12T08:26:43.907Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "NR"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "0.47.4.100",
      "hardwareVersion": "REV4",
      "model": "SCU2050",
      "softwareVersion": "v2.1.012.8.1.6190",
      "vendor": "Askey Corporation"
    },
    "cbsdSerialNumber": "G1E5S005517",
    "cpiSignatureData": {
      "digitalSignature":
```

```
"nqarOly2bKwN3ytao64Os_oRhjGh74aswl-J_ocbNDEATqYr3NQ-zLgia4m1OtNRgdKHS3K3K_MV9HoERT8
XFJU6AxAa0pjWCaVEyT8V4HER5sowyQ7n6ZwfrfenMcB0LIqyGowRQtQ7DTEf7uaZGDRtOwAY0mJgLvE
TiCMuCgXPH6wTLAsr00M2RZAicZzlyObN2rhh5JgQiRH0FJVMTqznG3NAW2EYNBrk0Vnyye9zJa9Ulc6S
ySNC6TBqfe1USpanpEX08oXUc39GdpD9BTdOz1zJ83XOOj44Yy_JmKMvWj1v0Zba9Y5B6E9plcY-zOVAor
k0uDZR0a0E0byA",
```

```
"encodedCpiSignedData":
```

```
"ewogICJmY2NJZCI6Ikg4TjYwMTU2QSIsCiAgImNic2RTZXJpYWxOdW1iZXliOiJHMUU1UzAwNTUxNyIsCi
AgImIuc3RhbGxhdGlvbGlBhcmFtIjogewogICAgImxhdGl0dWRlljo2Mi41LAogICAgImxvbmtpdHVkZSI6LTE1N
S41LAogICAgImhlaWdodCI6MTAuMCwKICAgICJoZWlnaHRUeXBlljoiQUdMliwKICAgICJhbnRlbn5hR2Fpbi
I6NiwKICAgICJob3Jpem9udGFsQWNjdXJhY3kiOiAzLAogICAgInZlcnRyY2FsQWNjdXJhY3kiOiAzLAogICAg
ImFudGVubmFEb3dudGlscCI6IDEwLAogICAgImVpcnBDYXhYbmlsaXR5IjozMywKICAgICJpbmRvb3JEZXBs
b3ltZW50IjpmYXxzZQogIH0sCiAgInByb2Zlc3Npb25hbEluc3RhbGxlckRhdGEiOiB7CiAgICAgI3BpSWQI
OiJjcGk5MDAxIiwKICAgICJjcGlOYWY1IjoiQlYgSW5zdGFsbGVyIENlcnRyZmljYXRlliwKICAgICJpbmN0Y
WxsQ2VydGlmaWNhdGlvbGlRpbWUiOiIyMDI0LTAzLTE5VDEwOjMwOjAwWlkiB9Cn0",
```

```
"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
```

```
},
"fccId": "H8N60156A",
"measCapability": [],
"userId": "AskeyUserId-000001"
}
]
```

2024-05-12T08:26:43.957Z - INFO - Registration message contains cpiSignatureData

2024-05-12T08:26:43.957Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2024-05-12T08:26:43.957Z - INFO - encodedCpiSignedData contents = {

```
"installationParam": {
  "eirpCapability": 33,
  "antennaAzimuth": 30,
  "heightType": "AGL",
  "longitude": -155.5,
  "antennaGain": 6,
  "indoorDeployment": false,
  "antennaBeamwidth": 60,
```



```
    "horizontalAccuracy": 3,
    "antennaDowntilt": 10,
    "latitude": 62.5,
    "height": 10.0,
    "verticalAccuracy": 3
  },
  "fcclId": "H8N60156A",
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2024-03-19T11:30:00Z",
    "cpild": "cpi9001"
  },
  "cbsdSerialNumber": "G1E5S005517"
}
2024-05-12T08:26:44.029Z - INFO - verified signature on cpiSignatureData
2024-05-12T08:26:44.032Z - INFO - cpiSignatureData data successfully validated against jsonschema
2024-05-12T08:26:44.032Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T08:26:47.676Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "inquiredSpectrum": [
        {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      ]
    }
  ]
}
2024-05-12T08:26:47.686Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000.0,
            "lowFrequency": 3550000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```

```
}
2024-05-12T08:26:51.684Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "operationParam": {
        "maxEirp": 19.0,
        "operationFrequencyRange": {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      }
    }
  ]
}
2024-05-12T08:26:51.688Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "channelType": "GAA",
      "grantExpireTime": "2024-05-19T08:26:51Z",
      "grantId": "62297682",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T08:26:55.420Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "62297682",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2024-05-12T08:26:55.430Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "62297682",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T08:30:15Z"
    }
  ]
}
2024-05-12T08:27:57.260Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "62297682",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
```

```
    }
  ]
}
2024-05-12T08:27:57.262Z - INFO - Time interval between two heartbeat request messages is: 61.841, limit
is: 65.0
2024-05-12T08:27:57.267Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "62297682",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T08:31:17Z"
    }
  ]
}
2024-05-12T08:28:58.561Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "62297682",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2024-05-12T08:28:58.562Z - INFO - Time interval between two heartbeat request messages is: 61.301, limit
is: 65.0
2024-05-12T08:28:58.571Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "62297682",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T08:32:18Z"
    }
  ]
}
2024-05-12T08:29:59.507Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "62297682",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2024-05-12T08:29:59.509Z - INFO - Time interval between two heartbeat request messages is: 60.946, limit
is: 65.0
2024-05-12T08:29:59.513Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "62297682",
```

```
"response": {  
  "responseCode": 105  
},  
"transmitExpireTime": "2024-05-12T08:29:59Z"  
}
```

```
]
```

```
}
```

2024-05-12T08:30:00.750Z - INFO - arrived to nstep starting question answer session with the technician
2024-05-12T08:30:00.752Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds
of receiving Heartbeat response with responseCode = 105? please choose one of the answers :
2024-05-12T08:30:21.345Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds
of receiving Heartbeat response with responseCode = 105? , the user choose y
2024-05-12T08:30:21.615Z - INFO - The final result of the test : WINNF.FT.C.HBT.3 is - passed


```

    "verticalAccuracy": 3
  },
  "fcclId": "H8N60156A",
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2024-03-19T11:30:00Z",
    "cpild": "cpi9001"
  },
  "cbsdSerialNumber": "G1E5S005517"
}
2024-05-12T08:35:38.177Z - INFO - verified signature on cpiSignatureData
2024-05-12T08:35:38.181Z - INFO - cpiSignatureData data successfully validated against jsonschema
2024-05-12T08:35:38.183Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T08:35:41.730Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "inquiredSpectrum": [
        {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      ]
    }
  ]
}
2024-05-12T08:35:41.736Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000.0,
            "lowFrequency": 3550000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T08:35:45.720Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {

```

```
"cbsdId": "H8N60156AMock-SASG1E5S005517",
"operationParam": {
  "maxEirp": 19.0,
  "operationFrequencyRange": {
    "highFrequency": 3590000000.0,
    "lowFrequency": 3550000000.0
  }
}
]
}
2024-05-12T08:35:45.726Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "channelType": "GAA",
      "grantExpireTime": "2024-05-19T08:35:45Z",
      "grantId": "182769823",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T08:35:49.460Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "182769823",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2024-05-12T08:35:49.467Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "182769823",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T08:39:09Z"
    }
  ]
}
2024-05-12T08:36:51.305Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "182769823",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2024-05-12T08:36:51.308Z - INFO - Time interval between two heartbeat request messages is: 61.845, limit
```

is: 65.0

2024-05-12T08:36:51.316Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "182769823",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2024-05-12T08:40:11Z"  
  }  
]
```

2024-05-12T08:37:52.355Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "182769823",  
    "grantRenew": false,  
    "operationState": "AUTHORIZED"  
  }  
]
```

2024-05-12T08:37:52.357Z - INFO - Time interval between two heartbeat request messages is: 61.05, limit is: 65.0

2024-05-12T08:37:52.361Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "182769823",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2024-05-12T08:41:12Z"  
  }  
]
```

2024-05-12T08:38:53.332Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "182769823",  
    "grantRenew": false,  
    "operationState": "AUTHORIZED"  
  }  
]
```

2024-05-12T08:38:53.334Z - INFO - Time interval between two heartbeat request messages is: 60.977, limit is: 65.0

2024-05-12T08:38:53.342Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "182769823",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2024-05-12T08:42:13Z"  
  }  
]
```



```

    }
  ]
}
2024-05-12T08:39:54.298Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "182769823",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2024-05-12T08:39:54.299Z - INFO - Time interval between two heartbeat request messages is: 60.965, limit
is: 65.0
2024-05-12T08:39:54.306Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "182769823",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T08:43:14Z"
    }
  ]
}
}
2024-05-12T08:40:55.298Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "182769823",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
}
2024-05-12T08:40:55.301Z - INFO - Time interval between two heartbeat request messages is: 61.0, limit is:
65.0
2024-05-12T08:40:55.305Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "182769823",
      "response": {
        "responseCode": 500
      },
      "transmitExpireTime": "2024-05-12T08:40:55Z"
    }
  ]
}
}
2024-05-12T08:40:56.542Z - INFO - arrived to nstep starting question answer session with the technician
2024-05-12T08:40:56.543Z - INFO - the question is : Did the CBSD1 stop RF transmission within 60 seconds
of receiving Heartbeat response with responseCode = 500? please choose one of the answers :
2024-05-12T08:42:24.888Z - INFO - for the question : Did the CBSD1 stop RF transmission within 60
seconds of receiving Heartbeat response with responseCode = 500? , the user choose y
2024-05-12T08:42:25.125Z - INFO - The final result of the test : WINNF.FT.C.HBT.4 is - passed

```

3.4 WINNF.FT.C.HBT.5

2024-05-12T08:45:01.566Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2024-05-12T08:45:01.568Z - INFO - the selected test from the user : WINNF.FT.C.HBT.5 is starting now

2024-05-12T08:45:25.388Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "NR"

},

"cbsdCategory": "B",

"cbsdInfo": {

"firmwareVersion": "0.47.4.100",

"hardwareVersion": "REV4",

"model": "SCU2050",

"softwareVersion": "v2.1.012.8.1.6190",

"vendor": "Askey Corporation"

},

"cbsdSerialNumber": "G1E5S005517",

"cpiSignatureData": {

"digitalSignature":

"nqarOly2bKwN3ytao64Os_oRhjGh74aswl-J_ocbNDEATqYr3NQ-zLgia4m1OtNRgdKHS3K3K_MV9HoERt8
XFJU6AxAa0pjWCaVEyT8V4HER5sowyQ7n6ZwfrfenMcB0LIqiyGowRQtQ7DTEf7uaZGDRtOWAY0mJgLvE
TiCMuCGXPH6wTLAsr00M2RZAicZzlyObN2rhhhd5JgQiRH0FJVMTqznG3NAW2EYNBrk0Vnyye9zJa9Ulc6S
ySNC6TBqfe1USpanpEX08oXUc39GdpD9BTdOz1zJ83XOOj44Yy_JmKMvWj1v0Zba9Y5B6E9plcY-zOVAor
k0uDZR0a0E0byA",

"encodedCpiSignedData":

"ewogICJmY2NJZCI6Ikg4TjYwMTU2QSIsCiAgImNic2RTZXJpYWxOdW1iZXliOiJHMUU1UzAwNTUxNyIsCi
AgImIuc3RhbGxhdGlvbiBhcmFtIjogewogICAgImxhdGI0dWRlljo2Mi41LAogICAgImxvbmdbmdpdHVkZSI6LTE1N
S41LAogICAgImhlaWdodCI6MTAuMCMwKICAgICJoZWlnaHRUeXBlljoiQUdMliwKICAgICJhbnRlbn5hR2Fpbi
I6NiwKICAgICJob3Jpem9udGFsQWNjdXJhY3kiOiAzLAogICAgInZlcnRyY2FsQWNjdXJhY3kiOiAzLAogICAg
ImFudGVubmFEb3dudGlsdCI6IDEwLAogICAgImFudGVubmFCZWZtd2lkdGgiOiA2MCMwKICAgICJhbnRlbn5h
hQXppbXV0aCI6IDMwLAogICAgImVpcnBDYXBhYm91bnR5bWwKICAgICJpbmRvb3JEZXBs3ltZW50Ijpw
mYWxzZQogIH0sCiAgInByb2Zlc3Npb25hbEluc3RhbGxlc3RhdGEiOiB7CiAgICAgI3BpSWQI3BpSWQI3BpSWQI3Bp
wKICAgICJjcGLOYW11IjoiQlYgSW5zdGFsbGVyIENicnRyZmljYXRlliwKICAgICJpbmN0YXxsQ2VydGlmawW
hdGlvbiRpbWUiOiIyMDI0LTAzLTE5VDE5OjMwOjAwWm9KICB9Cn0",

"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"

},

"fccId": "H8N60156A",

"measCapability": [],

"userId": "AskeyUserId-000001"

}

]

}

2024-05-12T08:45:25.437Z - INFO - Registration message contains cpiSignatureData

2024-05-12T08:45:25.437Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2024-05-12T08:45:25.437Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 33,

"antennaAzimuth": 30,

"heightType": "AGL",

"longitude": -155.5,

"antennaGain": 6,

"indoorDeployment": false,

"antennaBeamwidth": 60,

"horizontalAccuracy": 3,

"antennaDowntilt": 10,

"latitude": 62.5,

"height": 10.0,

```
    "verticalAccuracy": 3
  },
  "fcclId": "H8N60156A",
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2024-03-19T11:30:00Z",
    "cpild": "cpi9001"
  },
  "cbsdSerialNumber": "G1E5S005517"
}
2024-05-12T08:45:25.515Z - INFO - verified signature on cpiSignatureData
2024-05-12T08:45:25.519Z - INFO - cpiSignatureData data successfully validated against jsonschema
2024-05-12T08:45:25.519Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T08:45:29.098Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "inquiredSpectrum": [
        {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      ]
    }
  ]
}
2024-05-12T08:45:29.105Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000.0,
            "lowFrequency": 3550000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T08:45:33.124Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
```

```

    "cbsdId": "H8N60156AMock-SASG1E5S005517",
    "operationParam": {
      "maxEirp": 19.0,
      "operationFrequencyRange": {
        "highFrequency": 3590000000.0,
        "lowFrequency": 3550000000.0
      }
    }
  }
]
}
2024-05-12T08:45:33.130Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "channelType": "GAA",
      "grantExpireTime": "2024-05-19T08:45:33Z",
      "grantId": "762812788",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T08:45:37.039Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "762812788",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2024-05-12T08:45:37.046Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "762812788",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2024-05-12T08:45:37Z"
    }
  ]
}
2024-05-12T08:46:39.019Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "762812788",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2024-05-12T08:46:39.022Z - INFO - Time interval between two heartbeat request messages is: 61.98, limit is:

```

65.0

2024-05-12T08:46:39.026Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "762812788",  
    "response": {  
      "responseCode": 501  
    },  
    "transmitExpireTime": "2024-05-12T08:46:39Z"  
  }  
]
```

}

2024-05-12T08:46:40.645Z - INFO - arrived to nstep starting question answer session with the technician

2024-05-12T08:46:40.647Z - INFO - the question is : Did the CBSD transmit at any time during the test?

please choose one of the answers :

2024-05-12T08:47:56.127Z - INFO - for the question : Did the CBSD transmit at any time during the test? , the user choose n

2024-05-12T08:47:57.315Z - INFO - The final result of the test : WINNF.FT.C.HBT.5 is - passed


```
    "verticalAccuracy": 3
  },
  "fcclId": "H8N60156A",
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2024-03-19T11:30:00Z",
    "cpild": "cpi9001"
  },
  "cbsdSerialNumber": "G1E5S005517"
}
2024-05-12T08:53:54.181Z - INFO - verified signature on cpiSignatureData
2024-05-12T08:53:54.186Z - INFO - cpiSignatureData data successfully validated against jsonschema
2024-05-12T08:53:54.187Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T08:53:57.651Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "inquiredSpectrum": [
        {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      ]
    }
  ]
}
2024-05-12T08:53:57.657Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000.0,
            "lowFrequency": 3550000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T08:54:01.670Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
```

```

    "cbsdId": "H8N60156AMock-SASG1E5S005517",
    "operationParam": {
      "maxEirp": 19.0,
      "operationFrequencyRange": {
        "highFrequency": 3590000000.0,
        "lowFrequency": 3550000000.0
      }
    }
  }
]
}
2024-05-12T08:54:01.677Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "channelType": "GAA",
      "grantExpireTime": "2024-05-19T08:54:01Z",
      "grantId": "171648427",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T08:54:05.453Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "171648427",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2024-05-12T08:54:05.463Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "171648427",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T08:57:25Z"
    }
  ]
}
2024-05-12T08:55:07.388Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "171648427",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2024-05-12T08:55:07.390Z - INFO - Time interval between two heartbeat request messages is: 61.935, limit

```


is: 65.0

2024-05-12T08:55:07.395Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "171648427",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2024-05-12T08:58:27Z"  
  }  
]
```

2024-05-12T08:56:08.362Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "171648427",  
    "grantRenew": false,  
    "operationState": "AUTHORIZED"  
  }  
]
```

2024-05-12T08:56:08.364Z - INFO - Time interval between two heartbeat request messages is: 60.974, limit is: 65.0

2024-05-12T08:56:08.368Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "171648427",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2024-05-12T08:59:28Z"  
  }  
]
```

2024-05-12T08:57:09.397Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "171648427",  
    "grantRenew": false,  
    "operationState": "AUTHORIZED"  
  }  
]
```

2024-05-12T08:57:09.398Z - INFO - Time interval between two heartbeat request messages is: 61.034, limit is: 65.0

2024-05-12T08:57:09.403Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "171648427",  
    "response": {  
      "responseCode": 501  
    },  
    "transmitExpireTime": "2024-05-12T08:57:09Z"  
  }  
]
```

```
    }
  ]
}
2024-05-12T08:58:10.505Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "171648427",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2024-05-12T08:58:10.507Z - INFO - Time interval between two heartbeat request messages is: 61.108, limit is: 65.0
2024-05-12T08:58:10.516Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "171648427",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2024-05-12T08:58:10Z"
    }
  ]
}
2024-05-12T08:58:12.474Z - INFO - arrived to nstep starting question answer session with the technician
2024-05-12T08:58:12.476Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 501? please choose one of the answers :
2024-05-12T08:58:42.665Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 501? , the user choose y
2024-05-12T08:58:42.913Z - INFO - The final result of the test : WINNF.FT.C.HBT.6 is - passed
```



```
    "verticalAccuracy": 3
  },
  "fcclId": "H8N60156A",
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2024-03-19T11:30:00Z",
    "cpild": "cpi9001"
  },
  "cbsdSerialNumber": "G1E5S005517"
}
2024-05-12T08:59:34.431Z - INFO - verified signature on cpiSignatureData
2024-05-12T08:59:34.436Z - INFO - cpiSignatureData data successfully validated against jsonschema
2024-05-12T08:59:34.437Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T08:59:37.921Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "inquiredSpectrum": [
        {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      ]
    }
  ]
}
2024-05-12T08:59:37.927Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000.0,
            "lowFrequency": 3550000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T08:59:42.007Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
```

```
        "cbsdId": "H8N60156AMock-SASG1E5S005517",
        "operationParam": {
            "maxEirp": 19.0,
            "operationFrequencyRange": {
                "highFrequency": 3590000000.0,
                "lowFrequency": 3550000000.0
            }
        }
    }
]
}
2024-05-12T08:59:42.013Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "channelType": "GAA",
            "grantExpireTime": "2024-05-19T08:59:42Z",
            "grantId": "75462623",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2024-05-12T08:59:45.770Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "75462623",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
2024-05-12T08:59:45.776Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "75462623",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2024-05-12T09:03:05Z"
        }
    ]
}
2024-05-12T09:00:47.585Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "75462623",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2024-05-12T09:00:47.588Z - INFO - Time interval between two heartbeat request messages is: 61.816, limit
```

is: 65.0

2024-05-12T09:00:47.598Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "75462623",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2024-05-12T09:04:07Z"  
  }  
]
```

2024-05-12T09:01:48.528Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "75462623",  
    "grantRenew": false,  
    "operationState": "AUTHORIZED"  
  }  
]
```

2024-05-12T09:01:48.529Z - INFO - Time interval between two heartbeat request messages is: 60.942, limit is: 65.0

2024-05-12T09:01:48.533Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "75462623",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2024-05-12T09:05:08Z"  
  }  
]
```

2024-05-12T09:02:49.510Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "75462623",  
    "grantRenew": false,  
    "operationState": "AUTHORIZED"  
  }  
]
```

2024-05-12T09:02:49.513Z - INFO - Time interval between two heartbeat request messages is: 60.982, limit is: 65.0

2024-05-12T09:02:49.520Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "75462623",  
    "response": {  
      "responseCode": 502  
    },  
    "transmitExpireTime": "2024-05-12T09:02:49Z"  
  }  
]
```

```
    }  
  ]  
}  
2024-05-12T09:02:51.657Z - INFO - relinquishment request from CBRS : {  
  "relinquishmentRequest": [  
    {  
      "cbsdId": "H8N60156AMock-SASG1E5S005517",  
      "grantId": "75462623"  
    }  
  ]  
}  
2024-05-12T09:02:51.664Z - INFO - engine sent successfully, the response to CBRS : {  
  "relinquishmentResponse": [  
    {  
      "cbsdId": "H8N60156AMock-SASG1E5S005517",  
      "grantId": "75462623",  
      "response": {  
        "responseCode": 0  
      }  
    }  
  ]  
}  
2024-05-12T09:02:53.578Z - INFO - arrived to nstep starting question answer session with the technician  
2024-05-12T09:02:53.579Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds  
of receiving Heartbeat response with responseCode = 502? please choose one of the answers :  
2024-05-12T09:05:25.861Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds  
of receiving Heartbeat response with responseCode = 502? , the user choose y  
2024-05-12T09:05:26.308Z - INFO - The final result of the test : WINNF.FT.C.HBT.7 is - passed
```

3.7 WINNF.FT.C.HBT.9

2024-05-12T09:06:11.322Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2024-05-12T09:06:11.322Z - INFO - the selected test from the user : WINNF.FT.C.HBT.9 is starting now

2024-05-12T09:06:32.315Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "NR"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "0.47.4.100",
      "hardwareVersion": "REV4",
      "model": "SCU2050",
      "softwareVersion": "v2.1.012.8.1.6190",
      "vendor": "Askey Corporation"
    },
    "cbsdSerialNumber": "G1E5S005517",
    "cpiSignatureData": {
      "digitalSignature":
```

```
"nqarOly2bKwN3ytao64Os_oRhjGh74aswl-J_ocbNDEATqYr3NQ-zLgia4m1OtNRgdKHSk3K_MV9HoERT8
XFJU6AxAa0pjWCaVEyT8V4HER5sowyQ7n6ZwfrfenMcB0LIqiyGowRQtQ7DTEf7uaZGDRtOWAY0mJgLve
TiCMuCgXPH6wTLAsr00M2RZAicZzlyObN2rhhhd5JgQiRH0FJVMTqznG3NAW2EYnBrk0Vnyye9zJa9Ulc6S
ySNC6TBqfe1USpanpEX08oXUc39GdpD9BTdOz1zJ83XOOj44Yy_JmKMvWj1v0Zba9Y5B6E9plcY-zOVAor
k0uDZR0a0E0byA",
```

```
"encodedCpiSignedData":
```

```
"ewogICJmY2NJZCI6Ikg4TjYwMTU2QSIsCiAgImNic2RTZXJpYWxOdW1iZXliOiJHMUU1UzAwNTUxNyIsCi
AgImIuc3RhbGxhdGlvbiBhcmFtIjogewogICAgImxhdGloZWRlljo2Mi41LAogICAgImxvbmVmdpdHVkZSI6LTE1N
S41LAogICAgImhlaWdodCI6MTAuMCwKICAgICJoZWlnaHRUeXBlljoiQUdMliwKICAgICJhbnRlbn5hR2Fpbi
I6NiwiKICAgICJob3Jpem9udGFsQWNjdXJhY3kiOiAzLAogICAgInZlcnRyY2FsQWNjdXJhY3kiOiAzLAogICAg
ImFudGVubmFEb3dudGlsdCI6IDEwLAogICAgImFudGVubmFCZWZtd2lkdGgiOiA2MCwKICAgICJhbnRlbn5h
hQXppbXV0aCI6IDMwLAogICAgImVpcnBDYXBhYmVmlsaXR5IjozMywKICAgICJpbmRvb3JEZXBSb3ltZW50Ijpw
mYWxzZQogIH0sCiAgInByb2Zlc3Npb25hbEluc3RhbGxlckRhdGEiOiB7CiAgICAgI3BpSWQIoiJjcGk5MDAxIjw
KICAgICJjcGloYyW1IjoiQlYgSW5zdGFsbGVyIElcnRyZmljYXRlliwKICAgICJpbmN0YWxsQ2VydGlmaWN
hdGlvbiRpbWUiOiIyMDI0LTAzLTE5VDE5OjMwOjAwWlkiB9Cn0",
```

```
"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
```

```
},
"fccId": "H8N60156A",
"measCapability": [],
"userId": "AskeyUserId-000001"
}
]
```

2024-05-12T09:06:32.372Z - INFO - Registration message contains cpiSignatureData

2024-05-12T09:06:32.372Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2024-05-12T09:06:32.372Z - INFO - encodedCpiSignedData contents = {

```
"installationParam": {
  "eirpCapability": 33,
  "antennaAzimuth": 30,
  "heightType": "AGL",
  "longitude": -155.5,
  "antennaGain": 6,
  "indoorDeployment": false,
  "antennaBeamwidth": 60,
  "horizontalAccuracy": 3,
  "antennaDowntilt": 10,
  "latitude": 62.5,
```



```

    "height": 10.0,
    "verticalAccuracy": 3
  },
  "fcclId": "H8N60156A",
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2024-03-19T11:30:00Z",
    "cpild": "cpi9001"
  },
  "cbsdSerialNumber": "G1E5S005517"
}
2024-05-12T09:06:32.480Z - INFO - verified signature on cpiSignatureData
2024-05-12T09:06:32.486Z - INFO - cpiSignatureData data successfully validated against jsonschema
2024-05-12T09:06:32.487Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T09:06:35.979Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "inquiredSpectrum": [
        {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      ]
    }
  ]
}
2024-05-12T09:06:35.987Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000.0,
            "lowFrequency": 3550000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T09:06:39.957Z - INFO - grant request from CBRS : {
  "grantRequest": [

```

```

    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "operationParam": {
        "maxEirp": 19.0,
        "operationFrequencyRange": {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      }
    }
  ]
}
2024-05-12T09:06:39.966Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "channelType": "GAA",
      "grantExpireTime": "2024-05-19T09:06:39Z",
      "grantId": "889378868",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T09:06:43.832Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "889378868",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2024-05-12T09:07:56.157Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "889378868",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2024-05-12T09:07:56.157Z - INFO - request message received while HBT is absent, sleep 132 sec before
responding
2024-05-12T09:09:08.535Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "889378868",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
}

```

2024-05-12T09:09:08.535Z - INFO - request message received while HBT is absent, sleep 60 sec before responding

2024-05-12T09:10:03.844Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "889378868",  
    "response": {  
      "responseCode": 501  
    },  
    "transmitExpireTime": "2024-05-12T09:10:03Z"  
  }  
]
```

2024-05-12T09:10:05.433Z - INFO - arrived to nstep starting question answer session with the technician

2024-05-12T09:10:05.434Z - INFO - the question is : Were there RF transmissions from the CBSD during the test? please choose one of the answers :

2024-05-12T09:10:08.158Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"

2024-05-12T09:10:08.536Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"

2024-05-12T09:10:16.165Z - INFO - for the question : Were there RF transmissions from the CBSD during the test? , the user choose n

2024-05-12T09:10:16.505Z - INFO - The final result of the test : WINNF.FT.C.HBT.9 is - passed


```

    "verticalAccuracy": 3
  },
  "fcclId": "H8N60156A",
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2024-03-19T11:30:00Z",
    "cpild": "cpi9001"
  },
  "cbsdSerialNumber": "G1E5S005517"
}
2024-05-12T09:16:26.329Z - INFO - verified signature on cpiSignatureData
2024-05-12T09:16:26.335Z - INFO - cpiSignatureData data successfully validated against jsonschema
2024-05-12T09:16:26.338Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T09:16:29.921Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "inquiredSpectrum": [
        {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      ]
    }
  ]
}
2024-05-12T09:16:29.930Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000.0,
            "lowFrequency": 3550000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T09:16:33.881Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {

```

```

    "cbsdId": "H8N60156AMock-SASG1E5S005517",
    "operationParam": {
      "maxEirp": 19.0,
      "operationFrequencyRange": {
        "highFrequency": 3590000000.0,
        "lowFrequency": 3550000000.0
      }
    }
  }
]
}
2024-05-12T09:16:33.887Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "channelType": "GAA",
      "grantExpireTime": "2024-05-19T09:16:33Z",
      "grantId": "869595994",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T09:16:37.736Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "869595994",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2024-05-12T09:16:37.744Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "869595994",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T09:19:57Z"
    }
  ]
}
2024-05-12T09:17:39.668Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "869595994",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2024-05-12T09:17:39.670Z - INFO - Time interval between two heartbeat request messages is: 61.933, limit

```

```
is: 65.0
2024-05-12T09:17:39.674Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "869595994",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T09:20:59Z"
    }
  ]
}
2024-05-12T09:18:40.796Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "869595994",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2024-05-12T09:18:40.799Z - INFO - Time interval between two heartbeat request messages is: 61.128, limit
is: 65.0
2024-05-12T09:18:40.803Z - INFO - LAST HBT RESPONSE THAT SET TRANSMIT_EXPIRE_TIME WAS AT:
2024-05-12 09:17:39.669000
2024-05-12T09:19:53.311Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "869595994",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2024-05-12T09:19:53.312Z - INFO - request message received while HBT is absent, sleep 132 sec before
responding
2024-05-12T09:21:05.684Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "869595994",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2024-05-12T09:21:05.684Z - INFO - request message received while HBT is absent, sleep 60 sec before
responding
2024-05-12T09:22:00.809Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "869595994",
      "response": {
        "responseCode": 501
      }
    }
  ]
}
```

```
    },  
    "transmitExpireTime": "2024-05-12T09:22:00Z"  
  }  
]  
}  
2024-05-12T09:22:02.036Z - INFO - arrived to nstep starting question answer session with the technician  
2024-05-12T09:22:02.039Z - INFO - the question is : Did the CBSD stop RF transmissions within  
(transmitExpireTime + 60seconds) of last valid heartbeat response? please choose one of the answers :  
2024-05-12T09:22:05.312Z - INFO - engine sent successfully, the response to CBRS : "list index out of  
range"  
2024-05-12T09:22:05.686Z - INFO - engine sent successfully, the response to CBRS : "list index out of  
range"  
2024-05-12T09:22:44.130Z - INFO - for the question : Did the CBSD stop RF transmissions within  
(transmitExpireTime + 60seconds) of last valid heartbeat response? , the user choose y  
2024-05-12T09:22:44.522Z - INFO - The final result of the test : WINNF.FT.C.HBT.10 is - passed
```



```
    "height": 10.0,
    "verticalAccuracy": 3
  },
  "fcclId": "H8N60156A",
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2024-03-19T11:30:00Z",
    "cpild": "cpi9001"
  },
  "cbsdSerialNumber": "G1E5S005517"
}
2024-05-12T09:24:47.316Z - INFO - verified signature on cpiSignatureData
2024-05-12T09:24:47.319Z - INFO - cpiSignatureData data successfully validated against jsonschema
2024-05-12T09:24:47.322Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T09:24:50.983Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "inquiredSpectrum": [
        {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      ]
    }
  ]
}
2024-05-12T09:24:50.993Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000.0,
            "lowFrequency": 3550000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T09:24:54.992Z - INFO - grant request from CBRS : {
  "grantRequest": [
```

```
{
  {
    "cbsdId": "H8N60156AMock-SASG1E5S005517",
    "operationParam": {
      "maxEirp": 19.0,
      "operationFrequencyRange": {
        "highFrequency": 3590000000.0,
        "lowFrequency": 3550000000.0
      }
    }
  }
}
]
}
2024-05-12T09:24:55.000Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "channelType": "GAA",
      "grantExpireTime": "2024-05-19T09:24:55Z",
      "grantId": "872108397",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T09:24:58.734Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "872108397",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2024-05-12T09:24:58.744Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "872108397",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T09:28:18Z"
    }
  ]
}
2024-05-12T09:26:00.551Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "872108397",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
}
```

2024-05-12T09:26:00.552Z - INFO - Time interval between two heartbeat request messages is: 61.816, limit is: 65.0

2024-05-12T09:26:00.556Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "872108397",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2024-05-12T09:29:20Z"  
  }  
]
```

2024-05-12T09:26:19.102Z - INFO - relinquishment request from CBRS : {

```
"relinquishmentRequest": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "872108397"  
  }  
]
```

2024-05-12T09:26:19.108Z - INFO - engine sent successfully, the response to CBRS : {

```
"relinquishmentResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "872108397",  
    "response": {  
      "responseCode": 0  
    }  
  }  
]
```

2024-05-12T09:26:20.420Z - INFO - arrived to nstep starting question answer session with the technician

2024-05-12T09:26:20.421Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? please choose one of the answers :

2024-05-12T09:27:21.618Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? , the user choose y

2024-05-12T09:27:21.861Z - INFO - The final result of the test : WINNF.FT.C.RLQ.1 is - passed


```
    "height": 10.0,
    "verticalAccuracy": 3
  },
  "fcclId": "H8N60156A",
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2024-03-19T11:30:00Z",
    "cpild": "cpi9001"
  },
  "cbsdSerialNumber": "G1E5S005517"
}
2024-05-12T09:28:07.091Z - INFO - verified signature on cpiSignatureData
2024-05-12T09:28:07.096Z - INFO - cpiSignatureData data successfully validated against jsonschema
2024-05-12T09:28:07.098Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T09:28:10.572Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "inquiredSpectrum": [
        {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      ]
    }
  ]
}
2024-05-12T09:28:10.581Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000.0,
            "lowFrequency": 3550000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T09:28:14.496Z - INFO - grant request from CBRS : {
  "grantRequest": [
```

```

    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "operationParam": {
        "maxEirp": 19.0,
        "operationFrequencyRange": {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      }
    }
  ]
}
2024-05-12T09:28:14.505Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "channelType": "GAA",
      "grantExpireTime": "2024-05-19T09:28:14Z",
      "grantId": "285868460",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T09:28:18.336Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "285868460",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2024-05-12T09:28:18.345Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "285868460",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T09:31:38Z"
    }
  ]
}
2024-05-12T09:29:20.194Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "285868460",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}

```

2024-05-12T09:29:20.194Z - INFO - Time interval between two heartbeat request messages is: 61.857, limit is: 65.0

2024-05-12T09:29:20.200Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "grantId": "285868460",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2024-05-12T09:32:40Z"  
  }  
]
```

2024-05-12T09:29:43.140Z - INFO - deregistration request from CBRS : {

```
"deregistrationRequest": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517"  
  }  
]
```

2024-05-12T09:29:43.144Z - INFO - engine sent successfully, the response to CBRS : {

```
"deregistrationResponse": [  
  {  
    "cbsdId": "H8N60156AMock-SASG1E5S005517",  
    "response": {  
      "responseCode": 0  
    }  
  }  
]
```

2024-05-12T09:29:44.177Z - INFO - arrived to nstep starting question answer session with the technician

2024-05-12T09:29:44.178Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or Deregistration request at Test Harness? please choose one of the answers :

2024-05-12T09:30:31.529Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or Deregistration request at Test Harness? , the user choose y

2024-05-12T09:30:31.901Z - INFO - The final result of the test : WINNF.FT.C.DRG.1 is - passed


```
    "height": 10.0,  
    "verticalAccuracy": 3  
  },  
  "fcclId": "H8N60156A",  
  "professionalInstallerData": {  
    "cpiName": "BV Installer Certificate",  
    "installCertificationTime": "2024-03-19T11:30:00Z",  
    "cpilId": "cpi9001"  
  },  
  "cbsdSerialNumber": "G1E5S005517"  
}  
2024-05-12T09:39:12.467Z - INFO - verified signature on cpiSignatureData  
2024-05-12T09:39:12.470Z - INFO - cpiSignatureData data successfully validated against jsonschema  
2024-05-12T09:39:12.473Z - INFO - engine sent successfully, the response to CBRS : {  
  "registrationResponse": [  
    {  
      "cbsdId": "H8N60156AMock-SASG1E5S005517",  
      "response": {  
        "responseCode": 0  
      }  
    }  
  ]  
}  
2024-05-12T09:39:13.897Z - INFO - arrived to nstep starting question answer session with the technician  
2024-05-12T09:39:13.898Z - INFO - the question is : Were there RF transmissions from the CBSD1 during  
the test? please choose one of the answers :  
2024-05-12T09:39:26.783Z - INFO - for the question : Were there RF transmissions from the CBSD1 during  
the test? , the user choose n  
2024-05-12T09:39:26.947Z - INFO - The final result of the test : WINNF.FT.C.SCS.1 is - passed
```

6.2 WINNF.FT.C.SCS.2

2024-05-12T09:46:05.039Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2024-05-12T09:46:05.039Z - INFO - the selected test from the user : WINNF.FT.C.SCS.2 is starting now

6.3 WINNF.FT.C.SCS.3

2024-05-12T09:51:01.361Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2024-05-12T09:51:01.361Z - INFO - the selected test from the user : WINNF.FT.C.SCS.3 is starting now

6.4 WINNF.FT.C.SCS.4

2024-05-12T09:54:45.058Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2024-05-12T09:54:45.058Z - INFO - the selected test from the user : WINNF.FT.C.SCS.4 is starting now

6.5 WINNF.FT.C.SCS.5

2024-05-12T09:59:02.151Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2024-05-12T09:59:02.151Z - INFO - the selected test from the user : WINNF.FT.C.SCS.5 is starting now

2024-05-12T10:13:46.970Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "H8N60156AMock-SASG1E5S005517",
    "inquiredSpectrum": [
      {
        "highFrequency": 3590000000.0,
        "lowFrequency": 3550000000.0
      }
    ]
  }
]
```

}
2024-05-12T10:13:46.976Z - INFO - The requested spectrum is in the range, SpectrumInquiry response code is 0

2024-05-12T10:13:46.977Z - INFO - engine sent successfully, the response to CBRS : {

```
"spectrumInquiryResponse": [
  {
    "availableChannel": [
      {
        "channelType": "GAA",
        "frequencyRange": {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        },
        "maxEirp": 4,
        "ruleApplied": "FCC_PART_96"
      }
    ],
    "cbsdId": "H8N60156AMock-SASG1E5S005517",
    "response": {
      "responseCode": 0
    }
  }
]
```

}
2024-05-12T10:13:50.773Z - INFO - grant request from CBRS : {

```
"grantRequest": [
  {
    "cbsdId": "H8N60156AMock-SASG1E5S005517",
    "operationParam": {
      "maxEirp": 3.0,
      "operationFrequencyRange": {
        "highFrequency": 3590000000.0,
        "lowFrequency": 3550000000.0
      }
    }
  }
]
```

}
2024-05-12T10:13:50.778Z - INFO - engine sent successfully, the response to CBRS : {

```
"grantResponse": [
  {
    "cbsdId": "H8N60156AMock-SASG1E5S005517",
    "channelType": "GAA",
    "grantExpireTime": "2024-05-19T10:13:50Z",
    "grantId": "472157569",
    "heartbeatInterval": 60,
```

```
        "response": {
            "responseCode": 0
        }
    ]
}
2024-05-12T10:13:54.517Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "472157569",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
2024-05-12T10:13:54.523Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "472157569",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2024-05-12T10:17:14Z"
        }
    ]
}
2024-05-12T10:14:56.375Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "472157569",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2024-05-12T10:14:56.381Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "472157569",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2024-05-12T10:18:16Z"
        }
    ]
}
2024-05-12T10:15:57.322Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "472157569",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
```

```
]
}
2024-05-12T10:15:57.331Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "472157569",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T10:19:17Z"
    }
  ]
}
2024-05-12T10:16:58.321Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "472157569",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2024-05-12T10:16:58.329Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "472157569",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T10:20:18Z"
    }
  ]
}
2024-05-12T10:17:59.482Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "472157569",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2024-05-12T10:17:59.486Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "472157569",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T10:21:19Z"
    }
  ]
}
}
```

7.2 WINNF.PT.C.HBT.1(Max Eirp = 14 dBm/MHz)

2024-05-12T10:08:04.056Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2024-05-12T10:08:04.056Z - INFO - Selected spectrum frequency is {'lowFrequency': 3550000000L, 'highFrequency': 3590000000L}

2024-05-12T10:08:04.058Z - INFO - Granted Spectrum Max Eirp = 14dBm/MHz

2024-05-12T10:08:04.058Z - INFO - the selected test from the user : PowerMeasTest is starting now

2024-05-12T10:08:22.881Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "NR"

},

"cbsdCategory": "B",

"cbsdInfo": {

"firmwareVersion": "0.47.4.100",

"hardwareVersion": "REV4",

"model": "SCU2050",

"softwareVersion": "v2.1.012.8.1.6190",

"vendor": "Askey Corporation"

},

"cbsdSerialNumber": "G1E5S005517",

"cpiSignatureData": {

"digitalSignature":

"nqarOly2bKwN3ytao64Os_oRhjGh74aswl-J_ocbNDEATqYr3NQ-zLgia4m1OtNRgdKHSk3K_MV9HoERT8XFJU6AxAa0pjWCaVEyT8V4HER5sowyQ7n6ZwfrfenMcB0LlqiyGowRQtQ7DTEf7uaZGDRtOwAY0mJgLvE TiCMuCGXPH6wTLAsr00M2RZAicZzlyObN2rhhhd5JgQiRH0FJVMTqznG3NAW2EYNBrk0Vnyye9zJa9Ulc6S ySNC6TBqfe1USpanpEX08oXUc39GdpD9BTdOz1zJ83XOOj44Yy_JmKMvWj1v0Zba9Y5B6E9plcY-zOVAork0uDZR0a0E0byA",

"encodedCpiSignedData":

"ewogICJmY2NJZCI6Ikg4TjYwMTU2QSIsCiAgImNic2RTZXJpYWxOdW1iZXliOiJHMUU1UzAwNTUxNyIsCiAgImIuc3RhbGxhdGlvbiBhcmFtIjogewogICAgImxhdGloZWRlljo2Mi41LAogICAgImxvbmVmdpdHVkZSI6LTE1NS41LAogICAgImhlaWdodCI6MTAuMCAwKICAgICJoZWlnaHRUeXBlljoiQUdMliwKICAgICJhbnRlbn5hR2FpbiI6NiwiKICAgICJob3Jpem9udGFsQWNjdXJhY3kiOiAzLAogICAgInZlcnRyY2FsQWNjdXJhY3kiOiAzLAogICAgImFudGVubmFEb3dudGlsdCI6IDEwLAogICAgImFudGVubmFCZWZtd2lkZGgiOiA2MCwKICAgICJhbnRlbn5hQXppbXV0aCI6IDMwLAogICAgImVpcnBDYXBhYmVsaXR5IjozMywKICAgICJpbmRvb3JEZXBSb3ltZW50IjpmYXZzZQogIH0sCiAgInByb2Zlc3Npb25hbEluc3RhbGxlcRhdGEiOiB7CiAgICAgI3BpSWQOIjJjcGk5MDAxliwKICAgICJjcGLOYW1lIjoiQlYgSW5zdGFsbGVyIENlcnRyZmljYXRlliwKICAgICJpbmN0YWxsQ2VydGlmawNhdGlvbiRpbWUiOiIyMDI0LTAzLTE5VDE5OjMwOjAwWlkiB9Cn0",

"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"

},

"fccId": "H8N60156A",

"measCapability": [],

"userId": "AskeyUserId-000001"

}

]

}

2024-05-12T10:08:22.926Z - INFO - engine sent successfully, the response to CBRS : {

"registrationResponse": [

{

"cbsdId": "H8N60156AMock-SASG1E5S005517",

"response": {

"responseCode": 0

}

}

]


```
}
2024-05-12T10:08:26.403Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "inquiredSpectrum": [
        {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      ]
    }
  ]
}
2024-05-12T10:08:26.414Z - INFO - The requested spectrum is in the range, SpectrumInquiry response code
is 0
2024-05-12T10:08:26.414Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000.0,
            "lowFrequency": 3550000000.0
          },
          "maxEirp": 14,
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T10:08:30.119Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "operationParam": {
        "maxEirp": 13.0,
        "operationFrequencyRange": {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      }
    }
  ]
}
2024-05-12T10:08:30.125Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "channelType": "GAA",
      "grantExpireTime": "2024-05-19T10:08:30Z",
      "grantId": "786110537",

```

```
        "heartbeatInterval": 60,
        "response": {
            "responseCode": 0
        }
    ]
}
2024-05-12T10:08:34.045Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "786110537",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
2024-05-12T10:08:34.052Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "786110537",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2024-05-12T10:11:54Z"
        }
    ]
}
2024-05-12T10:09:36.016Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "786110537",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2024-05-12T10:09:36.023Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "786110537",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2024-05-12T10:12:56Z"
        }
    ]
}
2024-05-12T10:10:37.013Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "786110537",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
```

```
    }
  ]
}
2024-05-12T10:10:37.022Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "786110537",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T10:13:57Z"
    }
  ]
}
2024-05-12T10:11:38.042Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "786110537",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2024-05-12T10:11:38.048Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "786110537",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T10:14:58Z"
    }
  ]
}
```

7.3 WINNF.PT.C.HBT.1(Max Eirp = 23 dBm/MHz)

2024-05-12T10:00:52.740Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2024-05-12T10:00:52.740Z - INFO - Selected spectrum frequency is {'lowFrequency': 3550000000L, 'highFrequency': 3590000000L}

2024-05-12T10:00:52.740Z - INFO - Granted Spectrum Max Eirp = 23dBm/MHz

2024-05-12T10:00:52.742Z - INFO - the selected test from the user : PowerMeasTest is starting now

2024-05-12T10:01:10.957Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "NR"

},

"cbsdCategory": "B",

"cbsdInfo": {

"firmwareVersion": "0.47.4.100",

"hardwareVersion": "REV4",

"model": "SCU2050",

"softwareVersion": "v2.1.012.8.1.6190",

"vendor": "Askey Corporation"

},

"cbsdSerialNumber": "G1E5S005517",

"cpiSignatureData": {

"digitalSignature":

"nqarOly2bKwN3ytao64Os_oRhjGh74aswl-J_ocbNDEATqYr3NQ-zLgia4m1OtNRgdKHSk3K_MV9HoERT8XFJU6AxAa0pjWCaVEyT8V4HER5sowyQ7n6ZwfrfenMcB0LlqiyGowRQtQ7DTEf7uaZGDRtOwAY0mJgLvE TiCMuCGXPH6wTLAsr00M2RZAicZzlyObN2rhhhd5JgQiRH0FJVMTqznG3NAW2EYNBrk0Vnyye9zJa9Ulc6S ySNC6TBqfe1USpanpEX08oXUc39GdpD9BTdOz1zJ83XOOj44Yy_JmKMvWj1v0Zba9Y5B6E9plcY-zOVAork0uDZR0a0E0byA",

"encodedCpiSignedData":

"ewogICJmY2NJZCI6Ikg4TjYwMTU2QSIsCiAgImNic2RTZXJpYWxOdW1iZXliOiJHMUU1UzAwNTUxNyIsCiAgImIuc3RhbGxhdGlvbiBhcmFtIjogewogICAgImxhdGloZWVlIjo2Mi41LAogICAgImxvbmVmdpdHVkZSI6LTE1NS41LAogICAgImhlaWdodCI6MTAuMCwKICAgICJoZWlnaHRUeXBlljoiQUdMliwKICAgICJhbnRlbn5hR2FpbiI6NiwiKICAgICJob3Jpem9udGFsQWNjdXJhY3kiOiAzLAogICAgInZlcnRyY2FsQWNjdXJhY3kiOiAzLAogICAgImFudGVubmFEb3dudGlsdCI6IDEwLAogICAgImFudGVubmFCZWVtd2lkdGgiOiA2MCwKICAgICJhbnRlbn5hQXppbXV0aCI6IDMwLAogICAgImVpcnBDYXBhYm91IjozMywKICAgICJpbmRvb3JEZXBSb3ltZW50IjpmYXZzZQogIHR0sCiAgInByb2Zlc3Npb25hbEluc3RhbGxlcRhdGEiOiB7CiAgICAgIiY3BpSWQIiOiJjcGk5MDAxliwKICAgICJjcGloYXV1IjoiQlYgSW5zdGFsbGVyIENlcnRyZmljYXRlliwKICAgICJpbmN0YWxsQ2VydGlmawNhdGlvbiRpbWUiOiIyMDI0LTAzLTE5VDE5OjMwOjAwWlkiB9Cn0",

"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"

},

"fccId": "H8N60156A",

"measCapability": [],

"userId": "AskeyUserId-000001"

}

]

}

2024-05-12T10:01:11.012Z - INFO - engine sent successfully, the response to CBRS : {

"registrationResponse": [

{

"cbsdId": "H8N60156AMock-SASG1E5S005517",

"response": {

"responseCode": 0

}

}

]

```

}
2024-05-12T10:01:14.477Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "inquiredSpectrum": [
        {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      ]
    }
  ]
}
2024-05-12T10:01:14.490Z - INFO - The requested spectrum is in the range, SpectrumInquiry response code
is 0
2024-05-12T10:01:14.492Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000.0,
            "lowFrequency": 3550000000.0
          },
          "maxEirp": 23,
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2024-05-12T10:01:18.191Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "operationParam": {
        "maxEirp": 19.0,
        "operationFrequencyRange": {
          "highFrequency": 3590000000.0,
          "lowFrequency": 3550000000.0
        }
      }
    }
  ]
}
2024-05-12T10:01:18.201Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "channelType": "GAA",
      "grantExpireTime": "2024-05-19T10:01:18Z",
      "grantId": "29503373",

```

```
        "heartbeatInterval": 60,
        "response": {
            "responseCode": 0
        }
    ]
}
2024-05-12T10:01:22.101Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "29503373",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
2024-05-12T10:01:22.111Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "29503373",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2024-05-12T10:04:42Z"
        }
    ]
}
2024-05-12T10:02:23.980Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "29503373",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2024-05-12T10:02:23.986Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "29503373",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2024-05-12T10:05:43Z"
        }
    ]
}
2024-05-12T10:03:25.088Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8N60156AMock-SASG1E5S005517",
            "grantId": "29503373",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
```

```
    }
  ]
}
2024-05-12T10:03:25.092Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "29503373",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T10:06:45Z"
    }
  ]
}
2024-05-12T10:04:26.033Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "29503373",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2024-05-12T10:04:26.039Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8N60156AMock-SASG1E5S005517",
      "grantId": "29503373",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2024-05-12T10:07:46Z"
    }
  ]
}
```