



Talaria TWO™ (INP2045)

Ultra-Low Power Multi-Protocol Wireless Platform SoC

IEEE 802.11 b/g/n, BLE 5.0

User Guide for Talaria TWO MPD Demo Tool – iPerf3 & Scan Modes

Release: 01-20-2023

Revision History

Version	Date	Comments
1.0	07-07-2022	First release.
2.0	09-06-2022	Updated to reflect the appropriate Max_Listen_Time for Standard Scan.
2.1	09-29-2022	Updated for SDK 2.6 release.
2.2	01-20-2023	Updated to include the latest version of the MPD Tool GUI.

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Terms & Definitions

AP	Access Point
ARP	Address Resolution Protocol
COM	Composite Device Driver
ELF	Extensible Linking Format
EVK	Evaluation Kit
FTDI	Future Technology Devices International
GARP	Gratuitous Address Resolution Protocol
GUI	Graphical User Interface
HTTP	Hyper Text Transfer Protocol
HTTPS	Hyper Text Transfer Protocol Secure
iPerf	Internet Performance Working Group
MPD	Multipurpose Demo
MQTT	Message Queuing Telemetry Transport
SSID	Service Set Identifier
TCP	Transmission Control Protocol
UDP	User Datagram Protocol
URL	Uniform Resource Locator
USB	Universal Serial Bus

Introduction

This document describes the different modes in which the iPerf3 and Scan applications can be used with the Demo tool GUI.

iPerf3

Select the iPerf3 tab on the Demo tool GUI to automatically load the signed firmware image for iPerf3 application.

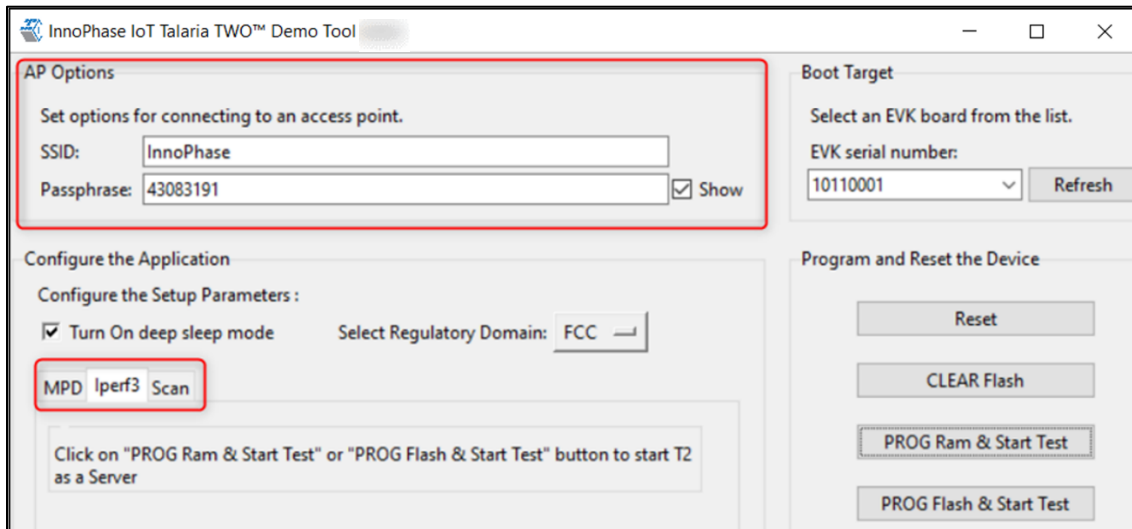


Figure 1: Selecting iPerf3

Note:

1. In case the PROG Ram & Start Test option does not load the application, click on PROG Flash & Start Test.
2. Work around for the above limitation is to click Reset before clicking on PROG Ram & Start Test again.
3. Work around for error with CLEAR Flash option: Click Reset before clicking on CLEAR Flash again.

The following sections provide information on the different modes in which the iPerf3 application can be used along with their respective outputs.

UDP Throughput Test Downlink

Console output of UDP Downlink test:

```
Y-BOOT 208ef13 2019-07-22 12:26:54 -0500 790da1-b-7

ROM yoda-h0-rom-16-0-gd5a8e586

FLASH:PNWWWWWAEBuild $Id: git-e31bdbe13 $

krn.gpio=--K suspend=1 np_conf_path=/data/nprofile.json ssid=InnoPhase
    passphrase=43083191

addr e0:69:3a:00:2c:42

[0.690,936] CONNECT:b0:39:56:93:83:31 Channel:6 rssi:-47 dBm

[0.732,813] MYIP 192.168.1.131

[0.732,977] IPv6 [fe80::e269:3aff:fe00:2c42]-link

IPerf3 server @ 192.168.1.131

-----

Iperf3 TCP/UDP server listening on 5201

-----

Accepted connection from 192.168.1.124 port 47552

[ 1] local 192.168.1.131 port 20756 connected to 192.168.1.124 port 34976

RSSI start: -46 dBm

RSSI end:   -48 dBm

-----
```

[ID]	Interval	Transfer	Bitrate
[1]	iperf3[S-RX-udp]: 0.0-30 sec	106.4 MBytes	29.7 Mbits/sec
User: 23606574 (78%)			
IRQ: 2906897 (9%)			
Idle: 3489850 (11%)			

Windows console output:

```
C:\Users\InnoP\Downloads\iperf-3.1.3-win64\iperf-3.1.3-win64>iperf3 -c 192.168.1.131 -u -b30M -i1 -t30

Connecting to host 192.168.1.131, port 5201

[ 5] local 192.168.1.124 port 34976 connected to 192.168.1.131 port 5201

[ ID] Interval            Transfer      Bitrate      Total Datagrams
[ 5]  0.00-1.00    sec   3.57 MBytes  30.0 Mbits/sec  2567
[ 5]  1.00-2.00    sec   3.58 MBytes  30.0 Mbits/sec  2568
[ 5]  2.00-3.00    sec   3.58 MBytes  30.0 Mbits/sec  2569
[ 5]  3.00-4.00    sec   3.58 MBytes  30.0 Mbits/sec  2568
.
.
.
.
.
[ 5] 24.00-25.00    sec   3.58 MBytes  30.0 Mbits/sec  2569
[ 5] 25.00-26.00    sec   3.58 MBytes  30.0 Mbits/sec  2568
[ 5] 26.00-27.00    sec   3.58 MBytes  30.0 Mbits/sec  2569
```



```
[ 5] 27.00-28.00 sec 3.58 MBytes 30.0 Mbits/sec 2568
[ 5] 28.00-29.00 sec 3.58 MBytes 30.0 Mbits/sec 2569
[ 5] 29.00-30.00 sec 3.58 MBytes 30.0 Mbits/sec 2569
-----
[ ID] Interval          Transfer      Bitrate        Jitter      Lost/Total Datagrams
[ 5]  0.00-30.00 sec    107 MBytes  30.0 Mbits/sec  0.000 ms    0/77054 (0%)  sender
[ 5]  0.00-30.00 sec    106 MBytes  29.8 Mbits/sec  0.000 ms   634/77054 (0.82%)
receiver

iperf Done.
```

UDP Throughput Test Uplink

Console output for UDP throughput uplink test:

```
-----  
Iperf3 TCP/UDP server listening on 5201  
-----
```

```
Accepted connection from 192.168.1.124 port 47568
```

```
[ 1] local 192.168.1.131 port 20756 connected to 192.168.1.124 port 39126
```

```
RSSI start: -47 dBm
```

```
RSSI end: -49 dBm  
-----
```

```
[ ID]          Interval      Transfer      Bitrate  
[ 1] iperf3[S-TX-udp]: 0.0-30 sec 48.8 MBytes 13.6 Mbits/sec
```

```
User: 10874781 (36%)
```

```
IRQ: 1501611 (5%)
```

```
Idle: 17631727 (58%)
```

Windows console output:

```
C:\Users\InnoP\Downloads\iperf-3.1.3-win64\iperf-3.1.3-win64> iperf3 -c 192.168.1.131 -u
-b30M -i1 -t30 -R

Connecting to host 192.168.1.131, port 5201

Reverse mode, remote host 192.168.1.131 is sending

[ 5] local 192.168.1.124 port 39126 connected to 192.168.1.131 port 5201

[ ID] Interval          Transfer      Bitrate        Jitter    Lost/Total Datagrams
[ 5]  0.00-1.00    sec  2.62 MBytes  22.0 Mbits/sec  0.605 ms  0/1881 (0%)
[ 5]  1.00-2.00    sec  2.62 MBytes  21.9 Mbits/sec  1.475 ms  0/1879 (0%)
[ 5]  2.00-3.00    sec  1.26 MBytes  10.6 Mbits/sec  1.434 ms  0/907 (0%)
[ 5]  3.00-4.00    sec  1.74 MBytes  14.6 Mbits/sec  0.773 ms  0/1247 (0%)
[ 5]  4.00-5.00    sec  1.36 MBytes  11.4 Mbits/sec  0.828 ms  0/976 (0%)
[ 5]  5.00-6.00    sec  1.76 MBytes  14.7 Mbits/sec  1.314 ms  0/1262 (0%)
[ 5]  6.00-7.00    sec  1.63 MBytes  13.7 Mbits/sec  0.931 ms  0/1173 (0%)
.
.
.
[ 5] 26.00-27.00   sec  1.53 MBytes  12.8 Mbits/sec  1.512 ms  0/1096 (0%)
[ 5] 27.00-28.00   sec  1.59 MBytes  13.3 Mbits/sec  1.299 ms  0/1142 (0%)
[ 5] 28.00-29.00   sec  1.53 MBytes  12.8 Mbits/sec  1.160 ms  0/1097 (0%)
[ 5] 29.00-30.00   sec  1.57 MBytes  13.2 Mbits/sec  1.988 ms  0/1128 (0%)
```

```
-----
```

[ID]	Interval		Transfer	Bitrate	Jitter	Lost/Total Datagrams	
[5]	0.00-30.00	sec	48.9 MBytes	13.7 Mbites/sec	0.000 ms	0/35102 (0%)	sender
[5]	0.00-30.00	sec	48.8 MBytes	13.6 Mbites/sec	1.988 ms	0/35022 (0%)	receiver

iperf Done.

TCP Throughput Test Downlink

Console output of TCP Throughput Downlink test:

```
-----  
Iperf3 TCP/UDP server listening on 5201  
-----
```

```
Accepted connection from 192.168.1.124 port 47556
```

```
[ 1] local 192.168.1.131 port 5201 connected to 192.168.1.124 port 47558
```

```
RSSI start: -47 dBm
```

```
RSSI end: -48 dBm  
-----
```

```
[ ID]          Interval      Transfer      Bitrate  
[ 1] iperf3[S-RX-tcp]: 0.0-30 sec 84.8 MBytes 23.7 Mbits/sec
```

```
User: 26877186 (88%)
```

```
IRQ: 3241560 (10%)
```

```
Idle: 124208 (0%)
```

Windows console output:

```
C:\Users\InnoP\Downloads\iperf-3.1.3-win64\iperf-3.1.3-win64>iperf3 -c 192.168.1.131 -  
i1 -t30  
  
Connecting to host 192.168.1.131, port 5201  
  
[ 5] local 192.168.1.124 port 47558 connected to 192.168.1.131 port 5201  
  
[ ID] Interval           Transfer     Bitrate      Retr  Cwnd  
  
[ 5]  0.00-1.00   sec   3.14 MBytes  26.3 Mbits/sec    0   67.0 KBytes  
[ 5]  1.00-2.00   sec   2.91 MBytes  24.4 Mbits/sec    0   67.0 KBytes  
[ 5]  2.00-3.00   sec   2.79 MBytes  23.4 Mbits/sec    0   67.0 KBytes  
[ 5]  3.00-4.00   sec   2.91 MBytes  24.4 Mbits/sec    0   67.0 KBytes  
[ 5]  4.00-5.00   sec   2.91 MBytes  24.4 Mbits/sec   10   47.1 KBytes  
[ 5]  5.00-6.00   sec   2.76 MBytes  23.1 Mbits/sec   21   17.1 KBytes  
[ 5]  6.00-7.00   sec   2.91 MBytes  24.4 Mbits/sec   20   34.2 KBytes  
[ 5]  7.00-8.00   sec   2.76 MBytes  23.1 Mbits/sec    9   28.5 KBytes  
  
.  
.  
.  
.  
  
[ 5] 23.00-24.00   sec   2.79 MBytes  23.4 Mbits/sec    0   67.0 KBytes  
[ 5] 24.00-25.00   sec   2.91 MBytes  24.4 Mbits/sec   22   14.3 KBytes  
[ 5] 25.00-26.00   sec   2.76 MBytes  23.1 Mbits/sec   28   15.7 KBytes
```

```
[ 5] 26.00-27.00 sec 2.76 MBytes 23.1 Mbits/sec 22 24.2 KBytes
[ 5] 27.00-28.00 sec 2.91 MBytes 24.4 Mbits/sec 9 29.9 KBytes
[ 5] 28.00-29.00 sec 2.79 MBytes 23.4 Mbits/sec 7 14.3 KBytes
[ 5] 29.00-30.00 sec 2.94 MBytes 24.7 Mbits/sec 8 32.8 KBytes
-----
[ ID] Interval          Transfer      Bitrate      Retr
[ 5]  0.00-30.00 sec 84.8 MBytes 23.7 Mbits/sec 296          sender
[ 5]  0.00-30.00 sec 84.8 MBytes 23.7 Mbits/sec          receiver

iperf Done.
-----
```

TCP Throughput Test Uplink

Console output of TCP Throughput Uplink test.

```
-----  
Iperf3 TCP/UDP server listening on 5201
```

```
-----  
Accepted connection from 192.168.1.124 port 47564
```

```
[ 1] local 192.168.1.131 port 5201 connected to 192.168.1.124 port 47566
```

```
RSSI start: -47 dBm
```

```
RSSI end: -48 dBm
```

```
-----  
[ ID]          Interval      Transfer      Bitrate  
[ 1] iperf3[S-TX-tcp]: 0.0-30 sec 48.7 MBytes 13.6 Mbits/sec
```

```
User: 13556511 (45%)
```

```
IRQ: 1300291 (4%)
```

```
Idle: 15148431 (50%)
```


Windows console output:

```
C:\Users\InnoP\Downloads\iperf-3.1.3-win64\iperf-3.1.3-win64> iperf3 -c 192.168.1.131
-i1 -t30 -R

Connecting to host 192.168.1.131, port 5201

Reverse mode, remote host 192.168.1.131 is sending

[ 5] local 192.168.1.124 port 47566 connected to 192.168.1.131 port 5201

[ ID] Interval            Transfer      Bitrate
[ 5]  0.00-1.00    sec  2.03 MBytes  17.0 Mbits/sec
[ 5]  1.00-2.00    sec  2.43 MBytes  20.4 Mbits/sec
[ 5]  2.00-3.00    sec  2.48 MBytes  20.8 Mbits/sec
[ 5]  3.00-4.00    sec  2.46 MBytes  20.6 Mbits/sec
[ 5]  4.00-5.00    sec  2.51 MBytes  21.0 Mbits/sec
[ 5]  5.00-6.00    sec  1.87 MBytes  15.7 Mbits/sec
.
.
.
[ 5] 27.00-28.00   sec  1.31 MBytes  11.0 Mbits/sec
[ 5] 28.00-29.00   sec  1.35 MBytes  11.3 Mbits/sec
[ 5] 29.00-30.00   sec  1.38 MBytes  11.6 Mbits/sec
-----
[ ID] Interval            Transfer      Bitrate      Retr
```

```
[ 5]  0.00-30.00  sec  48.8 MBytes  13.6 Mbits/sec  0          sender
[ 5]  0.00-30.00  sec  48.7 MBytes  13.6 Mbits/sec          receiver

iperf Done.
```

Scan

Select the Scan tab on the Demo tool GUI to actively scan for nearby Access Points. The user can choose between the following scan types:

1. Standard Wi-Fi Scan
2. Low Power Wi-Fi Smart Scan

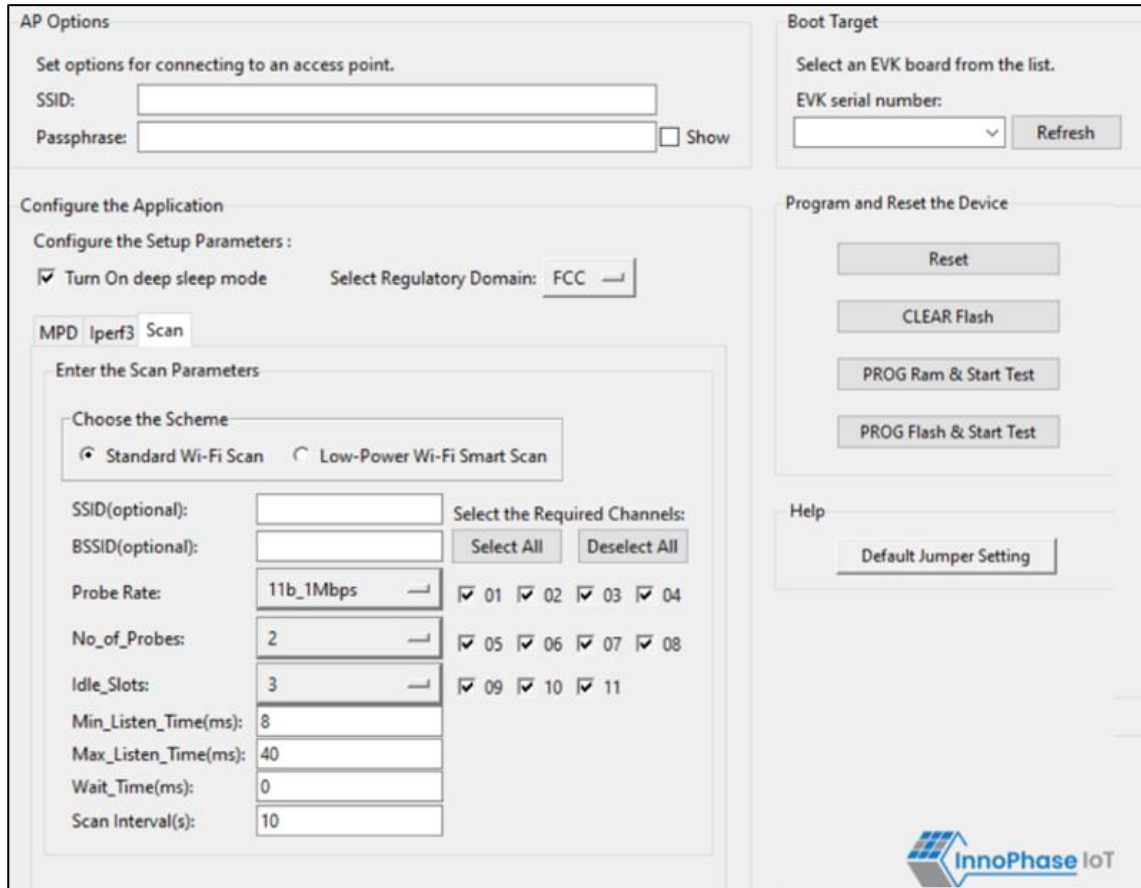


Figure 2: Scan tab

For more information on the different scan parameters and the procedure to configure them, refer document: [UG_Demo_Tool_Part_1.pdf \(sdk_x.y\pc_tools\MPD\doc\)](#).

Note: x and y in sdk_x.y refer to the SDK release version.

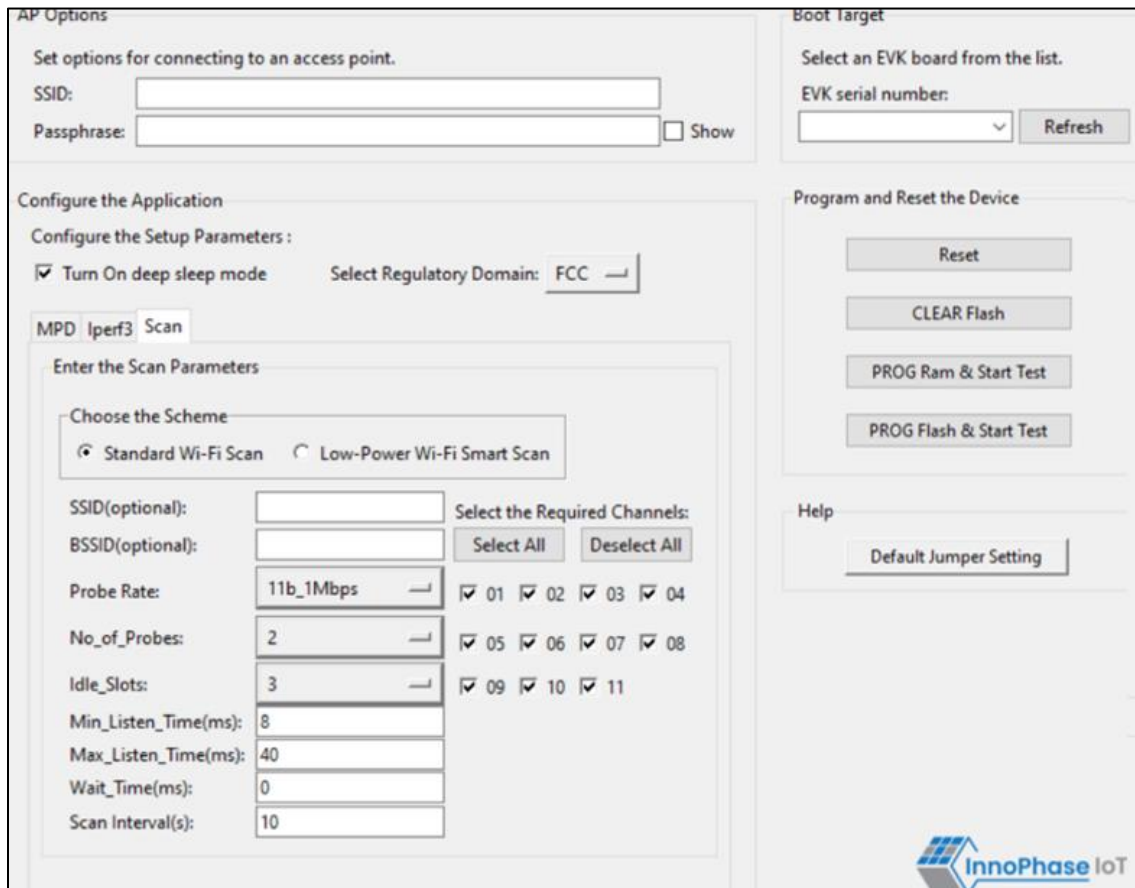
Default values of parameters for Standard Wi-Fi and Low-Power Wi-Fi scan are shown in Table 1. Depending on the user's choice of the scanning scheme, respective default values will be set to corresponding parameters.

Default Value			
Parameters	Standard Wi-Fi scan	Low-Power Wi-Fi Scan	Remark
No_of_Probes	2	1	Configurable
Ide_Slots	3	3	Configurable
Select the Required Probe Rate	11b_1Mbps	11b_6Mbps	Configurable
NAP Enable	No	Yes	Hard coded

Table 1: Default values for Standard Wi-Fi and Low-Power Wi-Fi Scan

Case 1: Standard Wi-Fi Scan

1. In this mode of scan, Talaria TWO will dwell 40ms on each channel.
2. Hence, to scan all 2Ghz channels, it will take ~520ms in clean environment.
3. In a crowded environment, it will take additional time to complete full scan based on the channel condition.



AP Options
Set options for connecting to an access point.
SSID:
Passphrase: Show

Configure the Application
Configure the Setup Parameters :
 Turn On deep sleep mode Select Regulatory Domain:

Enter the Scan Parameters
Choose the Scheme
 Standard Wi-Fi Scan Low-Power Wi-Fi Smart Scan

SSID(optional): Select the Required Channels:
BSSID(optional):
Probe Rate: 01 02 03 04
No_of_Probes: 05 06 07 08
Idle_Slots: 09 10 11
Min_Listen_Time(ms):
Max_Listen_Time(ms):
Wait_Time(ms):
Scan Interval(s):

Boot Target
Select an EVK board from the list.
EVK serial number:

Program and Reset the Device

Help

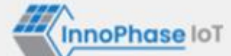


Figure 3: Scanning for Access Points – Standard Wi-Fi scan

Console output for Standard Scan Scheme:

```
UART:SNWWWWWAEBuild $Id: git-ba65998b7 $
mpd.proto=scan wifi.scan_num_probes=2 wifi.scan_idleslots=3 wifi.scan_min_listen_time=8
wifi.scan_max_listen_time=40 wifi.scan_wait_time=0 wifi.nap_scan=0
mpd.scan.dt_iterations=10 wifi.probe_rate=0x00 wifi.scan_channel_mask=0x7ff
mpd.regdomain=FCC mpd.suspend=1
$App:git-73e7f910
SDK Ver: SDK_2.6
T2 Multipurpose Demp App Version 0.12
Suspend Enabled.
Regdomain=FCC
addr e0:69:3a:00:13:90
Applying reg domain: 1-11@20
MPD scan mode.
Channels to be scanned=1,2,3,4,5,6,7,8,9,10,11
Enabling suspend.
period=10
Round:1 Found 9 nets:
00:5f:67:cd:c5:a6 on channel 11 @ -60 'InnoPhase' 'WPA2-PSK'
b0:a7:b9:73:8e:51 on channel 4 @ -73 'Lakshmi pg 2nd floor 2g' 'WPA2-PSK'
ba:6b:ad:62:6d:8b on channel 11 @ -79 'DESKTOP-9B1DNVC 1786' 'WPA2-PSK'
e4:a7:c5:d4:ea:86 on channel 6 @ -82 'Airtel-E5573-EA86' 'WPA2-PSK'
d8:47:32:2e:e1:e0 on channel 11 @ -83 'GPMH' 'WPA2-PSK'
3c:1e:04:2d:c1:01 on channel 11 @ -85 'Lakshmi pg 1st floor' 'WPA-PSK/WPA2-PSK Mixed
Mode'
34:e8:94:be:16:9b on channel 1 @ -88 'Infected v2.4' 'WPA2-PSK'
dc:71:37:56:91:b0 on channel 8 @ -90 'Hathway_Raghuram' 'WPA-PSK/WPA2-PSK Mixed Mode'
```

```
50:2b:73:98:0f:51 on channel 9 @ -92 'SharmaShesCheatingonYou' 'WPA-PSK/WPA2-PSK Mixed
Mode'
-----
Round:2 Found 7 nets:
00:5f:67:cd:c5:a6 on channel 11 @ -52 'InnoPhase' 'WPA2-PSK'
34:0a:33:70:f3:a2 on channel 1 @ -78 'Siddusm' 'WPA2-PSK'
90:8d:78:fa:54:60 on channel 10 @ -79 'LAKSHMI PG 4TH FLOOR' 'WPA2-PSK'
e4:a7:c5:d4:ea:86 on channel 6 @ -82 'Airtel-E5573-EA86' 'WPA2-PSK'
70:4f:57:77:7e:d4 on channel 2 @ -84 'Rahul' 'WPA2-PSK'
dc:71:37:56:91:b0 on channel 8 @ -84 'Hathway_Raghuram' 'WPA-PSK/WPA2-PSK Mixed Mode'
aa:74:84:e0:c9:a0 on channel 4 @ -94 'SUMAIYA' 'WPA-PSK/WPA2-PSK Mixed Mode'
-----
Round:3 Found 2 nets:
00:5f:67:cd:c5:a6 on channel 11 @ -60 'InnoPhase' 'WPA2-PSK'
e4:a7:c5:d4:ea:86 on channel 6 @ -79 'Airtel-E5573-EA86' 'WPA2-PSK'
-----
Round:4 Found 3 nets:
34:0a:33:70:f3:a2 on channel 1 @ -80 'Siddusm' 'WPA2-PSK'
e4:a7:c5:d4:ea:86 on channel 6 @ -80 'Airtel-E5573-EA86' 'WPA2-PSK'
34:e8:94:be:16:9b on channel 1 @ -90 'Infected v2.4' 'WPA2-PSK'
```

Expected Result: Depending on the scan specifications, available networks are identified and displayed.

Otti log: Shows an average current consumption of 43.7mA for 99.950ms scan duration, here the FCC regulatory domain is enabled.

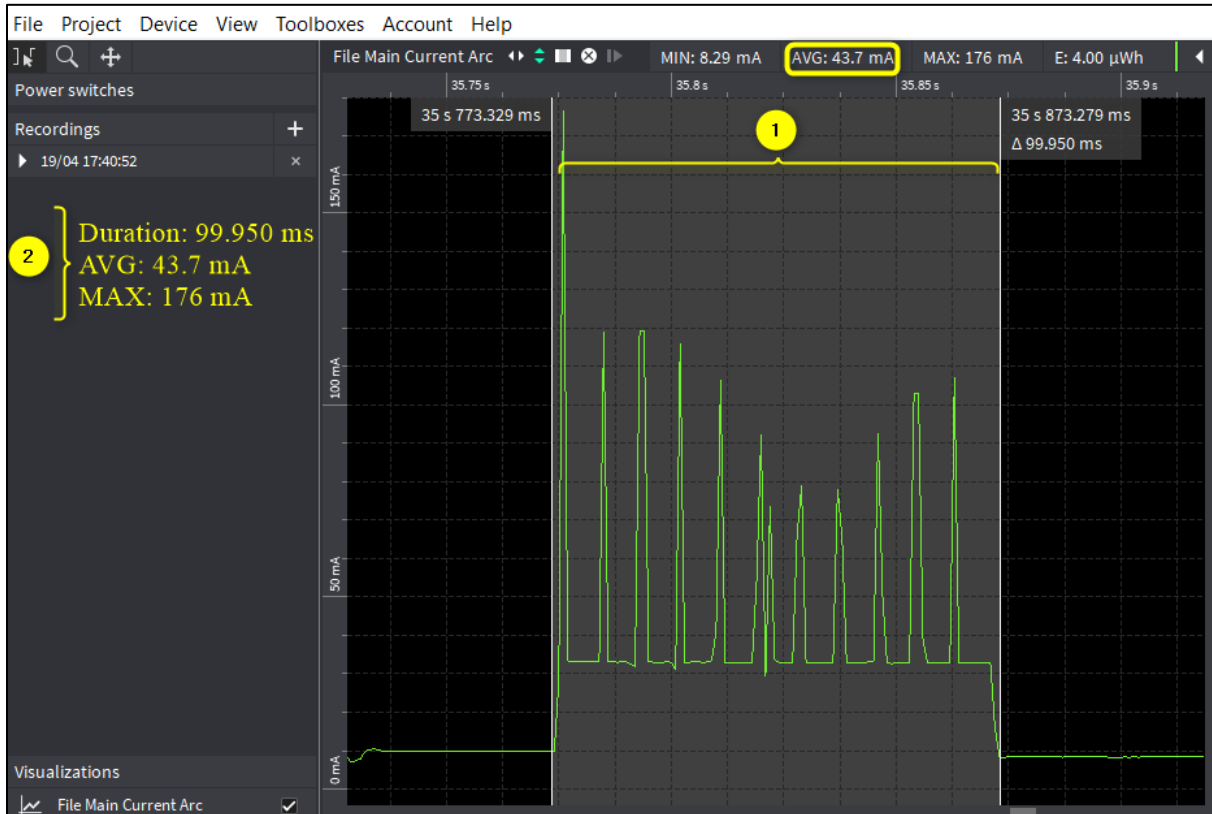


Figure 4: Case 1 - Standard scan - Oti log

Case 2: Low Power Wi-Fi Smart Scan

Overall current consumption can be reduced by one of the following methods:

1. Dynamic dwelling
 - a. Based on the channel condition, Talaria TWO can stay minimum channel time or maximum channel time.
 - b. Normally, minimum channel time is configured to 8ms, and maximum channel time is configured to 24ms.
 - c. While scanning, Talaria TWO will decide after every minimum channel time, whether to stay on channel or move to next channel.
 - d. Staying in the channel is based on channel condition. Talaria TWO will identify this by number of idle slots at the end of minimum channel time.
2. Napping
 - a. After probe, if Talaria TWO receives packet other than the Probe response and Beacon, Talaria TWO will take a NAP based on the duration of packet received.

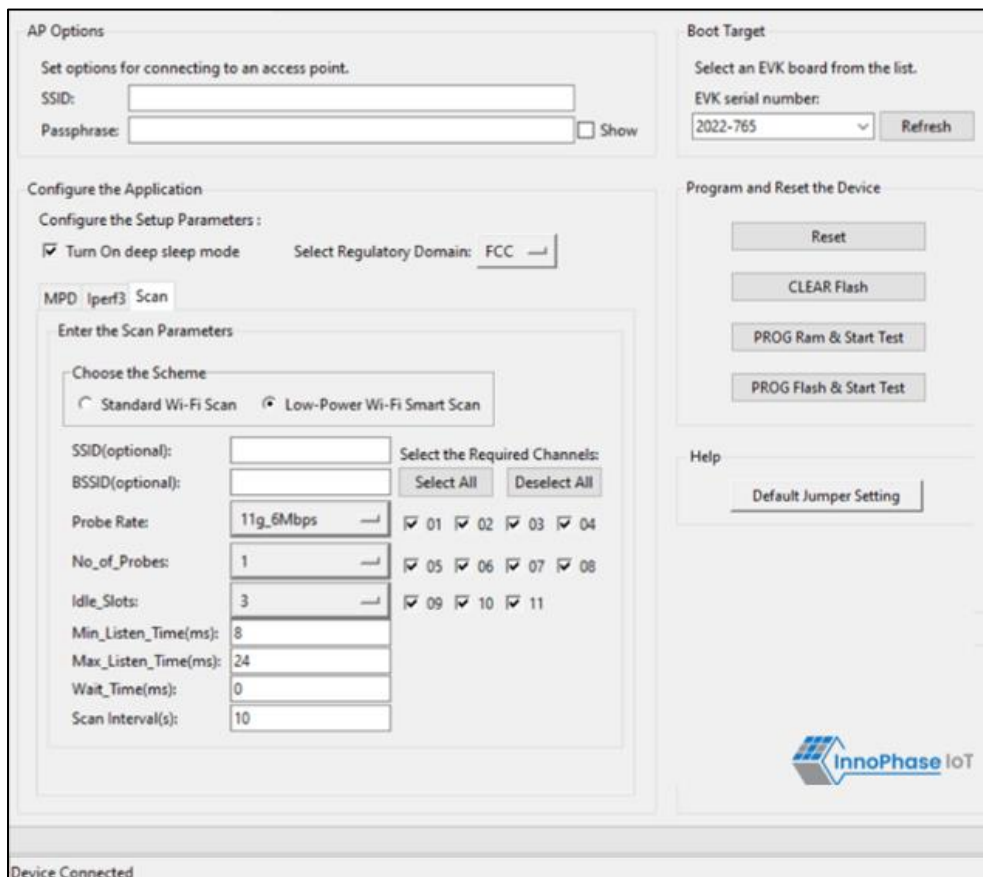


Figure 5: Scanning for Access Points – Low Power Wi-Fi smart scan

Console output for Low Power scan scheme:

```
UART:SNWWWWWAEBuild $Id: git-ba65998b7 $
mpd.proto=lpscan wifi.scan_num_probes=1 wifi.scan_idleslots=3
wifi.scan_min_listen_time=8 wifi.scan_max_listen_time=24 wifi.nap_scan=1
mpd.lpscan.ap_logging=1 mpd.lpscan.dt_iterations=10 mpd.lpscan.rate=0x100
wifi.scan_channel_mask=0x7ff mpd.regdomain=FCC mpd.suspend=1
$App:git-73e7f910
SDK Ver: SDK_2.6
T2 Multipurpose Demp App Version 0.12
Suspend Enabled.
Multicast reception Disabled.
Regdomain=FCC
addr e0:69:3a:00:13:90
Applying reg domain: 1-11@20
MPD lpscan mode.
Enabling suspend.
[1.718,157] Round:1 Found 3 nets:
-----
[1.718,817] 00:5f:67:cd:c5:a6 on channel 11 @ -45 'InnoPhase' 'WPA2-PSK'
[1.718,929] b0:a7:b9:73:8e:51 on channel 4 @ -70 'Lakshmi pg 2nd floor 2g' 'WPA2-PSK'
[1.719,042] 34:0a:33:70:f3:a2 on channel 1 @ -77 'Siddusm' 'WPA2-PSK'
[11.698,197] Round:2 Found 3 nets:
-----
[11.698,286] ba:6b:ad:62:6d:8b on channel 11 @ -67 'DESKTOP-9B1DNVC 1786' 'WPA2-PSK'
[11.698,401] b0:a7:b9:73:8e:51 on channel 4 @ -71 'Lakshmi pg 2nd floor 2g' 'WPA2-PSK'
[11.698,517] d8:47:32:2e:e1:e0 on channel 11 @ -79 'GPMH' 'WPA2-PSK'
[21.693,819] Round:3 Found 2 nets:
```

```
-----  
[21.693,903] 34:0a:33:70:f3:a2 on channel 1 @ -78 'Siddusm' 'WPA2-PSK'  
[21.694,019] 30:b6:2d:94:37:a0 on channel 1 @ -86 'JioPrivateNet' 'WPA2/WPA3-  
Enterprise'  
[31.684,572] Round:4 Found 2 nets:  
-----  
[31.684,656] 00:5f:67:cd:c5:a6 on channel 11 @ -47 'InnoPhase' 'WPA2-PSK'  
[31.684,769] f8:c4:f3:18:2e:08 on channel 2 @ -91 'Shiva_Airtel' 'WPA2-PSK'  
[41.702,628] Round:5 Found 3 nets:  
-----  
[41.702,713] 00:5f:67:cd:c5:a6 on channel 11 @ -57 'InnoPhase' 'WPA2-PSK'  
[41.702,828] ba:6b:ad:62:6d:8b on channel 11 @ -66 'DESKTOP-9B1DNVC 1786' 'WPA2-PSK'  
[41.702,943] 70:4f:57:77:7e:d4 on channel 2 @ -85 'Rahul' 'WPA2-PSK'
```

Otti log: Shows an average current consumption of 32.8mA for 96.032ms scan duration for low power Wi-Fi smart scan, here FCC regulatory domain is enabled.

Note: The capture is taken in a clean environment.

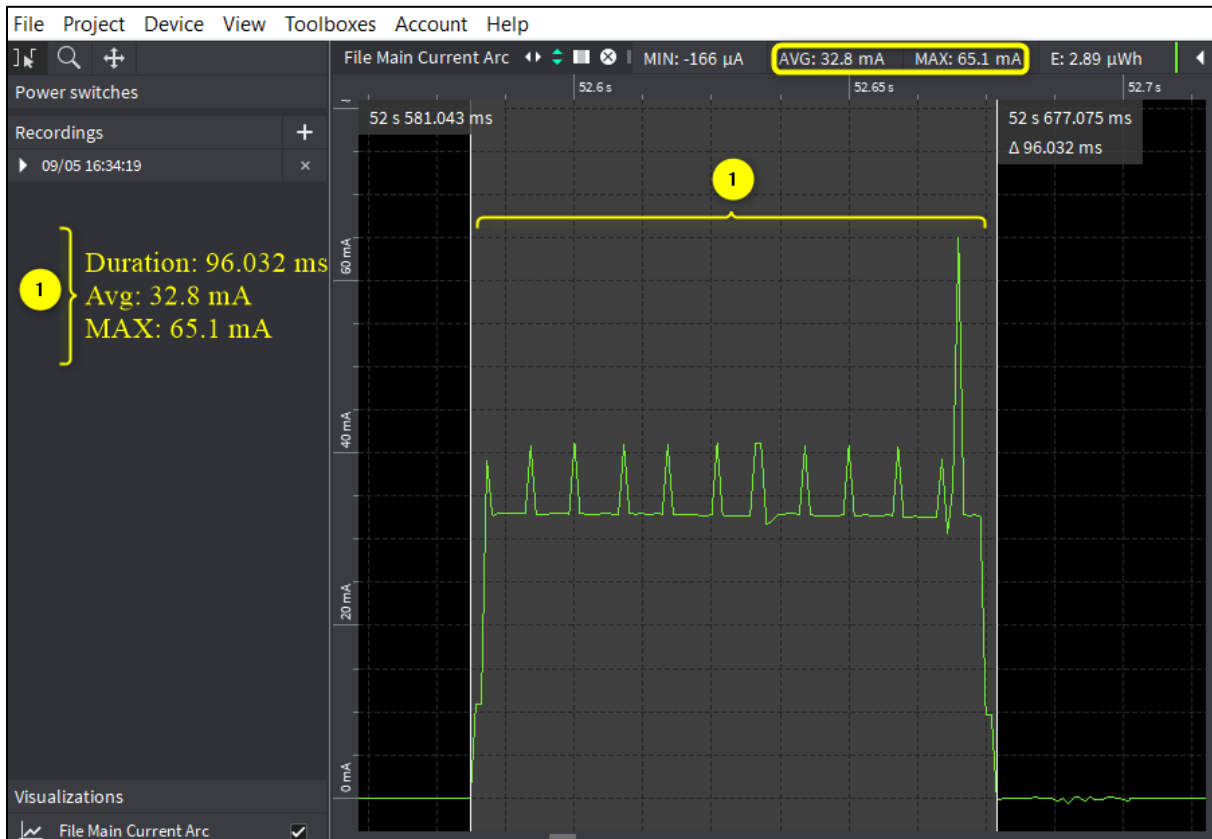


Figure 6: Low power Wi-Fi smart scan - Otti log

Note: Following are some of the use cases that can be configured manually by the user on the MPD GUI scan tab, which is applicable for both Standard and Low Power Smart scan:

1. The Scan tab allows the user to actively scan for nearby Access Points by default parameters.
2. Regulatory Domain: Depending on the user's geographical location, any one of the listed Regulatory Domains can be selected.
3. Channel_list: Set the Wi-Fi channels to be used.
For example: Set 1-11,13 to use channels 1 to 11 and 13, depending on the selected Regulatory Domain.
4. Prob_rate: The rate as defined by `rate_t` is used to transmit the probe request. If this field is set to `0xffff`, no probes will be sent and the scan will only be passive.
5. Setting the SSID.
SSID (Service Set Identifier) is the name of the user's wireless network, also known as Network ID. If the SSID of the network is provided and the BSSID field is kept empty, it scans for the network as per the provided SSID and gives the following details:
 - a. BSSID

- b. Channel
 - c. RSSI Range
 - d. Mode
6. Setting the BSSID.

BSSID recognizes the AP or router as it has a unique address which creates the wireless network. To set the BSSID of a network, enter the BSSID in the provided field and click on `Start`.

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