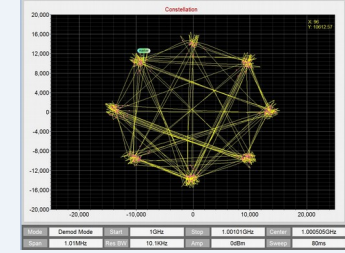
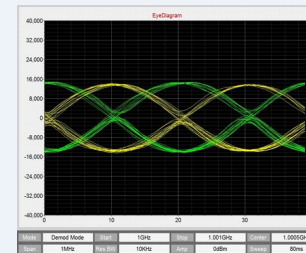
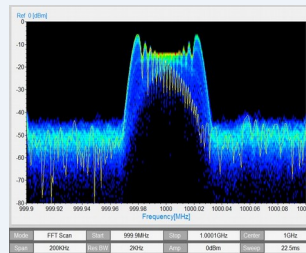
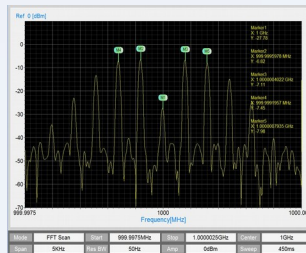
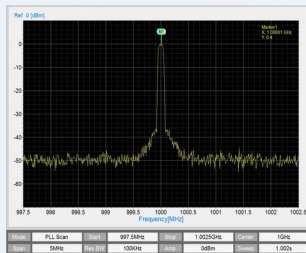




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# Wifi signal testing with VSA6G2A



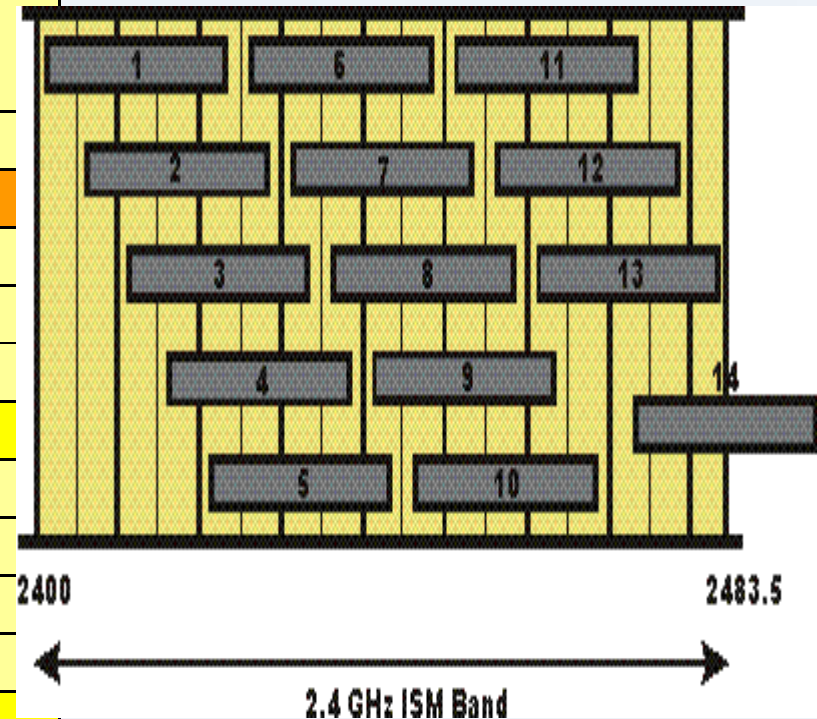


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## Wi-Fi WLAN channel frequencies

Channel Number	Lower Frequency GHz	Center Frequency GHz	Upper Frequency GHz
1	2401	2412	2423
2	2404	2417	2428
3	2411	2422	2433
4	2416	2427	2438
5	2421	2432	2443
6	2426	2437	2448
7	2431	2442	2453
8	2436	2447	2458
9	2441	2452	2463
10	2451	2457	2468
11	2451	2462	2473
12	2456	2467	2478
13	2461	2472	2483
14	2473	2484	2495



Channel 6&11 will be  
Wi-fi default setting



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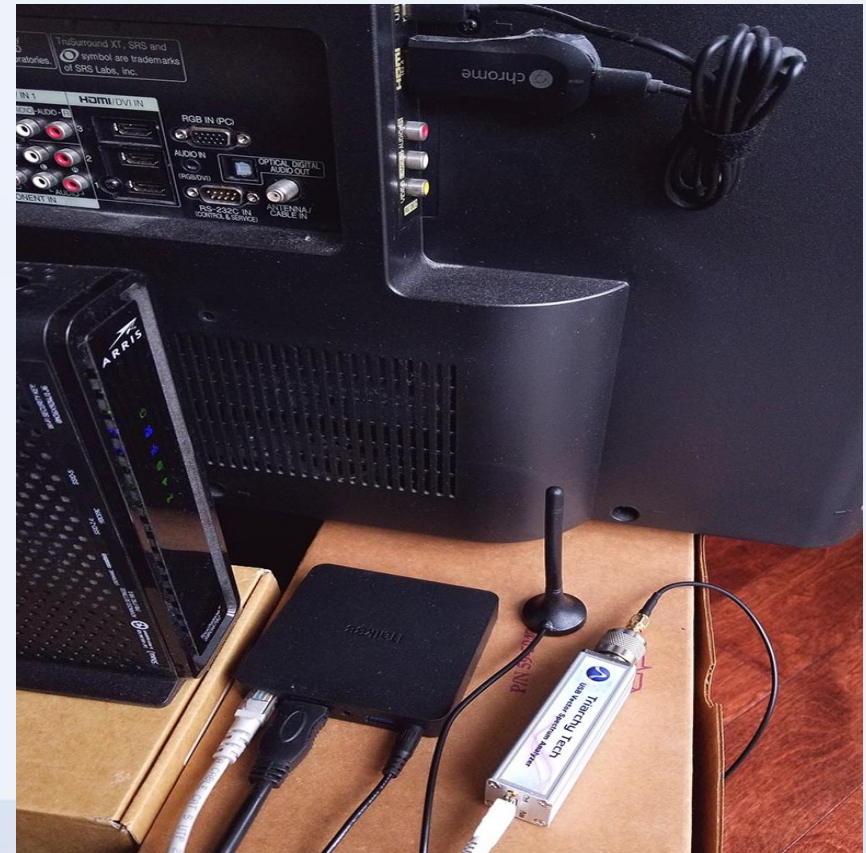
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## Wifi Router air signal testing

The antenna connected with VSA6G2A is closed to the Wifi router.  
Wifi router link with:

- 1: TV cable top box ( Wifi link)
- 2: Google Chromecast
- 3: One Smartphone play with youtube and cast video into Chrome.
- 4: One PC access internet via Wifi

So that multiple Wifi channel link with Wifi router.







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## Wifi Router air signal testing

VSA6G2A setting is:

Cent freq: 2415MHz

SPAN: 30MHz, RBW: 1MHz

Amp: -30dBm

Using current and density display

To show the spectrum waveform.

Wifi signal is working at Ch2.

Total 4 signals are overlap at CH2

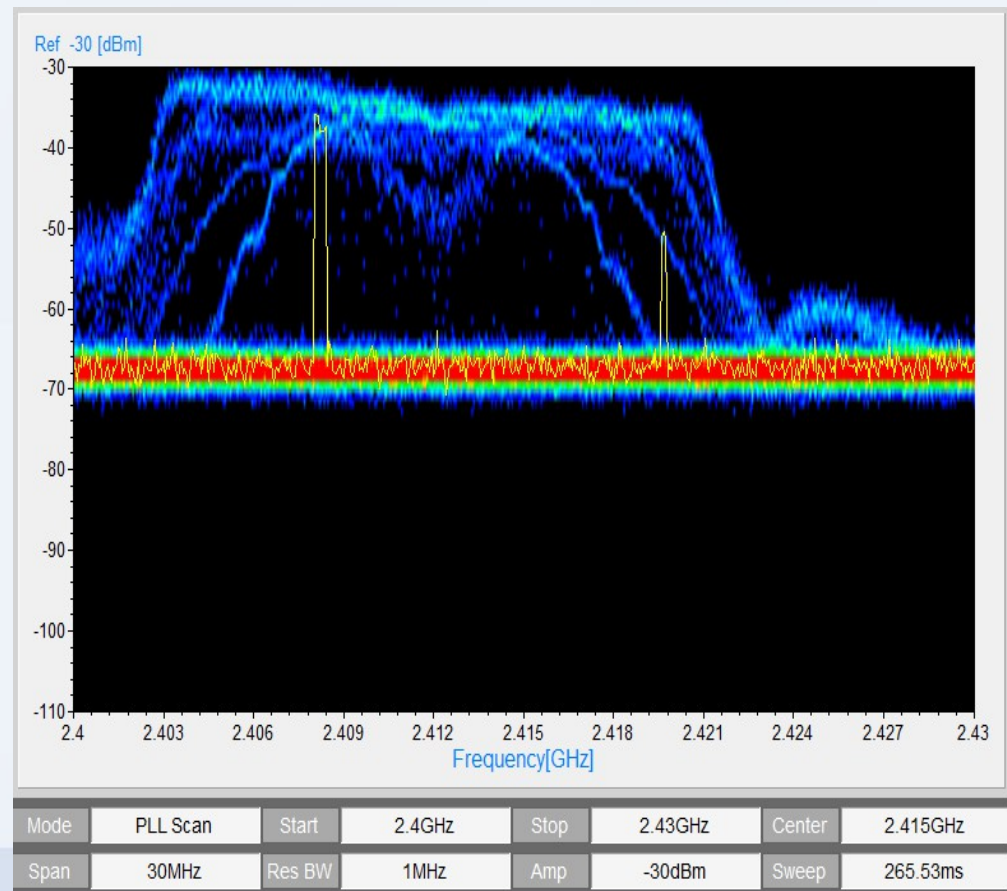
2 signals are 802.11b (DSSS)

2 signals are 802.11g (OFDM)

The Current display is only shown  
several pulse, Density display will

Be better to shown the overlap

Signal.



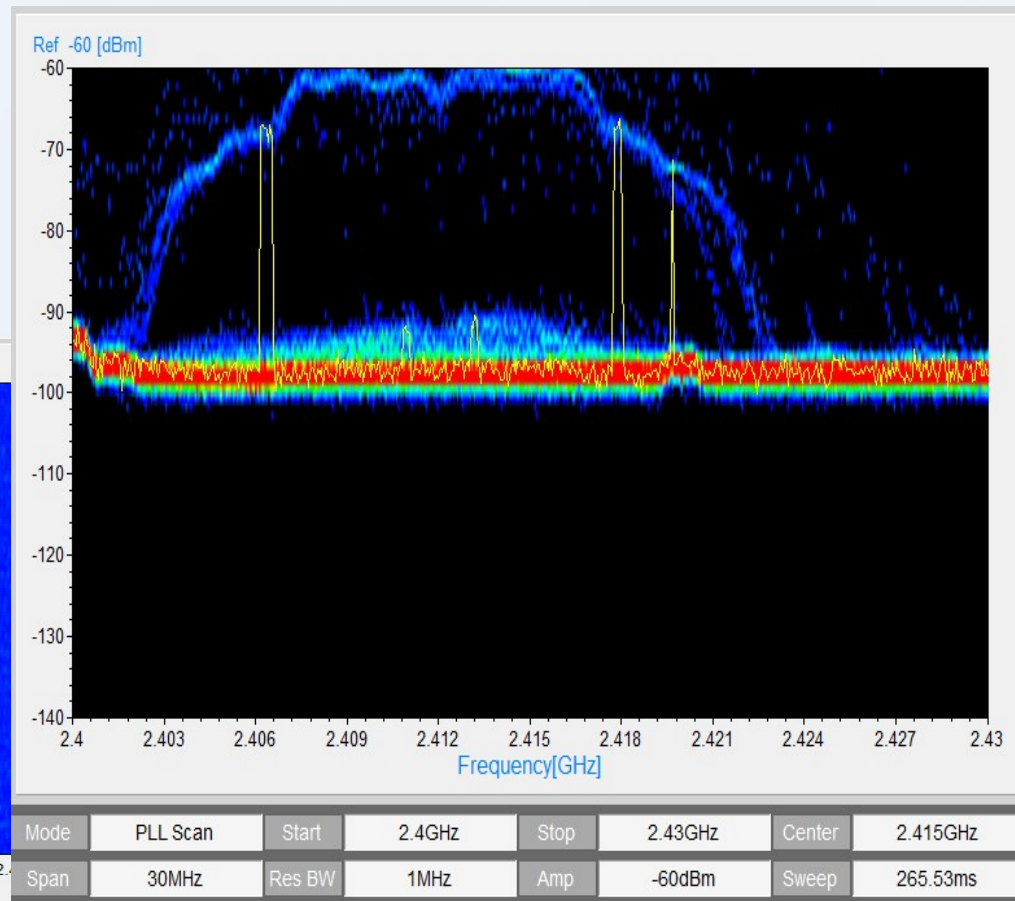
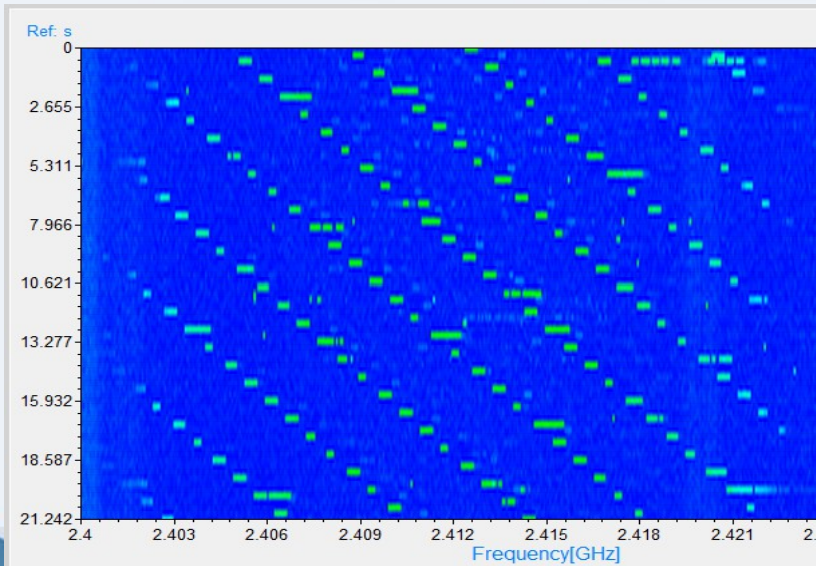


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# Wifi Router air signal testing

Turn off more Wifi link, just keep one TV box, the density display is shown the one Wifi signal.  
Waterfall display is signal frame with time slot





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## Wifi Router conductive testing

VSA6G2A Wifi connect with router through directional coupler, VSA6G2A can measure the the full power of Wifi router, and Wifi router is still link another Wifi device. The this way, VSA6G2A can measure the full power of Wifi signal.





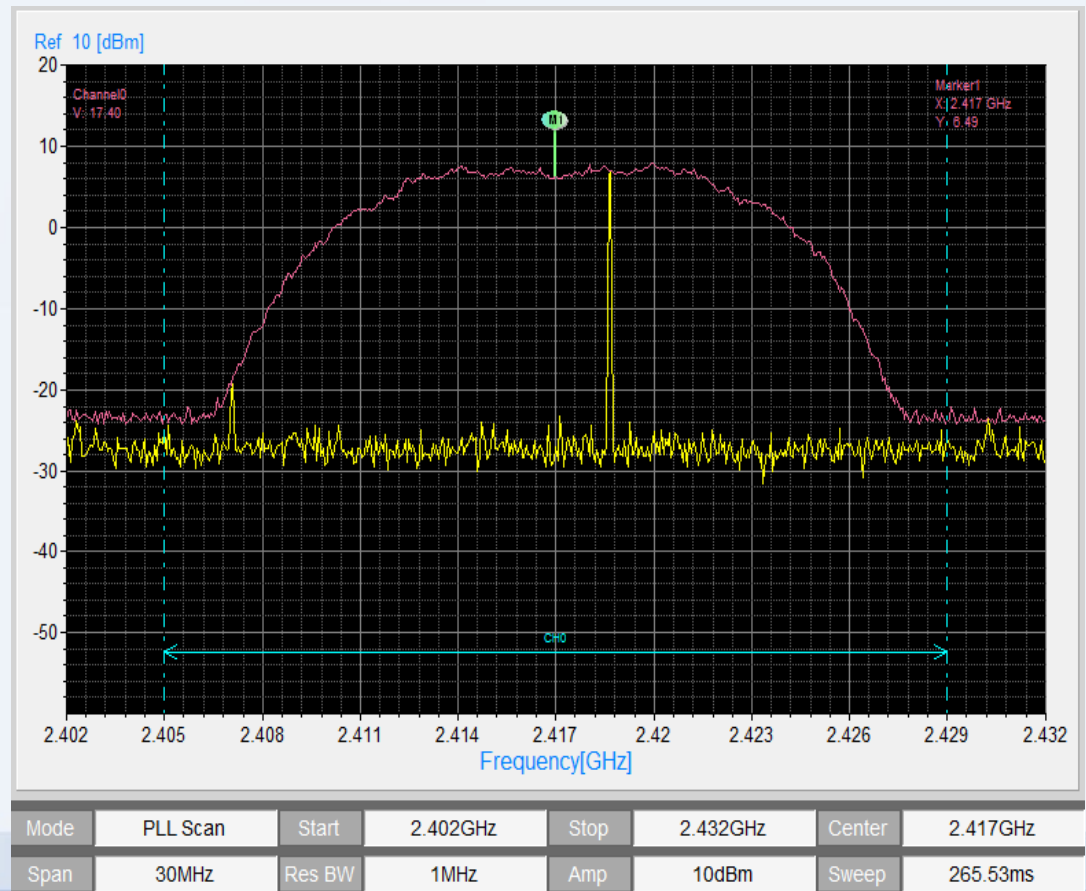


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## Wifi Router conductive testing

Using channel power tool to measure the output power of Wifi router. Because Wifi signal is burst signal, the current display can not be shown the full spectrum of signal, but MAX hold display can represent the full spectrum waveform. Channel power is shown 17.4dBm, and center marker is shown the 6.49dBm.





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# Wifi Router conductive testing

Set channel number to 3, two adjacent channel power can be measured.

Ch 0: 17.51dBm

Ch 1: -5.79dBm

Ch-1: -5.74dBm

