

WaveXpert

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WLAN NETWORK SNIFFER

FOR 2.4 AND 5GHZ WLAN ACCORDING TO IEEE 802.11a/b/g/n/ac



IT Networks

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WLAN Network Sniffer

When modern WLAN Networks (High Density, Industrial, University, Hospital, etc.) require an analysis of network transactions (sometimes up to layer 7 “application” of the OSI model) the engineers need to capture Wi-Fi traffic, store packets, and analyze network frames. Softing now offers WaveXpert, a multi-channel Wi-Fi communications capture probe, compliant with IEEE 802.11 a/b/g/n/ac standards.

	WaveXpert 1	WaveXpert 2
Frequencies	2,4GHz + 5GHz	5GHz
WLAN Standards	802.11 a/b/g/n/ac	802.11 a/n/ac
Possible channel bandwidth	20/40/80MHz	20/40/80/160MHz
MIMO	3x3	4x4
Simultaneously recordable channels	4 channels (up to 8 with 2 units)	4 channels (up to 8 with 2 units)
Article number	226559	226560

WHAT IS RECORDED

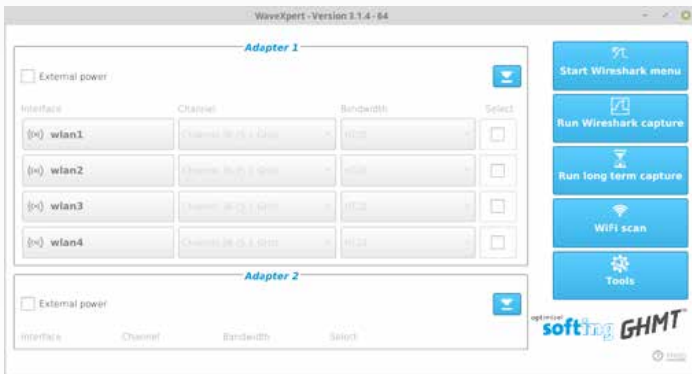
The special feature of WaveXpert is that not only user data but also management and control information is received loss-free and stored for further analysis. The unit operates in passive mode only, WLAN transmissions are only received and not sent.

HOW DATA IS COLLECTED

The WaveXpert is designed as a peripheral device for PCs, which have a Thunderbolt™ 3 interface. The data collected by the WaveXpert is transmitted via the Thunderbolt™ 3 interface to the PC and is stored in the PC's memory. There the data can be displayed and analyzed with Wireshark.

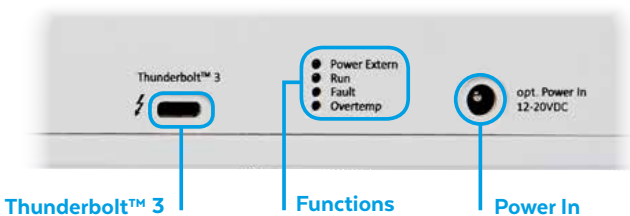
No.	Time	Source	Destination	Protocol	RSSI	TX	PHY type	Channel	Bandwidth	Info
803	1.636111765	HewlettP_ba...	Broadcast	802.11	-95 dBm	6,0	802.11a	132		Data, SN=2307, FN=0, Flags=p...F.
839	1.650025205	Netgear_79...	Broadcast	802.11	-91 dBm	1,0	802.11b	1		Beacon frame, SN=1610, FN=0, Flags=....., BI=100, SSID=No
810	1.650116269	3a:5b:0e:5b...	Broadcast	802.11	-73 dBm	6,0	802.11g	11		Beacon frame, SN=3450, FN=0, Flags=....., BI=100, SSID=Gu
866	1.650316977	HewlettP_31...	Broadcast	802.11	-87 dBm	1,0	802.11b	6		Beacon frame, SN=1531, FN=0, Flags=....., BI=100, SSID=Pr
894	1.650329558	HewlettP_31...	Broadcast	802.11	-87 dBm	1,0	802.11b	7		Beacon frame, SN=1531, FN=0, Flags=....., BI=100, SSID=Pr
906	1.654833014	HewlettP_31...	Broadcast	802.11	-98 dBm	6,0	802.11a	132		Beacon frame, SN=2881, FN=0, Flags=....., BI=100, SSID=Ga
813	1.671995141	00:ff:a5:ae...	IntelCor_d2:...	802.11	-78 dBm	585,0	802.11ac	36	80 MHz	QoS Data, SN=1338, FN=0, Flags=p...F.
849	1.671995357	00:ff:a5:ae...	IntelCor_d2:...	802.11	-78 dBm	585,0	802.11ac	44	80 MHz	QoS Data, SN=1338, FN=0, Flags=p...F.
850	1.672905804	IntelCor_d2...	2a:5b:0e:5b:...	802.11	-54 dBm	24,0	802.11a	44		802.11 Block Ack, Flags=.....
814	1.672966190	IntelCor_d2...	2a:5b:0e:5b:...	802.11	-62 dBm	24,0	802.11a	36		Request-to-send, Flags=.....
851	1.672988193	IntelCor_d2...	2a:5b:0e:5b:...	802.11	-63 dBm	24,0	802.11a	44		Request-to-send, Flags=.....
852	1.672994924	IntelCor_d2...	2a:5b:0e:5b:...	802.11	-72 dBm	24,0	802.11a	44		Clear-to-send, Flags=.....
880	1.673005959	IntelCor_d2...	2a:5b:0e:5b:...	802.11	-76 dBm	24,0	802.11a	48		Request-to-send, Flags=.....
881	1.673034437	IntelCor_d2...	2a:5b:0e:5b:...	802.11	-85 dBm	24,0	802.11a	48		Clear-to-send, Flags=.....
853	1.673048911	IntelCor_d2...	00:ff:a5:ae...	802.11	-63 dBm	260,0	802.11ac	44	80 MHz	QoS Data, SN=2636, FN=0, Flags=p...T
815	1.673067017	IntelCor_d2...	00:ff:a5:ae...	802.11	-62 dBm	260,0	802.11ac	36	80 MHz	QoS Data, SN=2636, FN=0, Flags=p...T
816	1.673070792	IntelCor_d2...	IntelCor_d2:...	802.11	-75 dBm	24,0	802.11a	36		Acknowledgement, Flags=.....
854	1.673086687	IntelCor_d2...	IntelCor_d2:...	802.11	-75 dBm	24,0	802.11a	44		Acknowledgement, Flags=.....
882	1.673112617	IntelCor_d2...	00:ff:a5:ae...	802.11	-78 dBm	260,0	802.11ac	48	80 MHz	QoS Data, SN=2636, FN=0, Flags=p...T
883	1.673115425	IntelCor_d2...	IntelCor_d2:...	802.11	-87 dBm	24,0	802.11a	48		Acknowledgement, Flags=.....

SOFTWARE/CONFIGURATION



For the operation and configuration of the WaveXpert such as for example the definition of the reception channels or of the channel bandwidth a user interface with a Linux Live operating system on the PC is supplied.

CONNECTIONS

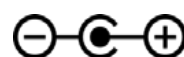


The WaveXpert is powered via the Thunderbolt connector and sends data to the PC. If an external power supply is connected, "Power External" lights up. The external power supply via "opt. Power In" is necessary at maximum load, e.g. when connecting 2 devices. "Fault" and "Overtemp" show error messages.

EXTERNAL POWER CONNECTION

In order to conserve the laptop's battery life and to operate the WaveXpert with larger channel bandwidths, the WaveXpert can be supplied via an external power supply. You can use Powerbanks, which should be able to supply a voltage between 12 and 20V. Devices which are available for additional charging of laptops are suitable for this purpose. The plug of this external power supply must be compatible with the power socket of the WaveXpert. The center pin must be connected to the positive pole. The center pin of the Power-In socket has a diameter of 2.5mm. The plug of the external power supply should have an outside diameter of 5.5mm.

Polarity of the contacts in the Power-In jack:



BENEFITS / WHY WAVEXPERT

- Captures in monitoring mode the important management frames (incl. radio tap header)
- Multichannel, Multi-MIMO capture
- Visibility of "roaming processes"
- Saves captures in PCAP format (with Wireshark)
- 4 Wi-Fi cards with 16 antennas in one tidy case
- 20 GBit/s Thunderbolt Interface

SPECIFICATIONS

External data interface to PC	Thunderbolt™ 3
Connector	USB-C
Cable between device and PC	Thunderbolt™ certified with at least 20Gbit/s Data rate
Power consumption via Thunderbolt™ from PC	15W (max)
Housing protection	IP20
Power connection	Socket DC In 12V to 20V / 2A (max) 5.5mm Plug diameter 2.5mm Center Pin Diameter
Operating temperature range	0 - 35°C 10 - 90%RH non-condensing
Housing dimensions	200 x 135 x 40mm
Weight (without cable)	0.5kg
Conformity	CE: RED directive 2014/53/EU CE: ROHS Directive 2011/65/EU USA/Canada: FCC
WLAN standard	IEEE 802.11a/b/g/n/ac (up to 160MHz)
Frequency	2.4GHz: 2,412 to 2,472GHz 5GHz: 5,180 to 5,825GHz
Max. channel bandwidth	20/40/80/160MHz
Simultaneously recordable channels	4 channels (up to 8 with 2 units)

SCOPE OF DELIVERY

- › WaveXpert device
- › Thunderbolt™ 3 Cable
- › USB stick with operating software
- › Quickstart manual
- › Softbag

EMEA

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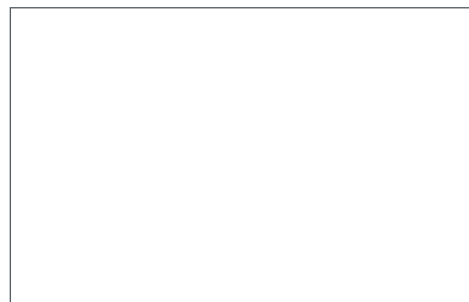
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