

DATASHEET IN3033DS
Ethernet Debugger
Model 7060-A

FEATURES

- Capture ethernet packets without intrusion (preamble, SFD, and FCS are all left intact)
- Capture non-ethernet packets
- Detect direction
- Detect CRC validity
- Count inter-frame gaps
- Inject packets
- Disrupt packets
- PoE passthrough
- Accessed through userspace

- Can be directly accessed from Wireshark
- Can be accessed and controlled by command line interface, able to directly capture to file in PcapNG format
- Open source host software
- Compact and portable, USB-powered solution
- Connectors: 2x RJ45 10/100/1000 Mbps Ethernet, 1x USB-B 3.0
- Status RGB-LED showing device state
- National compliances: FCC, CE, RCM, ICES-003
- Aluminum enclosure, dimensions: 120 x 30 x 70 mm
- Engineered and manufactured in Germany



Top: front side view; bottom: back side view

APPLICATIONS

- Protocol development (including layer-2 protocols like AVB / TSN, 1588, Spanning Tree)
- MAC development
- PHY debugging
- Cable testing
- Performance monitoring
- Intelligence wiretap

Table 1 Ordering Code

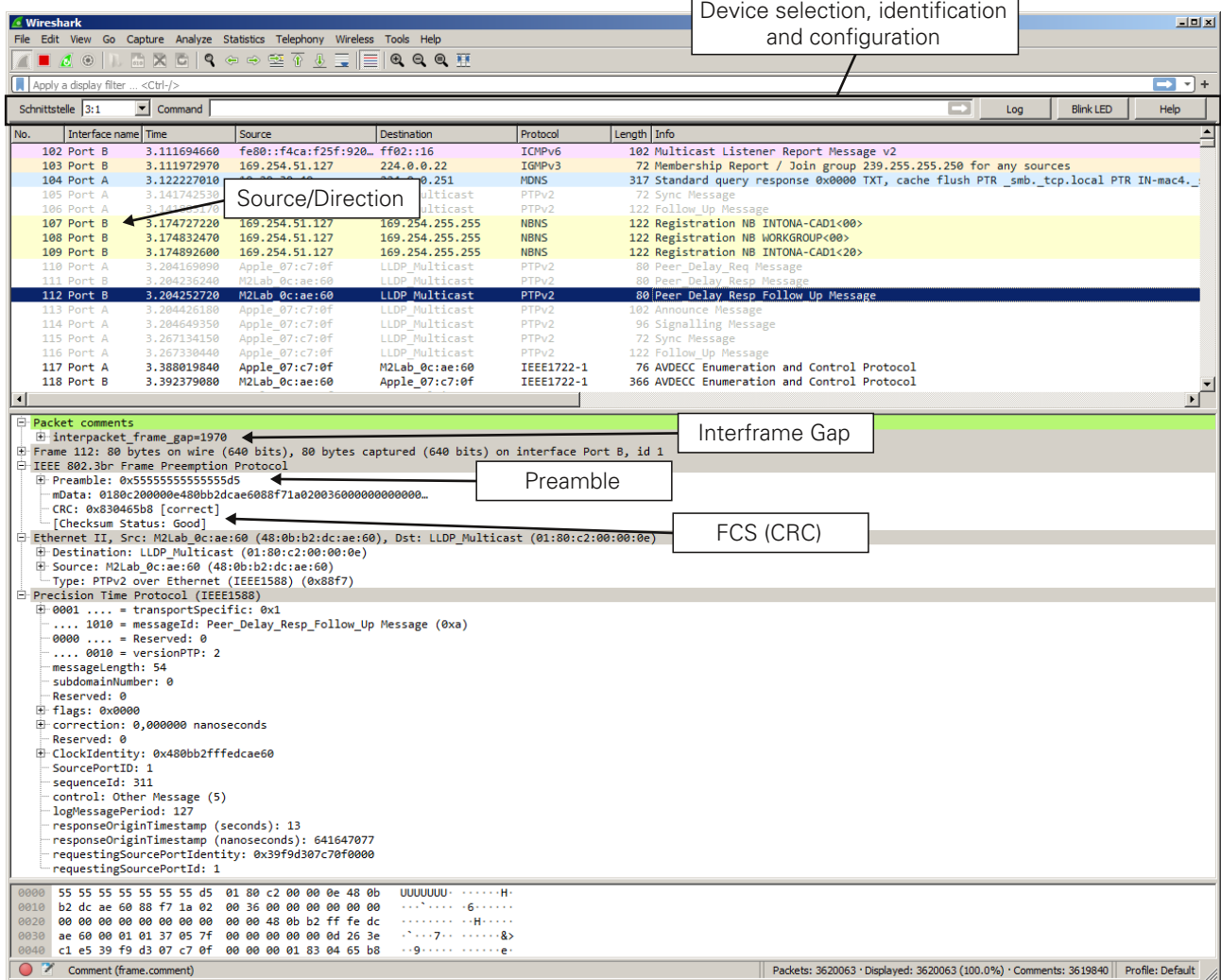
7060-A	Ethernet Debugger	USB 3.0 cable included (2 meters)
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Options: -8 = DIN-Rail mount; -G = Ground contact screw

Table 2 Technical Specifications

Power Supply	Powered by USB host device (350mA max)
Capture Speed	Ethernet is captured in realtime at full bandwidth over USB 3.0 (> 2 Gbps)
Capture Format	PcapNG to file or via FIFO to Wireshark
Supported OS	Windows, Linux, macOS (all possible CPU vendors supported)
Ambient Temperature	-40–80°C
Dimensions, Weight	120 x 30 x 70 mm; 300g

Example Wireshark Session



The image shows a Wireshark capture session with several annotations:

- Device selection, identification and configuration:** A callout box points to the top menu bar and toolbar of the Wireshark interface.
- Source/Direction:** A callout box points to the 'Source' and 'Destination' columns in the packet list pane.
- Interframe Gap:** A callout box points to the gap between the end of one packet and the start of the next in the packet bytes pane.
- Preamble:** A callout box points to the preamble bytes (0x5555555555555555) in the packet bytes pane.
- FCS (CRC):** A callout box points to the CRC bytes (0x830465b8) in the packet bytes pane.

The packet list pane shows the following data:

No.	Interface name	Time	Source	Destination	Protocol	Length	Info
102	Port B	3.111694660	fe80::f4ca:f25f:920...	ff02::16	ICMPv6	102	Multicast Listener Report Message v2
103	Port B	3.111972970	169.254.51.127	224.0.0.22	IGMPv3	72	Membership Report / Join group 239.255.255.250 for any sources
104	Port A	3.122227010	169.254.51.127	0.251	MDNS	317	Standard query response 0x0000 TXT, cache flush PTR _smb._tcp.local PTR IN-mac4...
105	Port A	3.141745330	169.254.51.127	169.254.255.255	PTPv2	72	Sync Message
106	Port A	3.141745370	169.254.51.127	169.254.255.255	PTPv2	122	Follow Up Message
107	Port B	3.174727220	169.254.51.127	169.254.255.255	NBNS	122	Registration NB INTONA-CAD1<00>
108	Port B	3.174832470	169.254.51.127	169.254.255.255	NBNS	122	Registration NB WORKGROUP<00>
109	Port B	3.174892600	169.254.51.127	169.254.255.255	NBNS	122	Registration NB INTONA-CAD1<20>
110	Port A	3.204169090	Apple_07:c7:0f	LLDP_Multicast	PTPv2	80	Peer_Delay_Req Message
111	Port B	3.204236240	M2Lab_0c:ae:60	LLDP_Multicast	PTPv2	80	Peer_Delay_Resp Message
112	Port B	3.204252720	M2Lab_0c:ae:60	LLDP_Multicast	PTPv2	80	Peer_Delay_Resp_Follow_Up Message
113	Port A	3.204426180	Apple_07:c7:0f	LLDP_Multicast	PTPv2	102	Announce Message
114	Port A	3.204649350	Apple_07:c7:0f	LLDP_Multicast	PTPv2	96	Signalling Message
115	Port A	3.267134150	Apple_07:c7:0f	LLDP_Multicast	PTPv2	72	Sync Message
116	Port A	3.267330440	Apple_07:c7:0f	LLDP_Multicast	PTPv2	122	Follow Up Message
117	Port A	3.388019840	Apple_07:c7:0f	M2Lab_0c:ae:60	IEEE1722-1	76	AVDECC Enumeration and Control Protocol
118	Port B	3.392379080	M2Lab_0c:ae:60	Apple_07:c7:0f	IEEE1722-1	366	AVDECC Enumeration and Control Protocol

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