

産業プロトコル解析に最適

JS-TAP22 プロトコル解析ツール

低コストで簡単に使えます



- IO-LINK通信の解析
- Ethernetを基本とした
様々な通信プロトコルの解析

 IO-Link

 PROFINET[®]

 EtherCAT[®]

 EtherNet/IP[™]

 FL-net

- 低価格でかつ1台で2つの機能 (IO-LINK + Ethernet)
- Microsoft EXCELフォーマットによる使いやすい結果保存。 [IO-LINK]
- IO-LINK規格に基づいた正確なフレームのタイミング解析が可能 [IO-LINK]
- 解析時にI/ODD不要 [IO-LINK]
- PCの内臓NICでは実現できない伝送方向解析と正確な時間測定。 [Ethernet]
- PCの内臓NICではモニターできないVLANなどの全データ取得。 [Ethernet]
- 解析しながらPCのNICも併用可能 [Ethernet]
- USB電源のみで駆動。



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IO-LINK の解析画面イメージ：※EXCEL による結果表示

Time(us)	Mode	L+	Pin2	M-sequence control	PD	EVT	Information	M-Type
000048712789	COM3	H	-	Page[R] addr=0x02			MinCycleTime(3.0ms)	Type 0
000048713454	COM3	H	-	Page[R] addr=0x02			MinCycleTime(3.0ms)	Type 0
000048714140	COM3	H	-	Page[R] addr=0x03			M-sequence Capability(PreOP=2,OP=6,ISDU=1)	Type 0
000048714826	COM3	H	-	Page[R] addr=0x04			RevisionID(0x11)	Type 0
000048715511	COM3	H	-	Page[R] addr=0x05			ProcessDataIn(16bits)	Type 0
000048716198	COM3	H	-	Page[R] addr=0x06			ProcessDataOut(16bits)	Type 0
000048716885	COM3	H	-	Page[W] addr=0x00			MasterCommand(MasterIdent)	Type 0
000048717568	COM3	H	-	Page[R] addr=0x07			VendorID1(0x03)	Type 0
000048718254	COM3	H	-	Page[R] addr=0x08			VendorID2(0x8F)	Type 0
000048718940	COM3	H	-	Page[R] addr=0x09			DeviceID1(0x00)	Type 0
000048719626	COM3	H	-	Page[R] addr=0x0A			DeviceID2(0x01)	Type 0
000048720311	COM3	H	-	Page[R] addr=0x0B			DeviceID3(0x00)	Type 0
000048720996	COM3	H	-	Page[R] addr=0x0C			FunctionID1(0x00)	Type 0
000048721682	COM3	H	-	Page[R] addr=0x0D			FunctionID2(0x00)	Type 0
000048722372	COM3	H	-	Page[W] addr=0x00			MasterCommand(DevicePreoperate)	Type 0
000048723393	COM3	H	-	ISDU[W] flow=START		ev	I-Service(Read Request) index=0x15 Serial Number	Type 1
000048724895	COM3	H	-	Diagnosis[R] addr=0x00		ev	StatusCode type2(0x81)	Type 1
000048726402	COM3	H	-	Diagnosis[R] addr=0x01		ev	Event1(Qualifier=0x54,Code=0xFF91)	Type 1
000048727912	COM3	H	-	Diagnosis[R] addr=0x02		ev		Type 1
000048729422	COM3	H	-	Diagnosis[R] addr=0x03		ev		Type 1
000048730928	COM3	H	-	ISDU[R] flow=START		ev	I-Service(Read Response+) 12byte	Type 1
000048732439	COM3	H	-	ISDU[R] flow=COUNT(1)		ev		Type 1
000048733944	COM3	H	-	ISDU[R] flow=IDLE1		ev		Type 1

Ethernet の解析画面イメージ：※Wireshark による結果表示

No.	Time	Source	Destination	Protocol	Length	Info
4	0.000033	fe80::1845:6163:3bc...	ff02::1:3	LLMNR	100	Standard query 0x03df A wpad
5	0.000094	192.168.1.60	224.0.0.252	LLMNR	80	Standard query 0xa94d AAAA wpad
6	0.000105	192.168.1.60	224.0.0.252	LLMNR	80	Standard query 0x499a AAAA wpad
7	0.000126	192.168.1.60	224.0.0.252	LLMNR	80	Standard query 0x03df A wpad
8	0.000134	192.168.1.60	224.0.0.252	LLMNR	80	Standard query 0x563a A wpad
9	0.031930	192.168.1.60	224.0.0.22	IGMPv3	76	Membership Report / Join group 224.0.0.22
10	0.031962	fe80::1845:6163:3bc...	ff02::16	ICMPv6	126	Multicast Listener Report Message v2
11	0.519802	Clevo_94:63:c8	LLDP_Multicast	LLDP	76	MA/80:fa:5b:94:63:c8 MA/80:fa:5b:94:63:c8
12	0.535806	Clevo_94:63:c8	Broadcast	ARP	76	Who has 192.168.1.60? (ARP Probe)

> Frame 1: 100 bytes on wire (800 bits), 100 bytes captured (800 bits)						
> Ethernet II, Src: Clevo_94:63:c8 (80:fa:5b:94:63:c8), Dst: IPv6mcast_01:00:03 (33:33:00:01:00:03)						
> Internet Protocol Version 6, Src: fe80::1845:6163:3bc5:197a, Dst: ff02::1:3						
> User Datagram Protocol, Src Port: 58030, Dst Port: 5355						
> Link-local Multicast Name Resolution (query)						
▼ EtherCAT Switch Link						
Port: 1						
.... 0... .. = Alignment Error: no						
...0 = Crc Error: no						
timestamp: 0x00000000aeaa624a						

0000	33 33 00 01 00 03 80 fa 5b 94 63 c8 86 dd 60 02	33..... [-c.....
0010	0d 29 00 1e 11 01 fe 80 00 00 00 00 00 00 18 45	.)... ..E
0020	61 63 3b c5 19 7a ff 02 00 00 00 00 00 00 00 00	ac;...z... ..
0030	00 00 00 01 00 03 e2 ae 14 eb 00 1e 0c 93 56 3aV:
0040	00 00 00 01 00 00 00 00 00 00 04 77 70 61 64 00wpad
0050	00 01 00 01 01 01 05 10 00 00 40 00 4a 62 aa ae@Jb..
0060	00 00 00 00

