

PhyView LAN PHY Performance Report



192.168.1.30 Test Port 1,1 Date May 31 2014 Time 8:07 AM DUT Type Sample 10/100/1000 Port Port 5 Suite Version: 4.0.35 05-28-14

Basic Capabilities

Auto-Negotiation								
AUTO-NEG	ACKS	1000BaseT	100BaseTX	10BaseT	100BaseT4	Pause	Link_OK	MDI/MDI-X
EXTENDED	EXTENDED	FULL	HALF+FULL	HALF+FULL	NO	RESPOND	YES	AUTO
Rx_OK	Gig Mode	M-S Fault	Mstr Fault	Slv Fault	Mstr T(sec)	Slv T(sec)		
1000Base-T Links	YES	AUTO	NONE	NONE	NONE	3	3	

Link Verification and Integrity

	MDI Connection				MDI-X Connection			
	10BaseT	100BaseTx	Master	Slave	10BaseT	100BaseTx	Master	Slave
Full Duplex	100	100	100	100	100	100	100	100
Half Duplex	100	100	N/A	N/A	100	100	N/A	N/A

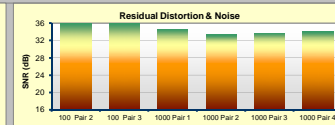
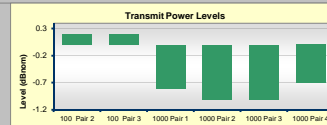
Transmitter & Interface Tests

Tx Power Level

Link Rate	Pair 1	Pair 2	Pair 3	Pair 4	Units
100BaseTX	0.2	0.2	0.2	0.2	dBVnom
1000BaseT	-0.8	-1	-1	-0.7	dBVnom

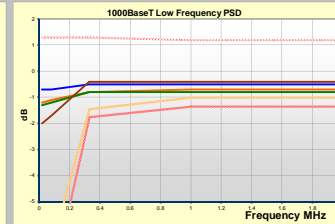
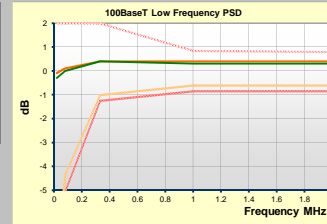
Signal Quality (SNR)

Link Rate	Pair 1	Pair 2	Pair 3	Pair 4	Average	Min SNR	Units
100BaseTX		36	36		36	36	dB
1000BaseT	34.6	33.3	33.8	34.1	33.95	33.3	dB



Low Frequency PSD

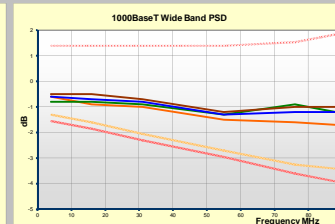
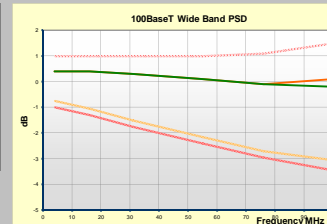
Link Rate	Frequency	Pair 1 PSD	Pair 2 PSD	Pair 3 PSD	Pair 4 PSD	Average	Min PSD	Units
100BaseTX	0.02 MHz			-0.1	-0.3	-0.2	-0.3	dB
	0.08 MHz			0.1	0	0.05	0	dB
	0.33 MHz			0.4	0.4	0.4	0.4	dB
	1 MHz			0.4	0.3	0.35	0.3	dB
1000BaseT	0.02 MHz			-0.7	-1.2	-1.3	-2	dB
	0.08 MHz			-0.7	-1.1	-1.2	-1.7	dB
	0.33 MHz			-0.5	-0.8	-0.4	-0.625	dB
	1 MHz			-0.5	-0.7	-0.8	-0.4	dB



Estimated Pk-Pk Voltage & Droop	Pair 1 Vpp	Pair 2 Vpp	Pair 3 Vpp	Pair 4 Vpp	PSD Traces:
100BaseTX	2.089	2.065			Pair 1 Pair 2 Pair 3 Pair 4
500ns Droop%, >2.4µsec τ	97.6%	97.6%			
Pk Diff. Volts T.S. #1 A>B	1.424	1.392	1.377	1.440	
Droop% T.S. #1 F->G,H->J	95.3%	94.8%	94.8%	92.5%	Yellow Limit Red Limit

Wide Band PSD

Link Rate	Frequency	Pair 1 PSD	Pair 2 PSD	Pair 3 PSD	Pair 4 PSD	Average	Min PSD	Units
100BaseTX	4 MHz		0.4	0.4		0.4	0.4	dB
	16 MHz		0.4	0.4		0.4	0.4	dB
	31 MHz		0.3	0.3		0.3	0.3	dB
	55 MHz		0.1	0.1		0.1	0.1	dB
	76 MHz		-0.1	-0.1		-0.1	-0.1	dB
1000BaseT	4 MHz	-0.6	-0.6	-0.8	-0.5	-0.625	-0.8	dB
	16 MHz	-0.7	-0.9	-0.8	-0.5	-0.725	-0.9	dB
	31 MHz	-0.8	-1	-0.9	-0.7	-0.85	-1	dB
	55 MHz	-1.3	-1.5	-1.3	-1.2	-1.325	-1.5	dB
	76 MHz	-1.2	-1.6	-0.9	-1	-1.175	-1.6	dB

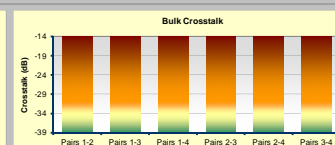
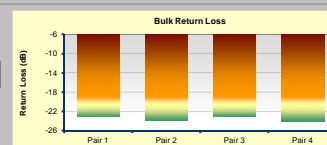


Estimated Mask Fits	Pair 1 Fit	Pair 2 Fit	Pair 3 Fit	Pair 4 Fit	PSD Traces:
100BaseTX	Rise/Fall Time: 4x1 nsec		3.99	4.08	Pair 1 Pair 2 Pair 3 Pair 4
1000BaseT	Test Signal #1 Mask Fit	Fit OK	Fit OK	Fit OK	Yellow Limit Red Limit

Skew, Echo, Xtalk

(1000BaseT Interfaces)

Time Skew	Pair 1	Pair 2	Pair 3	Pair 4	Average	Maximim	Units
Time Skew	0	0	0	0	0	0	nsec
Return Loss	-23	-23.9	-23	-24.1	-23.5	-23	dB



Receiver Tests

10Base-T with Line Loss: MDI Link Chk

Line Loss+Slew=	5 ns -2.7dB	UP
Loss+Tx Offset	-50 ppm	UP
Loss+Tx Offset	50 ppm	UP
Loss+Tx Offset	-100 ppm	UP
Loss+Tx Offset	100 ppm	UP
Loss+Noise	10 dB(40mV)	UP
Loss+Noise	14 dB(40mV)	UP
Loss+Jitter	17 dB(1.4ns)	UP
Loss+Jitter	20 dB(1.4ns)	UP
Noise+Jitter	10.5, 17 dB & dB	UP
Noise+Jitter	13.5, 19.5 dB & dB	UP

100Base-TX with Line Loss: MDI Link Mon

Line Loss+Slew=	5 ns -2.7dB	100%
Loss+Tx Offset	-50 ppm	100%
Loss+Tx Offset	50 ppm	100%
Loss+Tx Offset	-100 ppm	100%
Loss+Tx Offset	100 ppm	100%
Loss+Noise	5 dB(40mV)	100%
Loss+Noise	11 dB(40mV)	100%
Loss+Jitter	11 dB(1.4ns)	100%
Loss+Jitter	17 dB(1.4ns)	100%
Noise+Jitter	4, 10 dB & dB	100%
Noise+Jitter	10, 16 dB & dB	100% SNR1

1000Base-TX with Line Loss: MASTER Link Mon

Line Loss+Slew=	3.5 ns -1.9dB	100%
Loss+Tx Offset	-50 ppm	100%
Loss+Noise	-1 dB(40mV)	100%
Loss+Noise	1.5 dB(40mV)	100%
Loss+Noise	4 dB(40mV)	100%
Loss+Jitter	-1 dB(1.4ns)	100%
Loss+Jitter	1.5 dB(1.4ns)	100%
Loss+Jitter	4 dB(1.4ns)	99%
Noise+Jitter	-1.5, -2.5 dB & dB	100%
Noise+Jitter	1, 0 dB & dB	100%
Noise+Jitter	3.5, 2.5 dB & dB	100% SNR3

Summary

Link	MDI	MDI-X	MASTER	SLAVE
10Base-T	Limited	Good	Excellent	
100Base-TX	Limited	Good	Excellent	
1000Base-T	Limited	Good	Excellent	

10Base-T with Line Loss: MDI-X Link Chk

Line Loss+Slew=	5 ns -2.7dB	UP
Loss+Tx Offset	-50 ppm	UP
Loss+Tx Offset	50 ppm	UP
Loss+Tx Offset	-100 ppm	UP
Loss+Tx Offset	100 ppm	UP
Loss+Noise	10 dB(40mV)	UP
Loss+Noise	14 dB(40mV)	UP
Loss+Jitter	17 dB(1.4ns)	UP
Loss+Jitter	20 dB(1.4ns)	UP
Noise+Jitter	10.5, 17 dB & dB	UP
Noise+Jitter	13.5, 19.5 dB & dB	UP

100Base-TX with Line Loss: MDI-X Link Mon

Line Loss+Slew=	5 ns -2.7dB	100%
Loss+Tx Offset	-50 ppm	100%
Loss+Tx Offset	50 ppm	100%
Loss+Tx Offset	-100 ppm	100%
Loss+Tx Offset	100 ppm	100%
Loss+Noise	5 dB(40mV)	100%
Loss+Noise	11 dB(40mV)	100%
Loss+Jitter	11 dB(1.4ns)	100%
Loss+Jitter	17 dB(1.4ns)	100%
Noise+Jitter	4, 10 dB & dB	100%
Noise+Jitter	10, 16 dB & dB	100% SNR2

1000Base-TX with Line Loss: SLAVE Link Mon

Line Loss+Slew=	5 ns -2.7dB	100%
Loss+Tx Offset	-100 ppm	100%
Loss+Tx Offset	100 ppm	100%
Loss+Tx Offset	-115 ppm	100%
Loss+Tx Offset	115 ppm	100%
Offset+Noise	-100, -1 ppm & dB	100%
Offset+Noise	100, -1 ppm & dB	100%
Offset+Noise	-100, 1.5 ppm & dB	100%
Offset+Noise	100, 1.5 ppm & dB	100%
Offset+Noise	-100, 4 ppm & dB	100%
Offset+Noise	100, 4 ppm & dB	100% SNR4

Local Rx Health (Lowest Pair) SNR dB

100 Base-TX	SNR1	30.8
100 Base-TX	SNR2	29.8
1000 Base-T	SNR3	24.1
1000 Base-T	SNR4	24