

Test Report No. EWA30067-00

Transmission Performance Testing:

according to ISO/IEC 11801 Edition 2 (09/2002)
Channel Klasse E

The Equipment Under Test (EUT)

Part 1:	Modular Patch Panel MPP /MPD Category 6 /Class E
Part 2:	Outlet AMJ45 8/8 Cat. 6 / Class E
Part 3:	L00003A0049 (2x) TG Measuring Cable Cat. 6 - 5m (2x)
Part 4:	M06015A0079 (2x) Microtest Omniscanner 2 Channel Adapter Cat. 6
Installation Cable:	ACOME 4P AWG23 SSTP 100Ohms ZH Cat.7

Result:

The EUT verified as being compliant with the transmission specifications of the standard ISO/IEC 11801 Edition 2 (09/2002).

The minimum NEXT reserve of the Channel Class E is:
@100 MHz = 12,2 dB and @ 250 MHz = 6,5 dB.

Test location:

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Tested by:



Frank Albert

Steinenbronn, March 31, 2003

Products:

The electrical modul Modular Patch Panel MPP / MPD Cat. 6 / Class E and Outlet AMJ45 8/8 Cat. 6 / Class E is used in the following products:

Modular Patch Panel MPP / MPD Cat. 6 / Class E:

J02023A0021 Modular Patch Panel Cat. 6 / Class E MPP24-HS screened, RAL 7035

J02023H0021 Modular Patch Panel Cat. 6 / Class E MPP24-HS screened, RAL 7035

J02022A0038 10" Mod. Patch Panel Cat.6 MPP12-HS screened, RAL 7035

J02022A0028 Distributor Cat.6 MPD12-HS screened

J02021A0019 Distributor Cat.6 MPD12-HS 3HU/10PU screened

J02021A0015 Distributor Cat.6 Typ II MPD6-HS screened

J02021A0017 Distributor Cat.6 Typ II MPD6-HS screened

J02021A0024 Distributor Cat.6 MPD6-HS 3HU/8PU screened without front panel

Outlet AMJ45 8/8 Cat. 6 / Class E

J00020A0393 Outlet AMJ45 8/8 UP/50 EK screenend, Cat. 6 / Class E alpine white

J00020A0394 Outlet AMJ45 8/8 UP/50 EK screenend, Cat. 6 / Class E pearl white RAL 1013

J00020A0395 Outlet AMJ45 8/8 UP/50 EK screenend, Cat. 6 / Class E without cover plate

J00020H0393 Outlet AMJ45 8/8 UP/50 EK screenend, Cat. 6 / Class E alpine white

J00020H0394 Outlet AMJ45 8/8 UP/50 EK screenend, Cat. 6 / Class E pearl white RAL 1013

J00020A0392 Outlet AMJ45 8/8 UP/50 EK screenend, Cat. 6 / Class E without cover plate

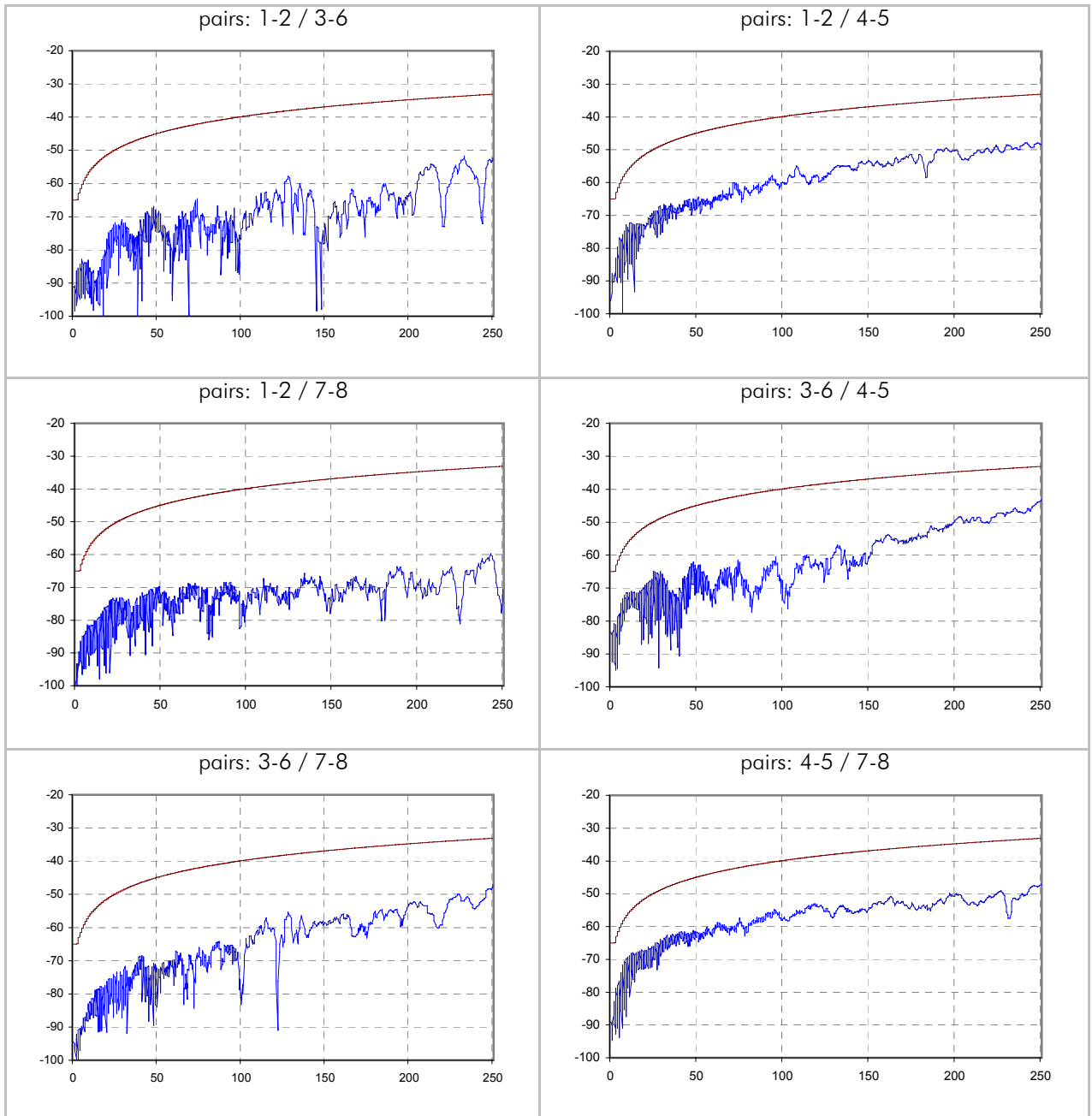
Test Results

pairs	1-2	3-6	4-5	7-8	limit	skew / ns	limit
max Propagation delay / ns	440,0	447,0	442,0	448,0	546,3	8,0	50,0
Attenuation @ 100 MHz / dB	-19,1	-19,1	-19,3	-19,1	-21,7		
Attenuation @ 250 MHz / dB	-30,9	-31,2	-31,4	-30,8	-21,7		
min PSNEXT margin / dB	12,5	5,9	7,0	9,3			
@ f / MHZ	250,1	248,8	238,0	248,8			
PSNEXT limit / dB	-30,1	-30,2	-30,5	-30,2			
PSNEXT @ 100 MHz	-55,1	-50,9	-49,9	-52,1	-37,1		
PSNEXT @ 250 MHz	-42,7	-36,2	-38,8	-39,6	-30,2		
min PSELFEXT margin / dB	13,7	7,4	6,9	12,4			
@ f / MHZ	1,2	235,3	1,2	236,2			
PSELFEXT limit / dB	-58,8	-12,8	-58,8	-12,8			
PSELFEXT @ 100 MHz	-35,9	-37,6	-31,7	-34,3	-20,3		
PSELFEXT @ 250 MHz	-32,4	-20,7	-20,6	-26,9	-12,3		
min PSACR margin / dB	17,2	10,3	10,7	13,5			
@ f / MHZ	229,0	238,0	10,2	11,3			
PSACR limit / dB	-3,4	-4,4	47,2	46,1			
PSACR @ 100 MHz	41,0	47,5	36,5	38,8	15,4		
PSACR @ 250 MHz	16,3	11,1	9,9	14,3	-5,7		
min Return Loss margin / dB	3,3	3,7	4,3	3,0			
@ f / MHZ	3,7	2,5	2,5	2,5			
Return Loss limit / dB	-19,0	-19,0	-19,0	-19,0			

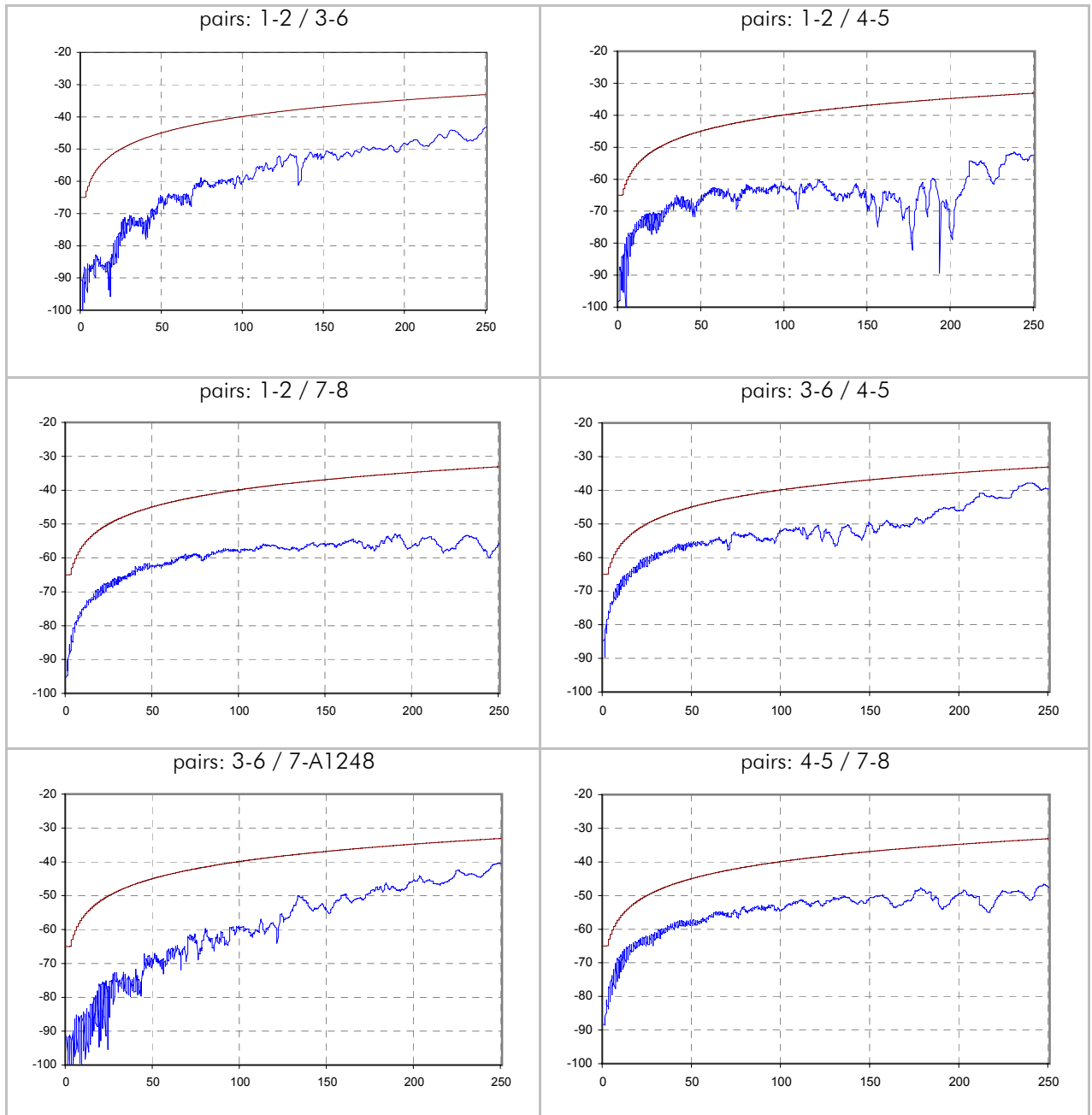
pairs	1-2 / 3-6	1-2 / 4-5	1-2 / 7-8	3-6 / 4-5	3-6 / 7-8	4-5 / 7-8	limit
min NEXT margin / dB	10,1	14,5	16,2	4,4	7,2	10,9	
@ f / MHZ	250,1	241,6	41,0	238,0	248,8	11,3	
Next limit / dB	-33,1	-33,4	-46,4	-33,5	-33,2	-55,7	
NEXT @ 100 MHz	-60,2	-60,2	-57,9	-52,1	-59,5	-54,5	-39,9
NEXT @ 250 MHz	-43,4	-48,3	-56,4	-39,6	-40,5	-47,3	-33,1
min ACR margin / dB	14,6	16,8	17,4	8,7	11,9	11,6	
@ f / MHZ	229,0	9,7	41,0	238,0	248,8	11,3	
ACR limit / dB	-0,4	50,3	32,9	-1,5	-2,7	48,7	
ACR @ 100 MHz	41,1	41,0	38,8	32,9	40,4	35,3	18,2
ACR @ 250 MHz	12,2	16,8	25,6	8,2	9,3	15,8	-2,8

pairs	3-6 / 1-2	4-5 / 1-2	7-8 / 1-2	4-5 / 3-6	7-8 / 3-6	7-8 / 4-5	limit
	1-2 / 3-6	1-2 / 4-5	1-2 / 7-8	3-6 / 4-5	3-6 / 7-8	4-5 / 7-8	
min ELFEXT margin / dB	16,1	11,4	23,8	5,0	12,5	10,1	
@ f / MHZ	247,0	1,4	175,9	227,2	242,5	229,0	
ELFEXT limit / dB	-15,4	-60,3	-18,4	-16,1	-15,6	-16,1	
min ELFEXT margin / dB	16,2	11,4	23,9	5,0	13,2	10,9	
@ f / MHZ	247,0	1,4	89,1	241,6	242,5	229,0	
ELFEXT limit / dB	-15,4	-60,3	-24,3	-15,6	-15,6	-16,1	
ELFEXT @ 100 MHz	-44,4	-36,7	-49,3	-39,2	-46,4	-34,6	-23,3
ELFEXT @ 250 MHz	-32,8	-40,2	-45,2	-21,3	-29,1	-29,1	-15,3
ELFEXT @ 100 MHz	-44,4	-36,5	-49,3	-39,0	-46,3	-34,7	-23,3
ELFEXT @ 250 MHz	-32,5	-39,6	-45,2	-21,1	-29,5	-29,7	-15,3

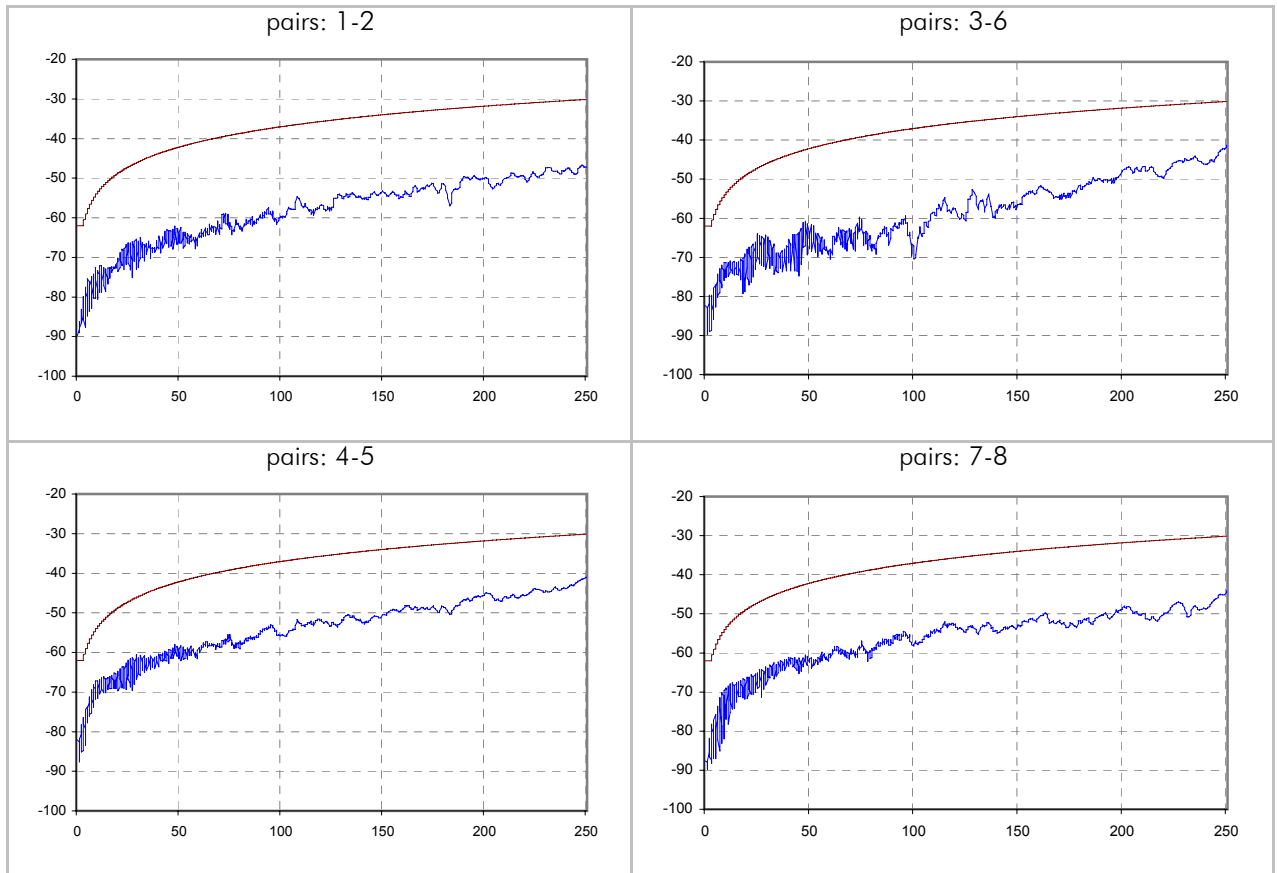
NEXT / dB (scanner side - type 1 side)



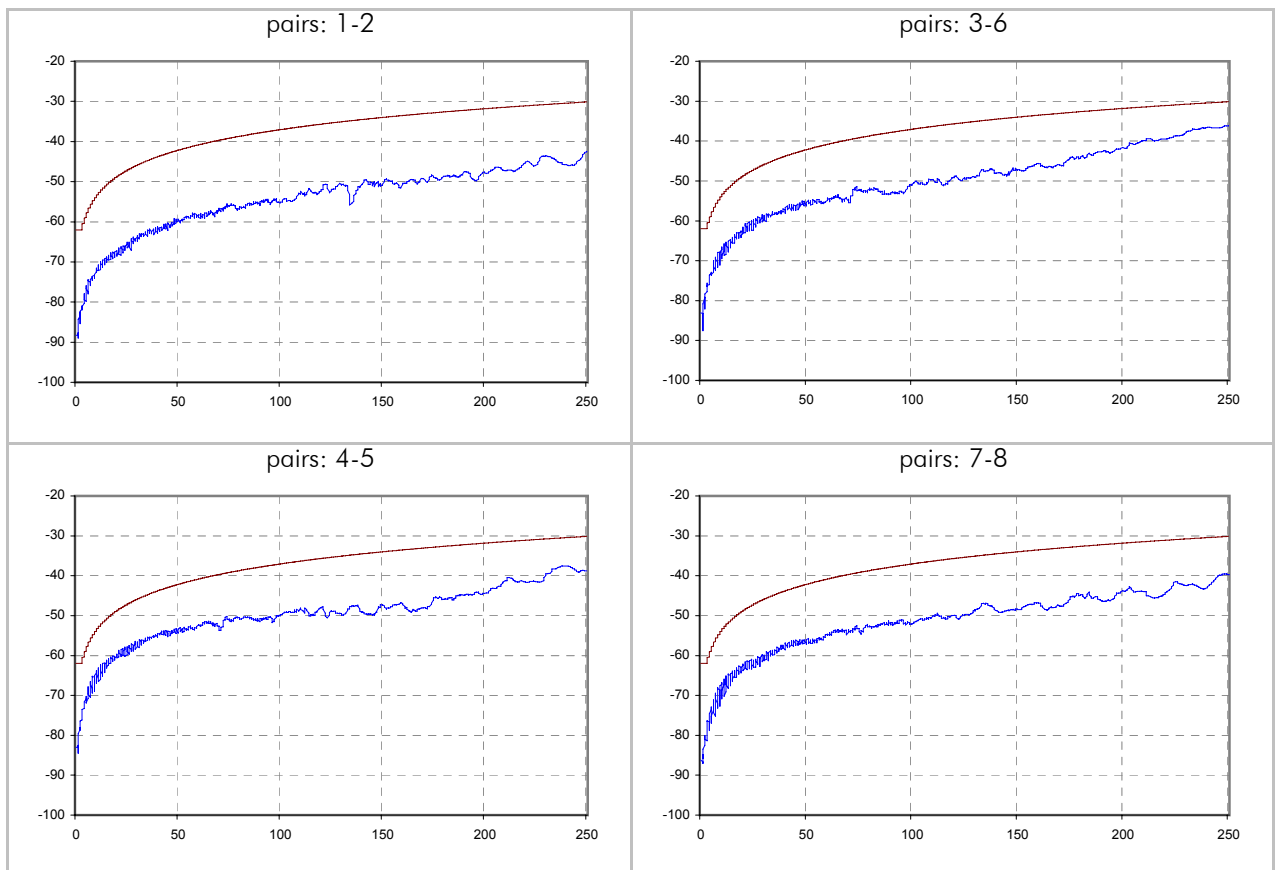
NEXT / dB (remote side - type 2 side)



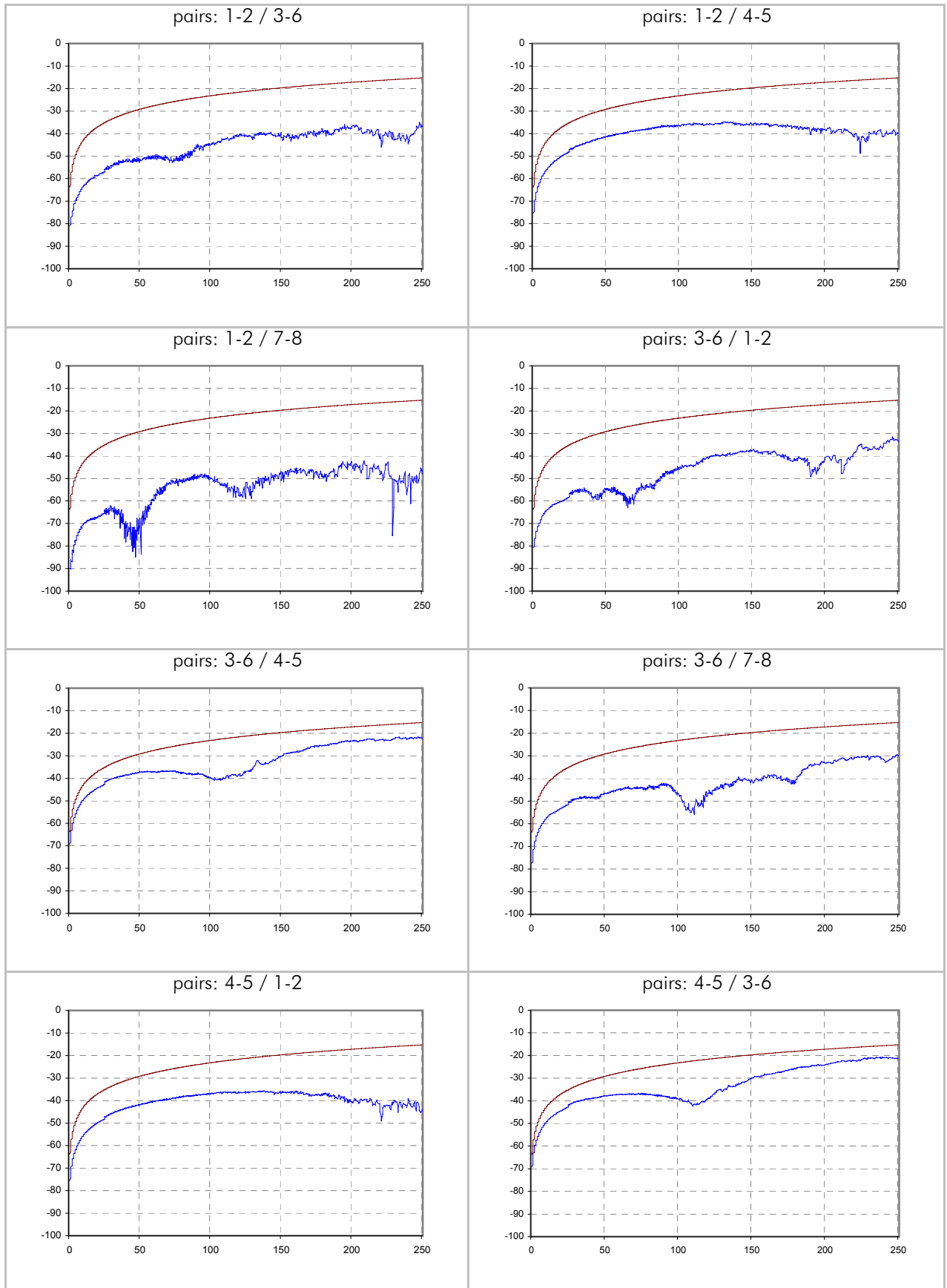
PSNEXT / dB (scanner side - type 1 side)



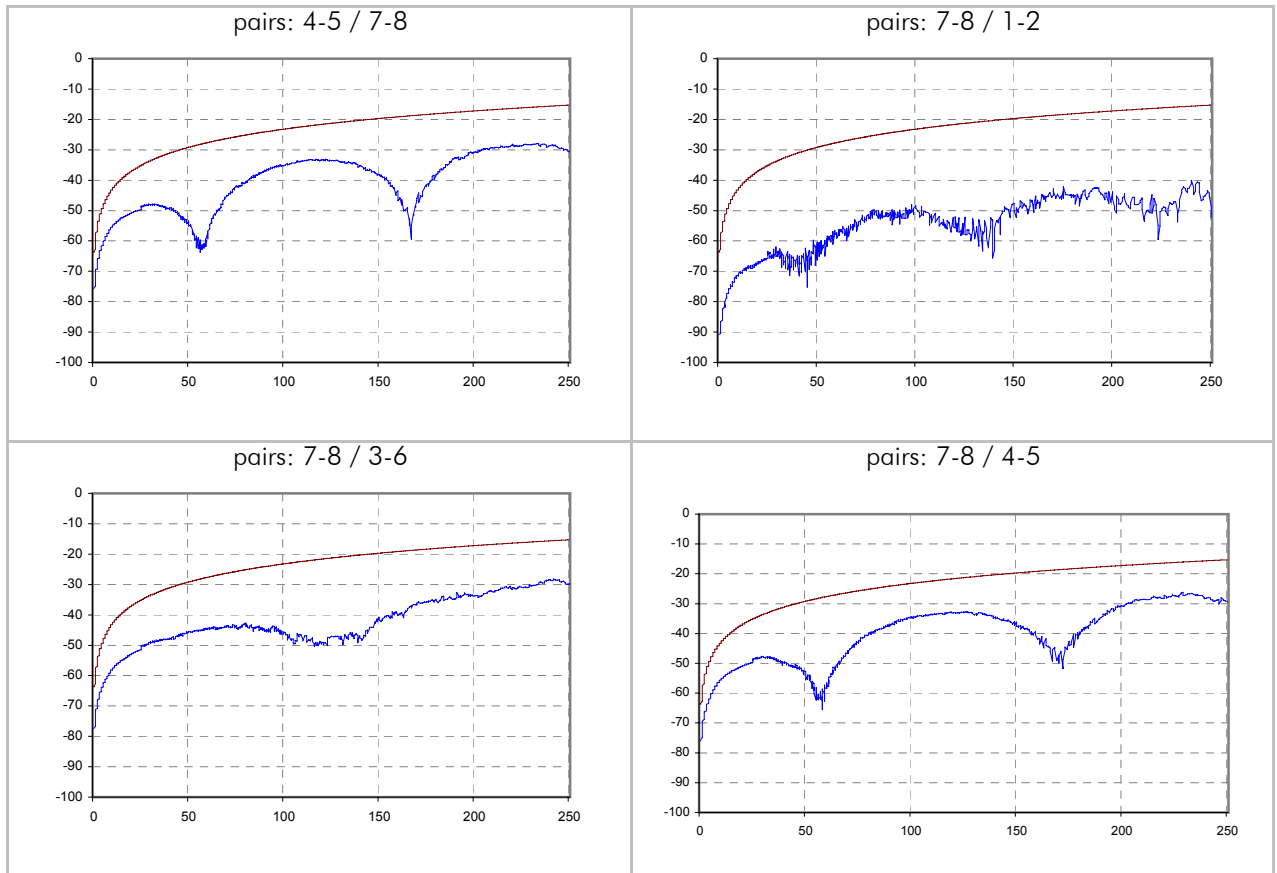
PSNEXT / dB (remote side - type 2 side)



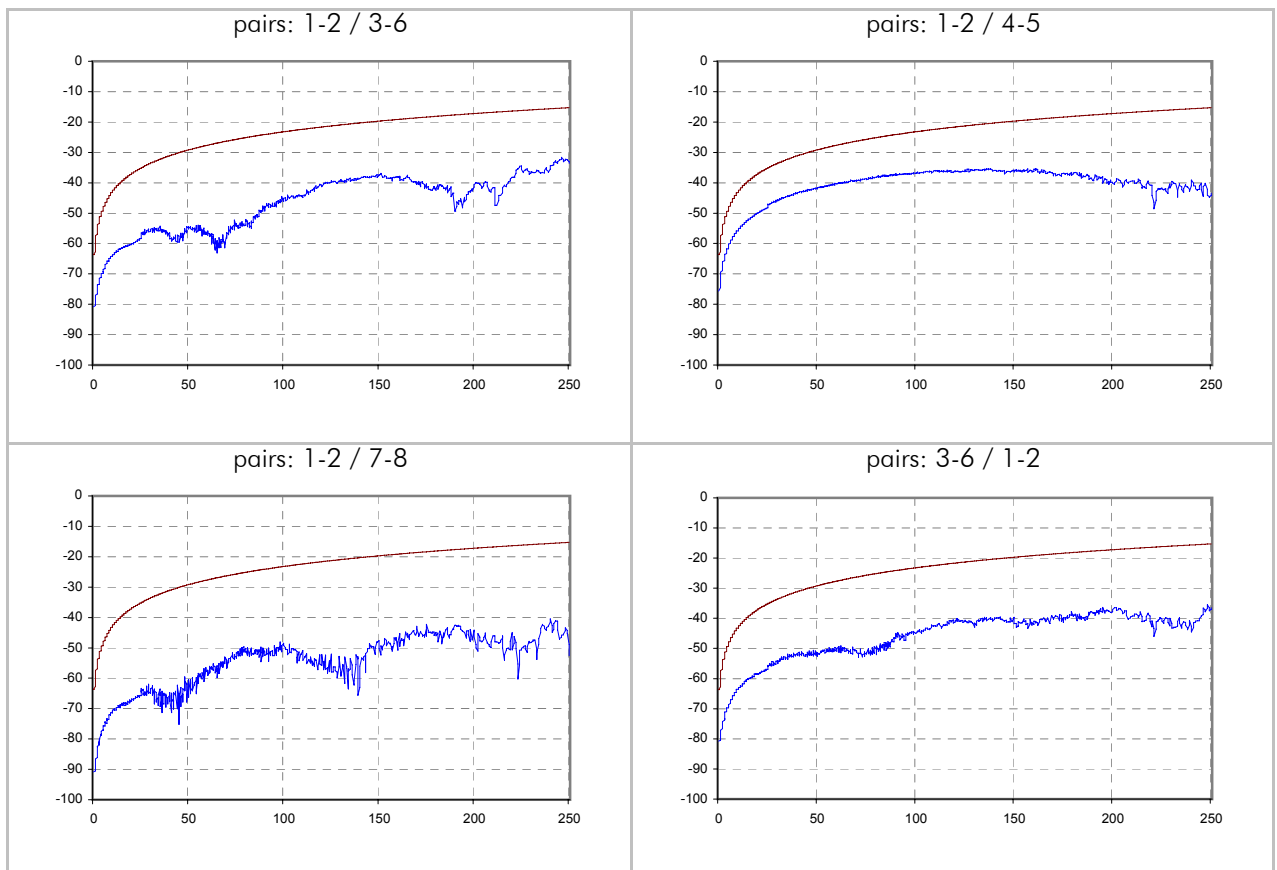
ELFEXT / dB (scanner side - type 1 side)



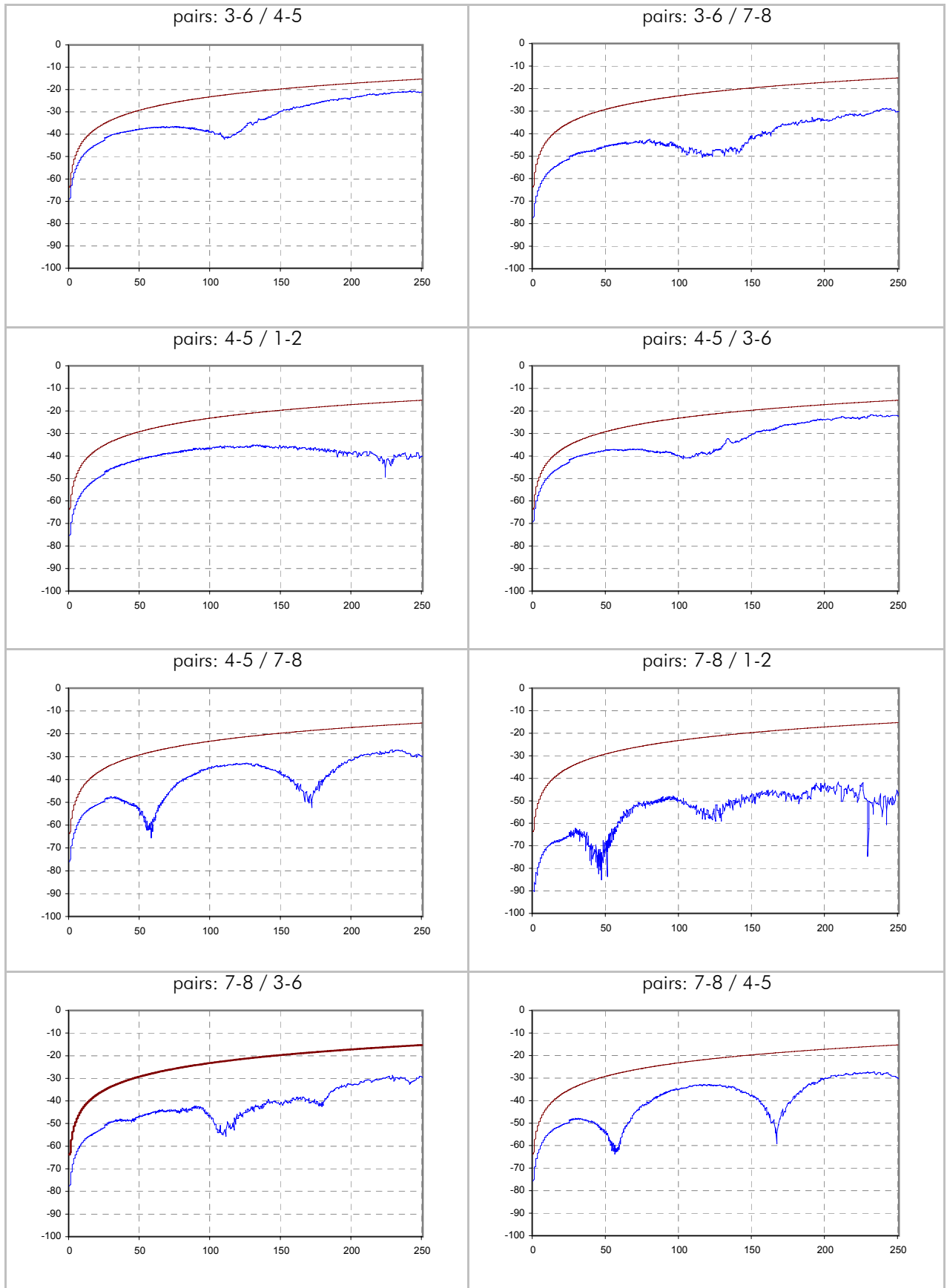
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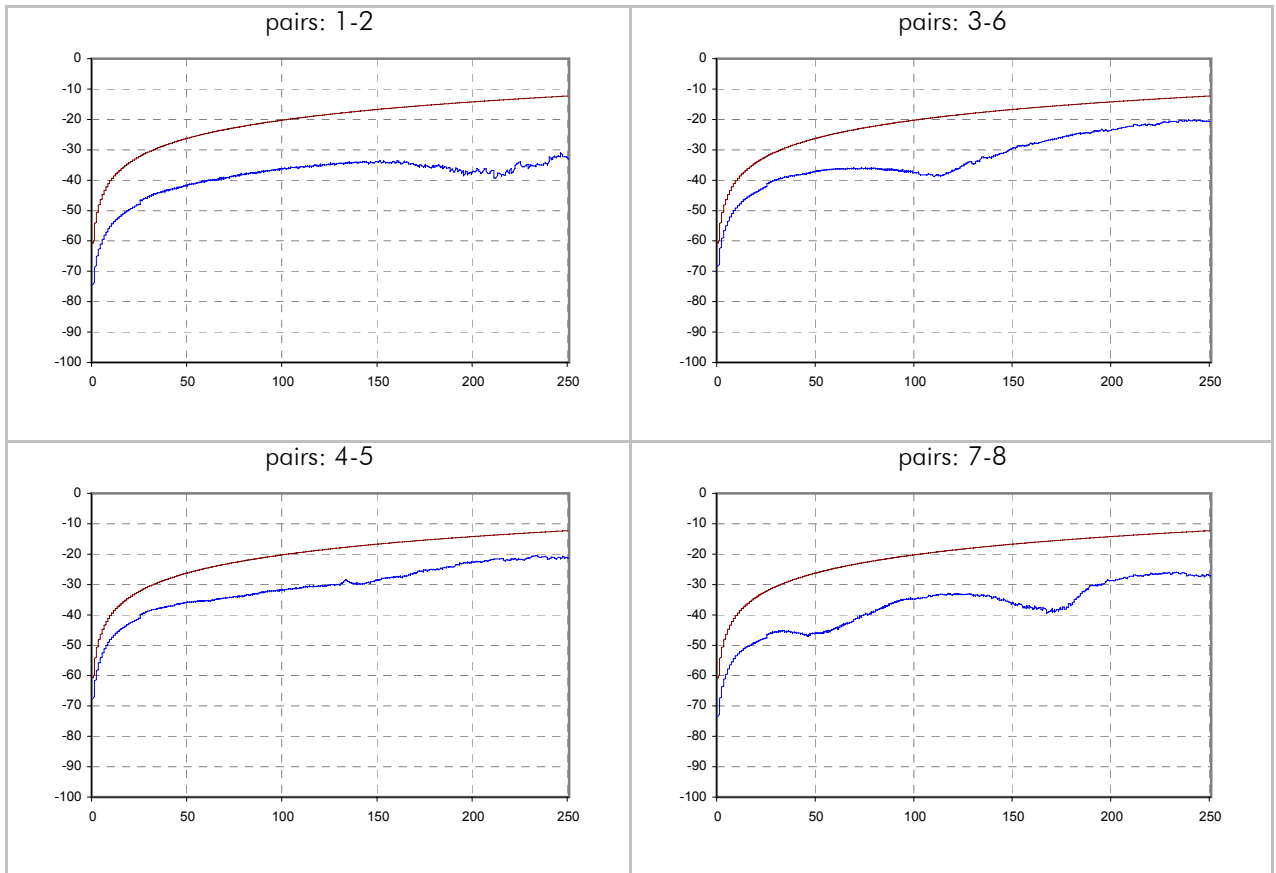
ELFEXT / dB (remote side - type 2 side)



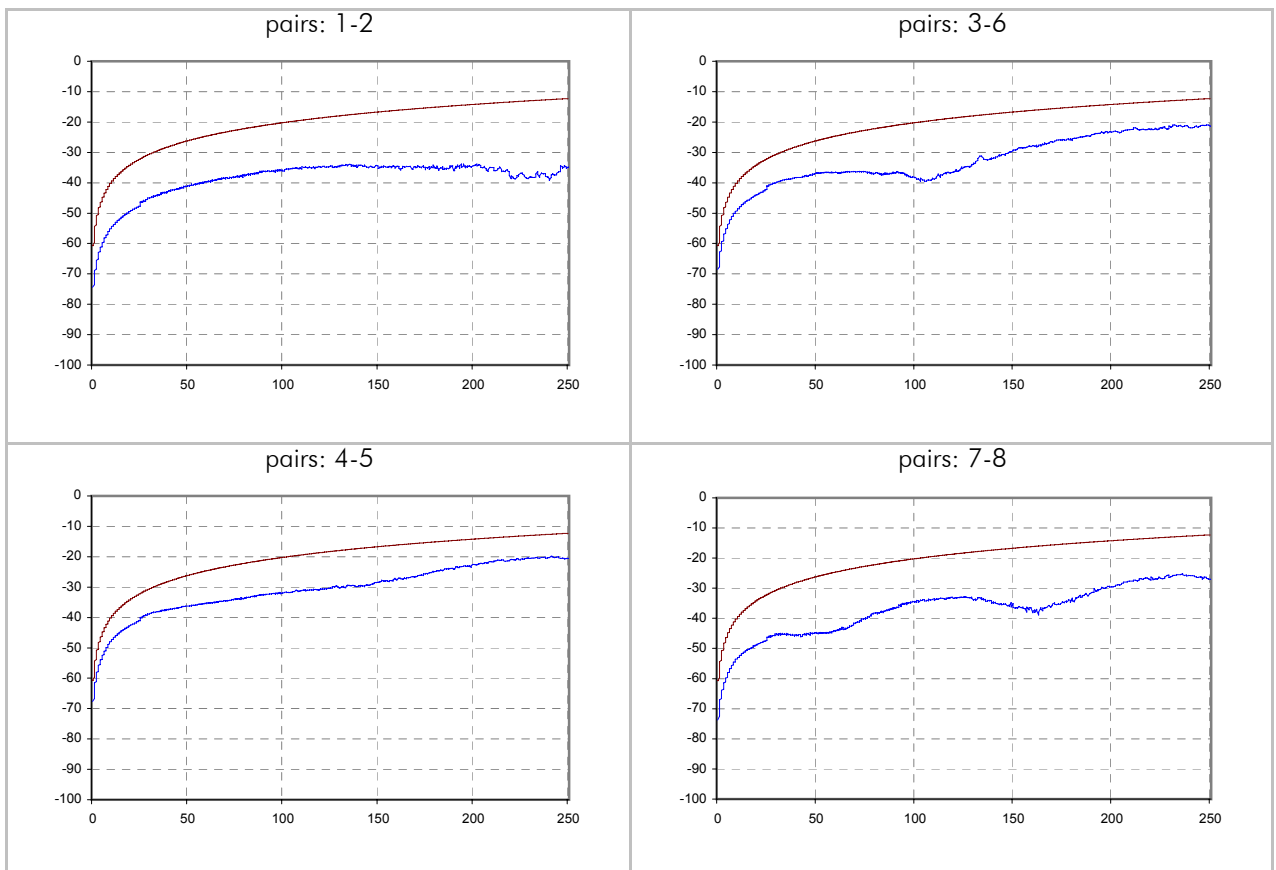
ELFEXT / dB (remote side - type 2 side)



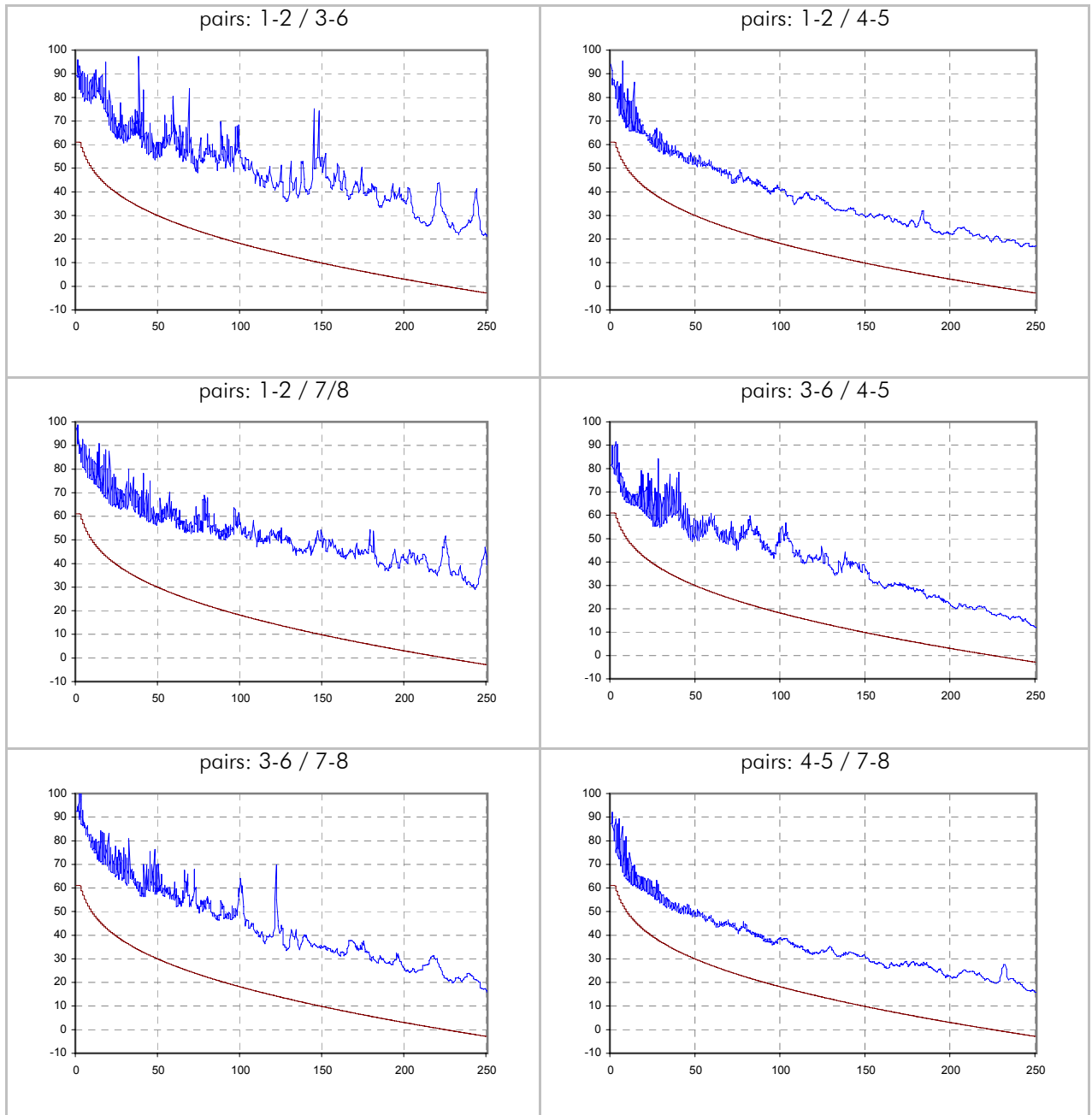
PSELFEXT / dB (scanner side - type 1 side)



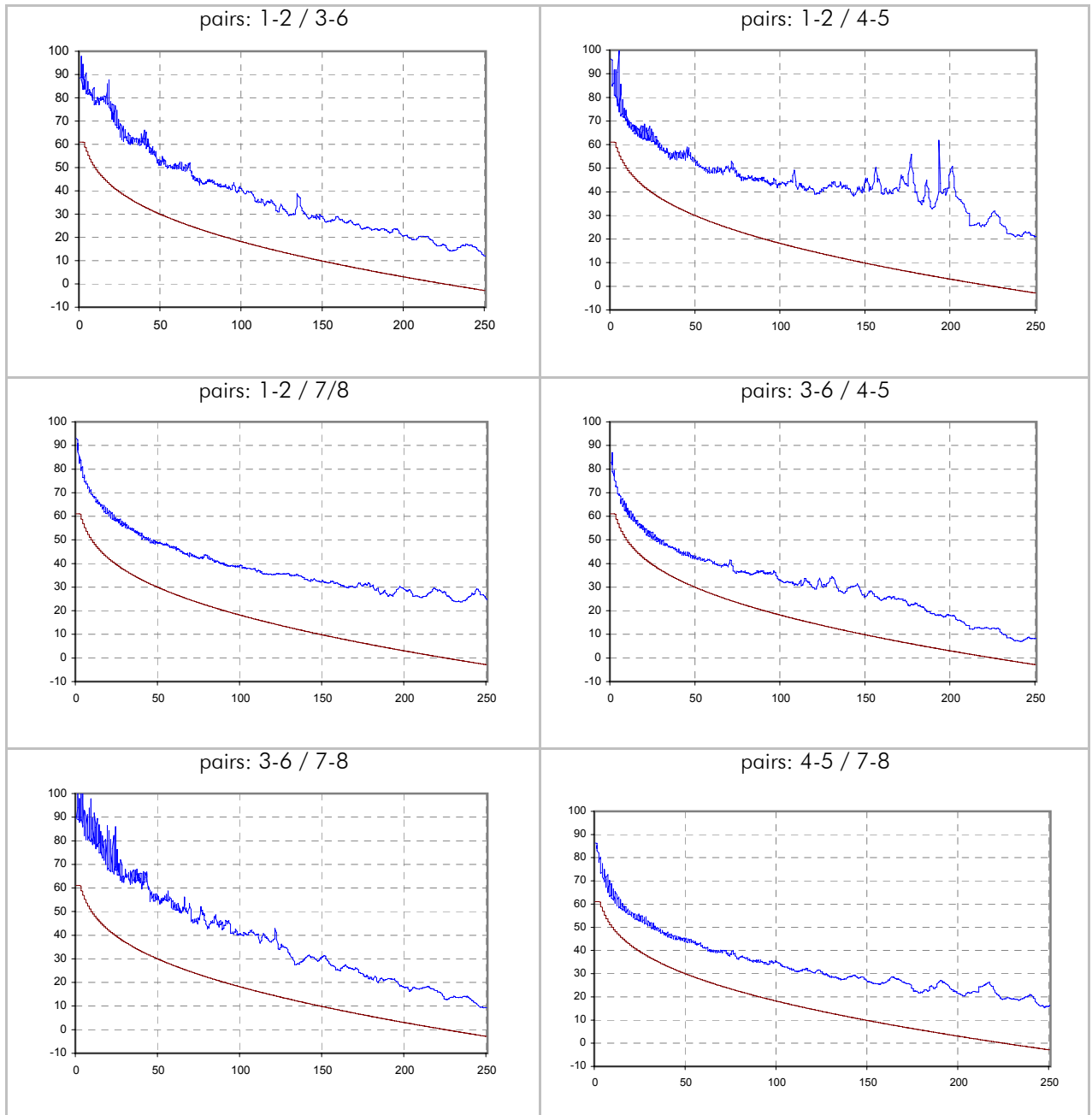
PSELFEXT / dB (remote side - type 2 side)



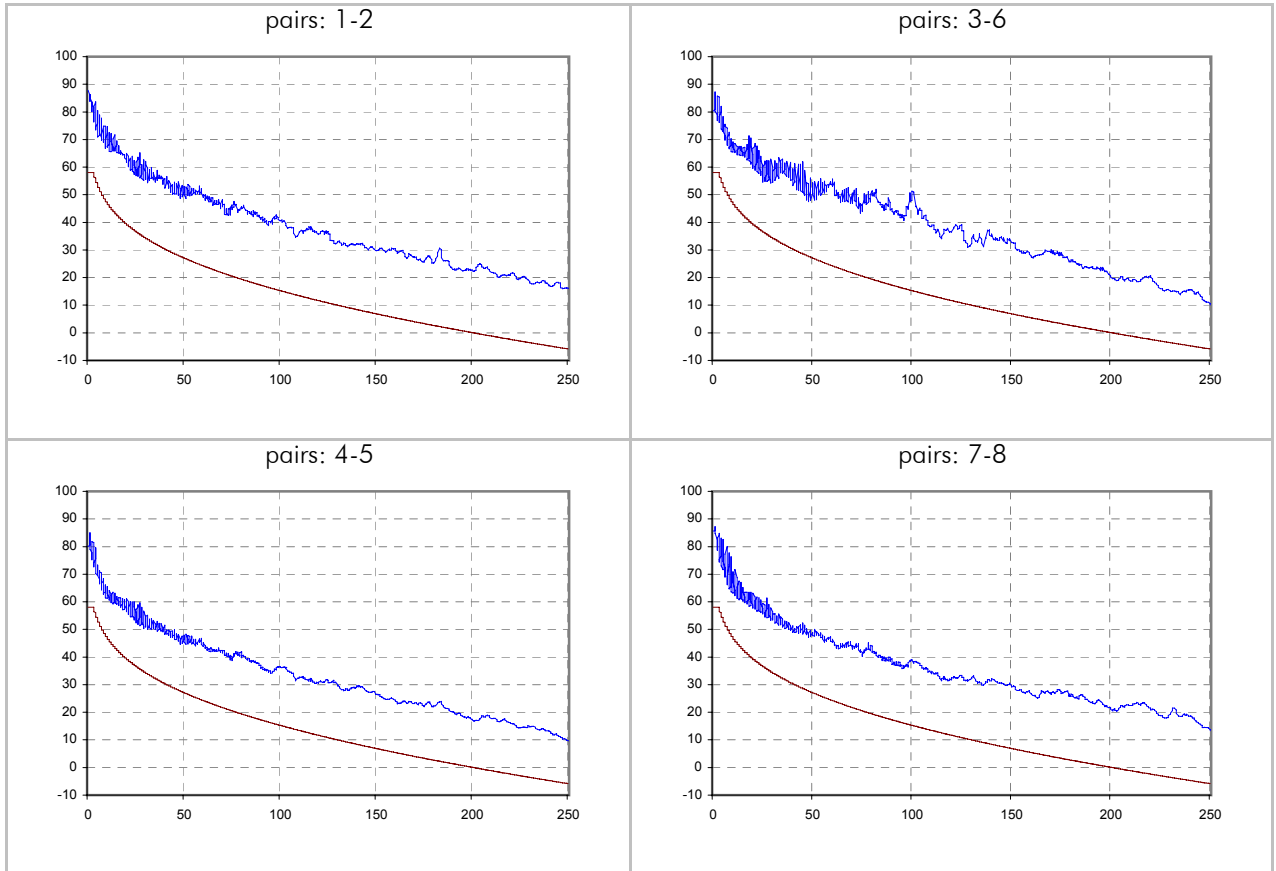
ACR / dB (scanner side - type 1 side)



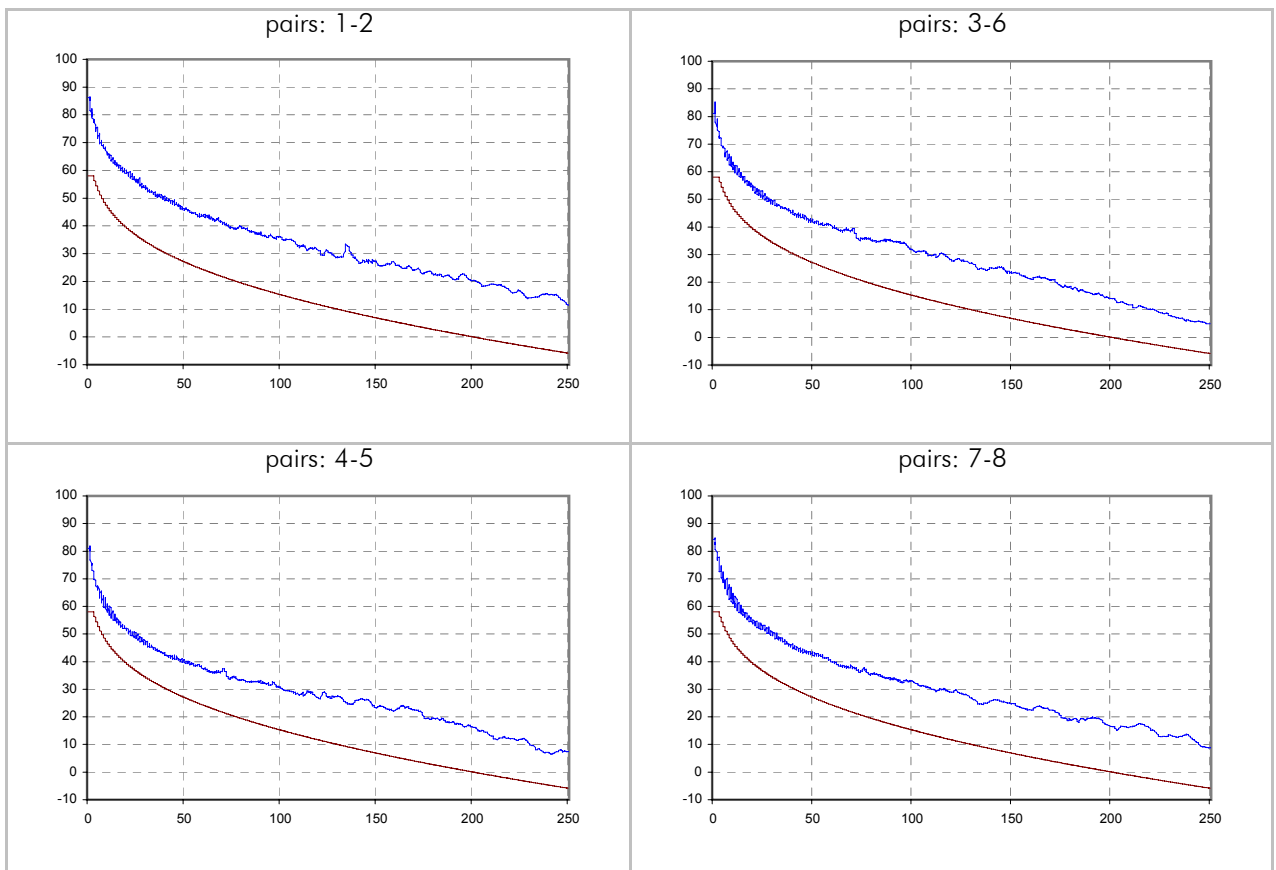
ACR / dB (remote side - type 2 side)



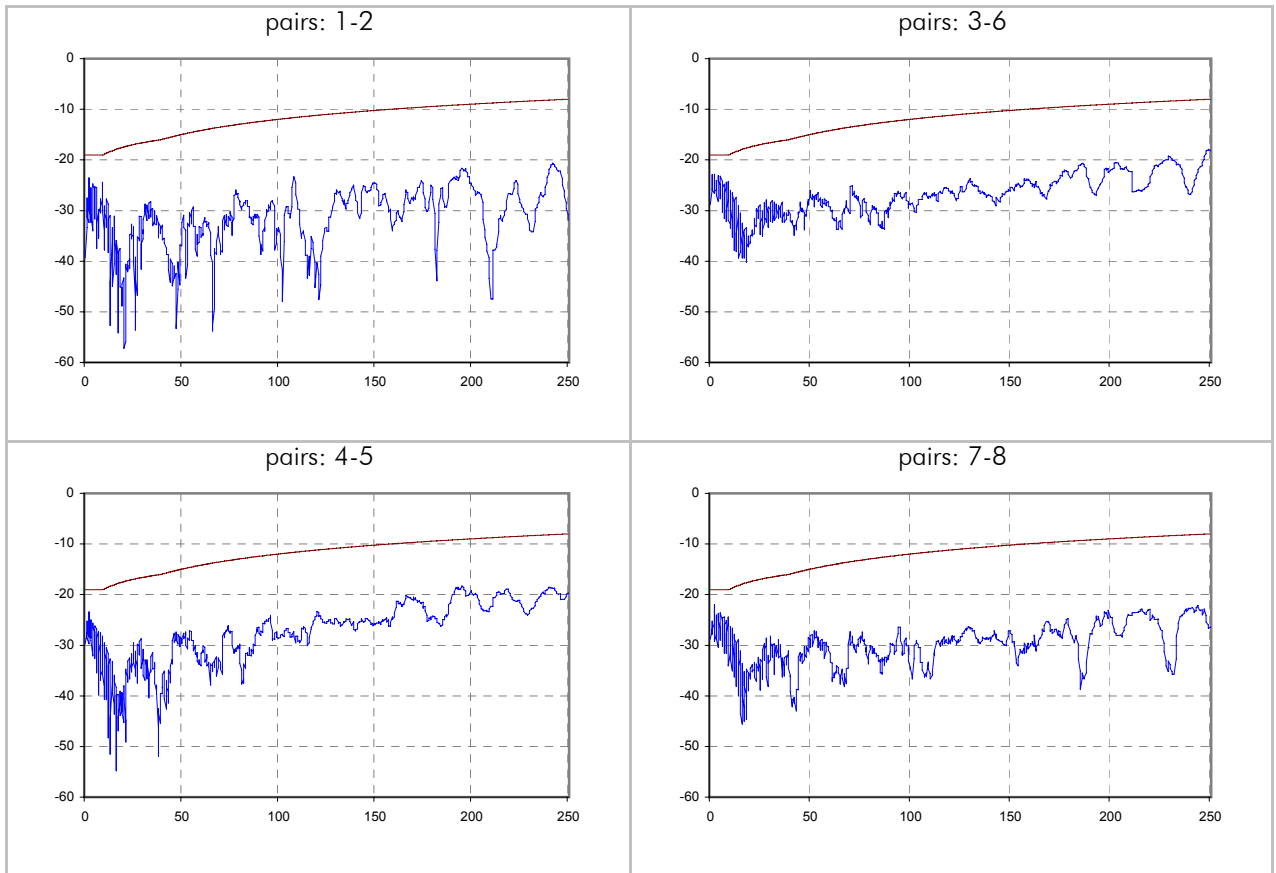
PSACR / dB (scanner side - type 1 side)



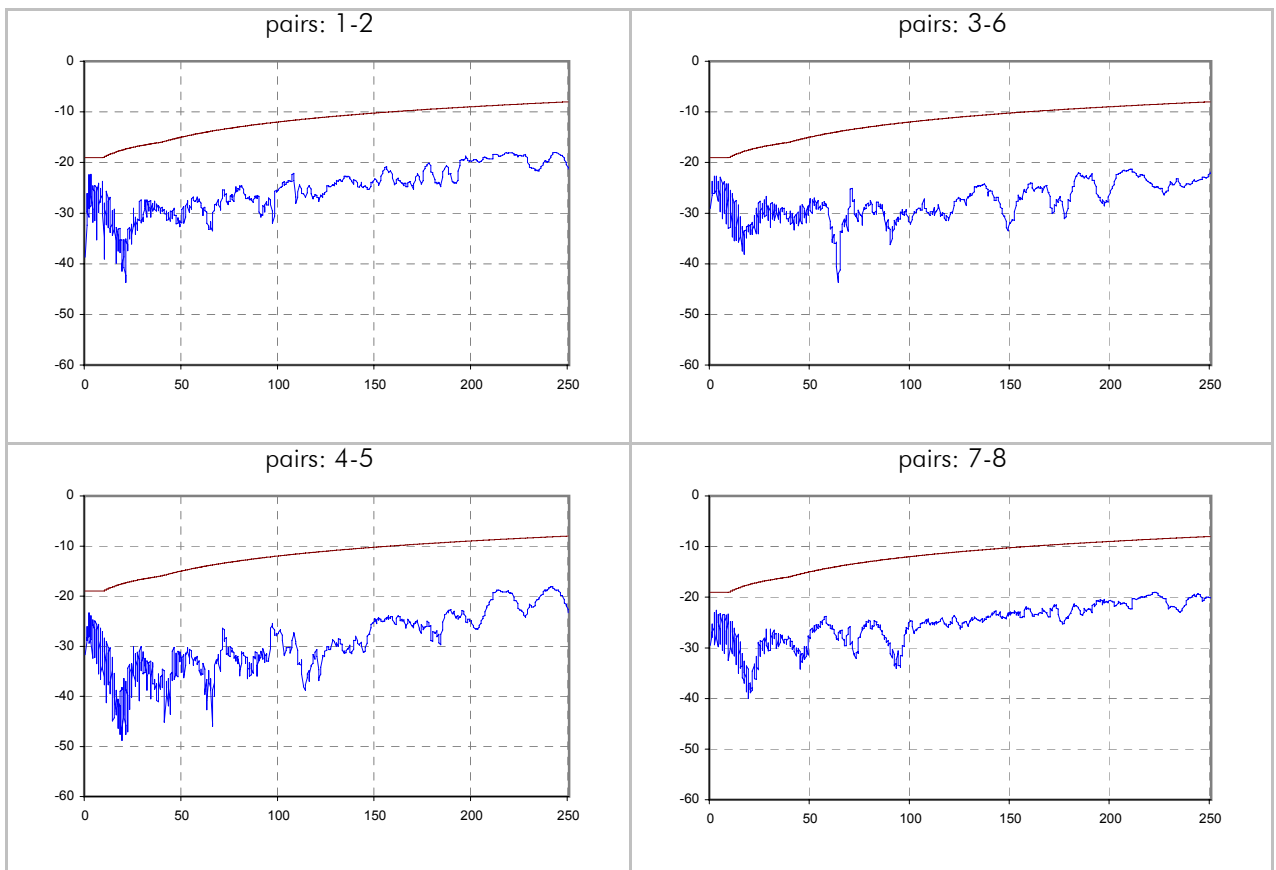
PSACR / dB (remote side - type 2 side)



Return Loss / dB (scanner side - type 1 side)



Return Loss / dB (remote side - type 2 side)



Attenuation / dB

