

## Test Report No. EWA20026-49

### Transmission Performance Testing:

according to ISO/IEC JTC 1/SC 25 N 739 IT (2001-10-10)  
Channel Class E

### The Equipment Under Test (EUT)

Part 1:	Modular Patch Panel MPP /MPD Cat. 6
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:	Leoni Q-Line 4P23 SC 600 FRNC

### Result:

The EUT has been verified as being compliant with the transmission specifications according to the standard ISO/IEC JTC 1/SC 25 N 739 IT (2001).

The minimum NEXT reserve of the Channel Class E is:  
@100 MHz = -11,5 dB and @ 250 MHz = -9,2 dB.

### Test location:

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### Tested by:



Frank Albert

Steinenbronn, August 06, 2002

## Products:

Electrically compatible with the following part numbers:

Modular Patch Panel MPP / MPD Cat. 6:

- J02023F0019 Mod. Patch Panel Cat. 6 MPP24-HS screened, RAL 7035
- J02023B0019 Mod. Patch Panel Cat. 6 MPP24-HS screened, RAL 7035
- J02023C0019 Mod. Patch Panel Cat. 6 MPP24-HS screened, RAL 7035
- J02023D0019 Mod. Patch Panel Cat. 6 MPP24-HS screened, RAL 7035
- J02023E0019 Mod. Patch Panel Cat. 6 MPP24-HS screened, RAL 7035
- J02023H0019 Mod. Patch Panel Cat. 6 MPP24-HS screened, RAL 7035
- J02022F0024 Mod. Patch Panel Cat. 6 MPP16-HS screened, RAL 7035
- J02022B0024 Mod. Patch Panel Cat. 6 MPP16-HS screened, RAL 7035
- J02022D0024 Mod. Patch Panel Cat. 6 MPP16-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

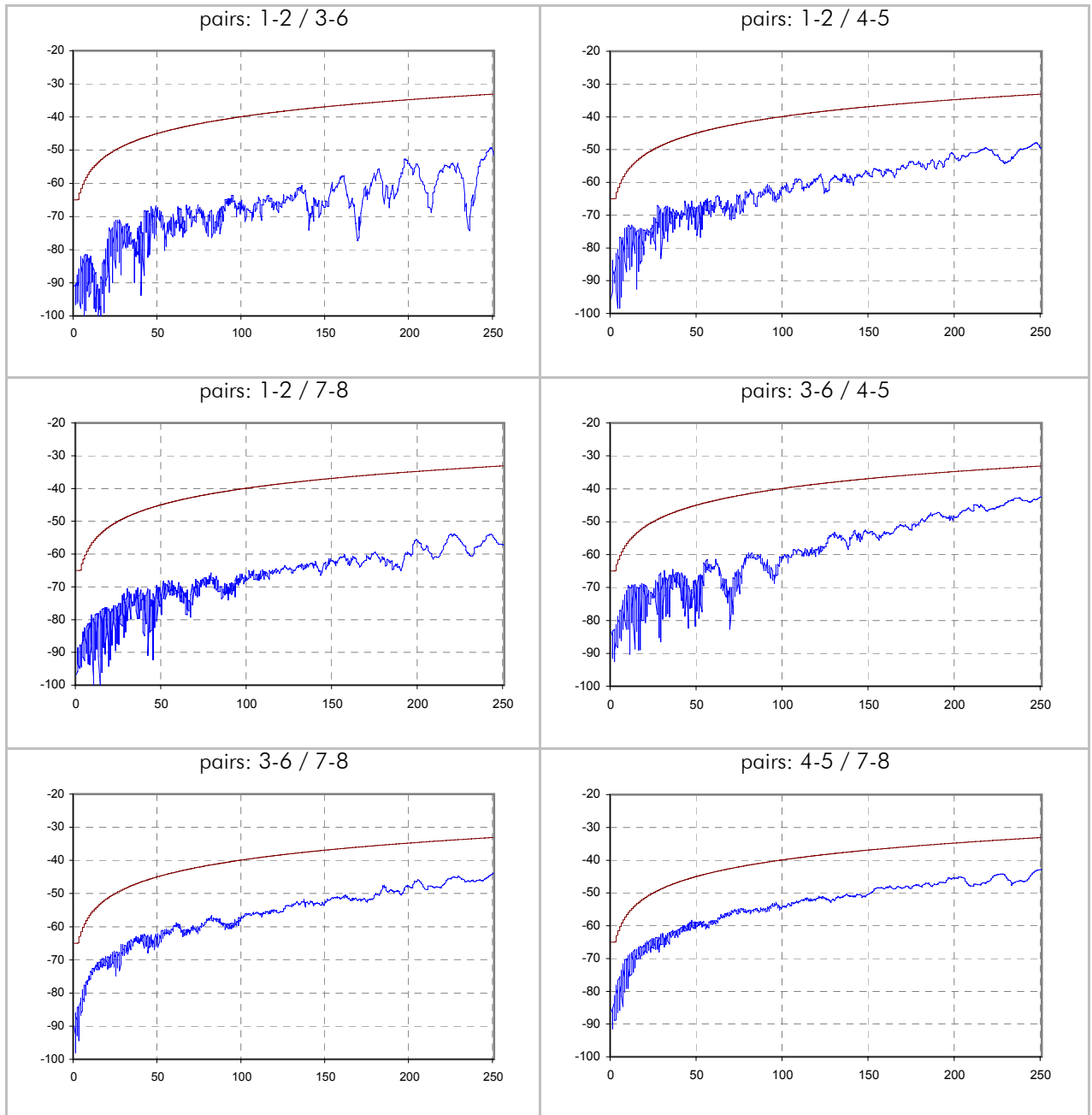
## Test Results

pairs	1-2	3-6	4-5	7-8	limit	skew / ns	limit
max Propagation delay / ns	435,0	443,0	437,0	443,0	546,3	8,0	50,0
Attenuation @ 100 MHz / dB	-18,7	-19,2	-19,2	-19,3	-21,7		
Attenuation @ 250 MHz / dB	-30,9	-31,5	-31,1	-31,7	-21,7		
min PSNEXT margin / dB	14,6	5,5	8,7	8,1			
@ f / MHZ	214,6	237,1	237,1	231,7			
PSNEXT limit / dB	-31,3	-30,6	-30,6	-30,7			
PSNEXT @ 100 MHz	-54,5	-49,2	-49,1	-50,3	-37,1		
PSNEXT @ 250 MHz	-46,0	-39,4	-39,4	-40,5	-30,2		
min PSELFEXT margin / dB	13,5	8,0	7,0	12,6			
@ f / MHZ	1,2	1,0	1,4	1,4			
PSELFEXT limit / dB	-58,8	-60,6	-57,3	-57,3			
PSELFEXT @ 100 MHz	-36,1	-35,4	-31,4	-33,9	-20,3		
PSELFEXT @ 250 MHz	-31,1	-27,2	-27,0	-29,8	-12,3		
min PSACR margin / dB	16,6	9,9	10,0	11,8			
@ f / MHZ	3,2	235,3	25,5	237,1			
PSACR limit / dB	58,0	-4,1	36,7	-4,3			
PSACR @ 100 MHz	41,6	37,2	34,2	33,9	15,4		
PSACR @ 250 MHz	18,0	8,4	10,7	9,2	-5,7		
min Return Loss margin / dB	4,1	4,5	3,7	5,0			
@ f / MHZ	2,5	2,5	2,5	2,5			
Return Loss limit / dB	-19,0	-19,0	-19,0	-19,0			

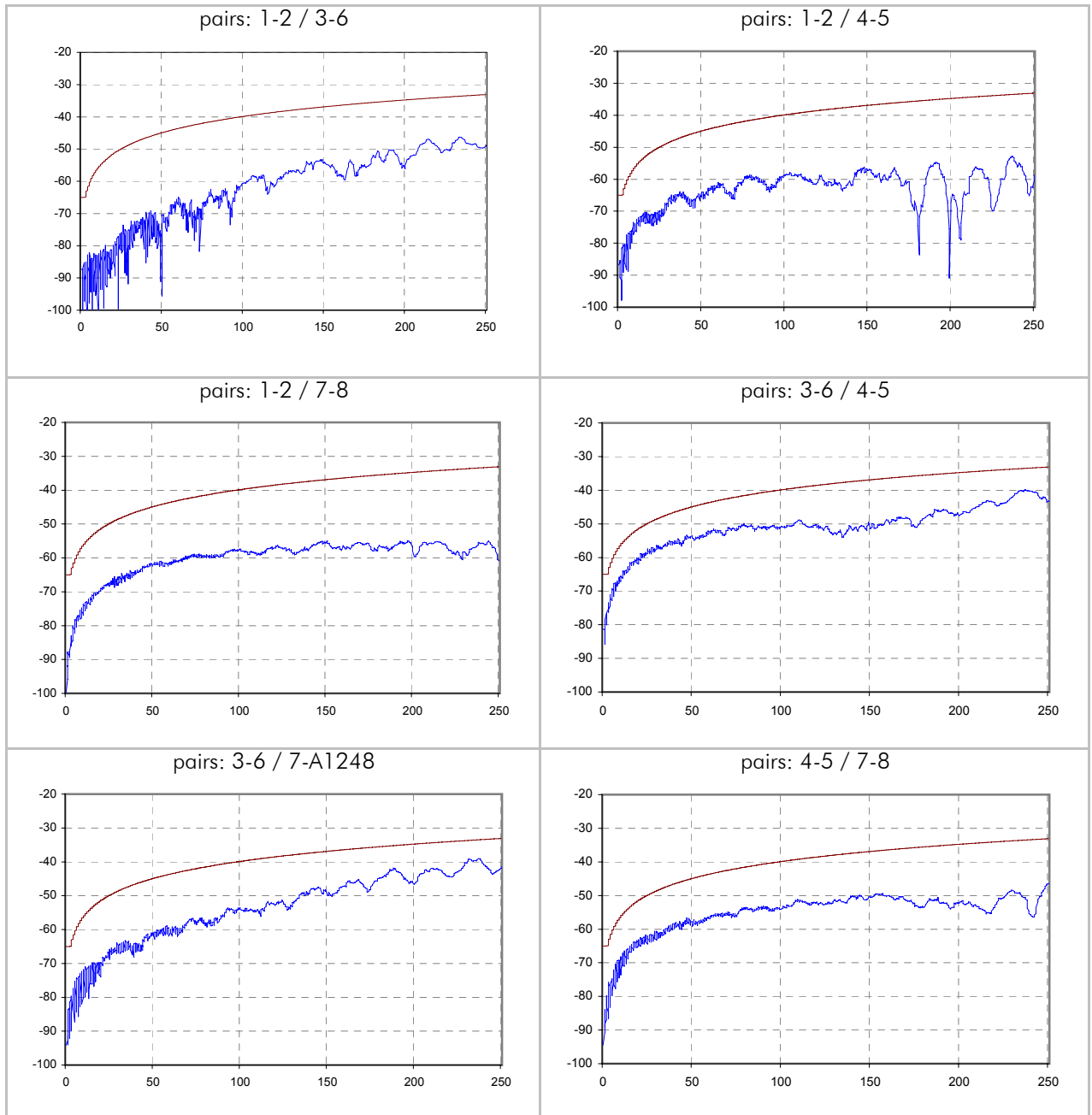
pairs	1-2 / 3-6	1-2 / 4-5	1-2 / 7-8	3-6 / 4-5	3-6 / 7-8	4-5 / 7-8	limit
min NEXT margin / dB	12,6	14,6	16,5	6,3	5,5	9,8	
@ f / MHZ	233,5	247,9	51,3	237,1	231,7	250,1	
Next limit / dB	-33,6	-33,2	-44,8	-33,5	-33,7	-33,1	
NEXT @ 100 MHz	-60,9	-59,0	-58,1	-51,4	-53,9	-54,2	-39,9
NEXT @ 250 MHz	-49,4	-49,2	-57,1	-42,7	-42,3	-43,0	-33,1
min ACR margin / dB	16,9	16,4	17,6	8,7	9,2	12,3	
@ f / MHZ	214,6	3,2	28,9	25,5	237,1	11,5	
ACR limit / dB	1,3	60,6	37,7	39,3	-1,4	48,5	
ACR @ 100 MHz	41,7	39,9	38,8	32,2	34,6	34,9	18,2
ACR @ 250 MHz	17,8	18,0	25,4	11,1	10,6	11,3	-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	18,5	11,0	25,5	5,8	13,5	11,3	
@ f / MHZ	229,0	1,2	233,5	1,0	1,2	221,8	
ELFEXT limit / dB	-16,1	-61,8	-15,9	-63,6	-61,8	-16,3	
min ELFEXT margin / dB	17,7	10,9	24,1	5,7	13,4	11,1	
@ f / MHZ	229,0	1,2	233,5	1,0	1,2	217,3	
ELFEXT limit / dB	-16,1	-61,8	-15,9	-63,6	-61,8	-16,5	
ELFEXT @ 100 MHz	-46,1	-36,5	-58,3	-37,2	-40,8	-35,0	-23,3
ELFEXT @ 250 MHz	-34,6	-33,9	-43,5	-29,1	-35,3	-31,9	-15,3
ELFEXT @ 100 MHz	-45,6	-36,0	-57,7	-37,3	-40,8	-34,9	-23,3
ELFEXT @ 250 MHz	-34,0	-33,7	-42,7	-29,5	-35,1	-31,4	-15,3

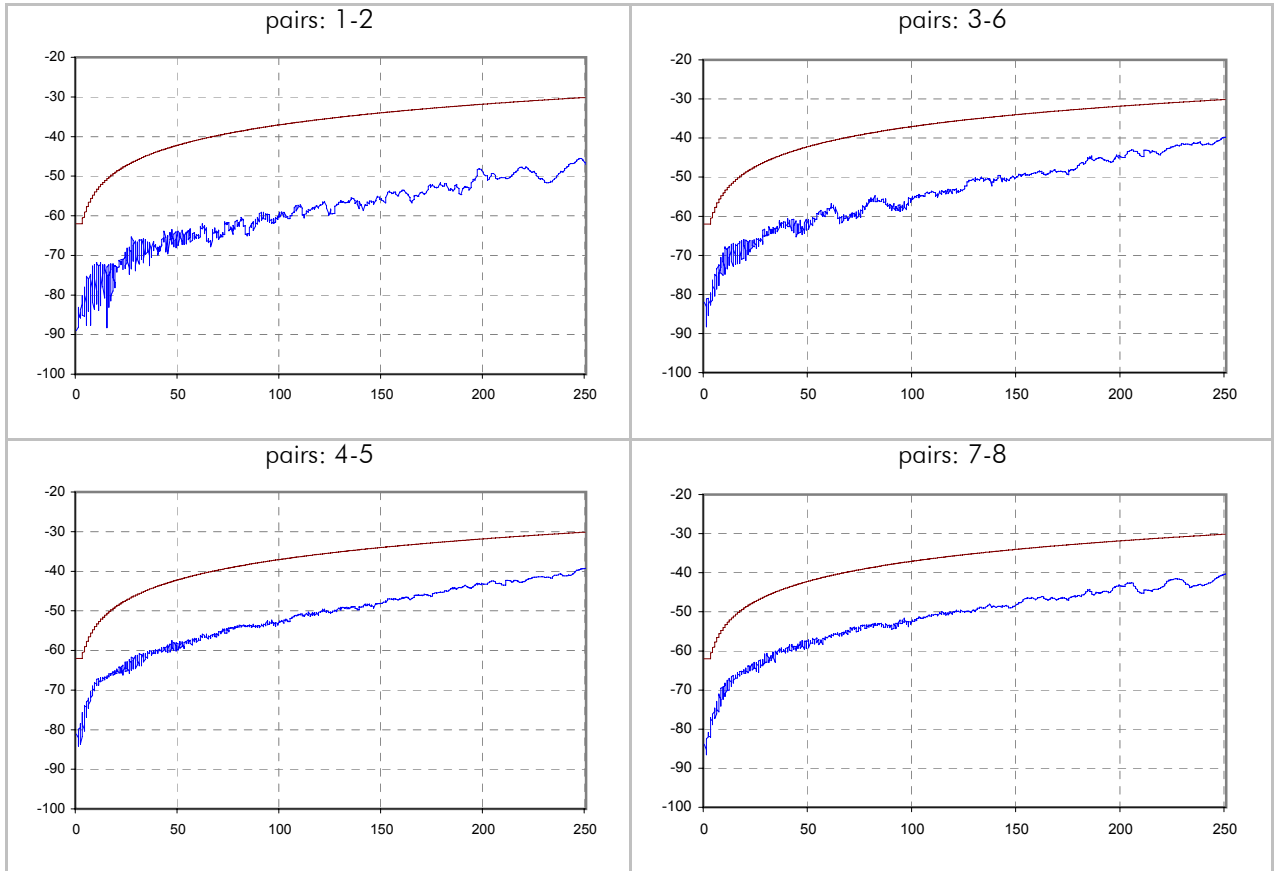
NEXT / dB (scanner side - type 1 side)



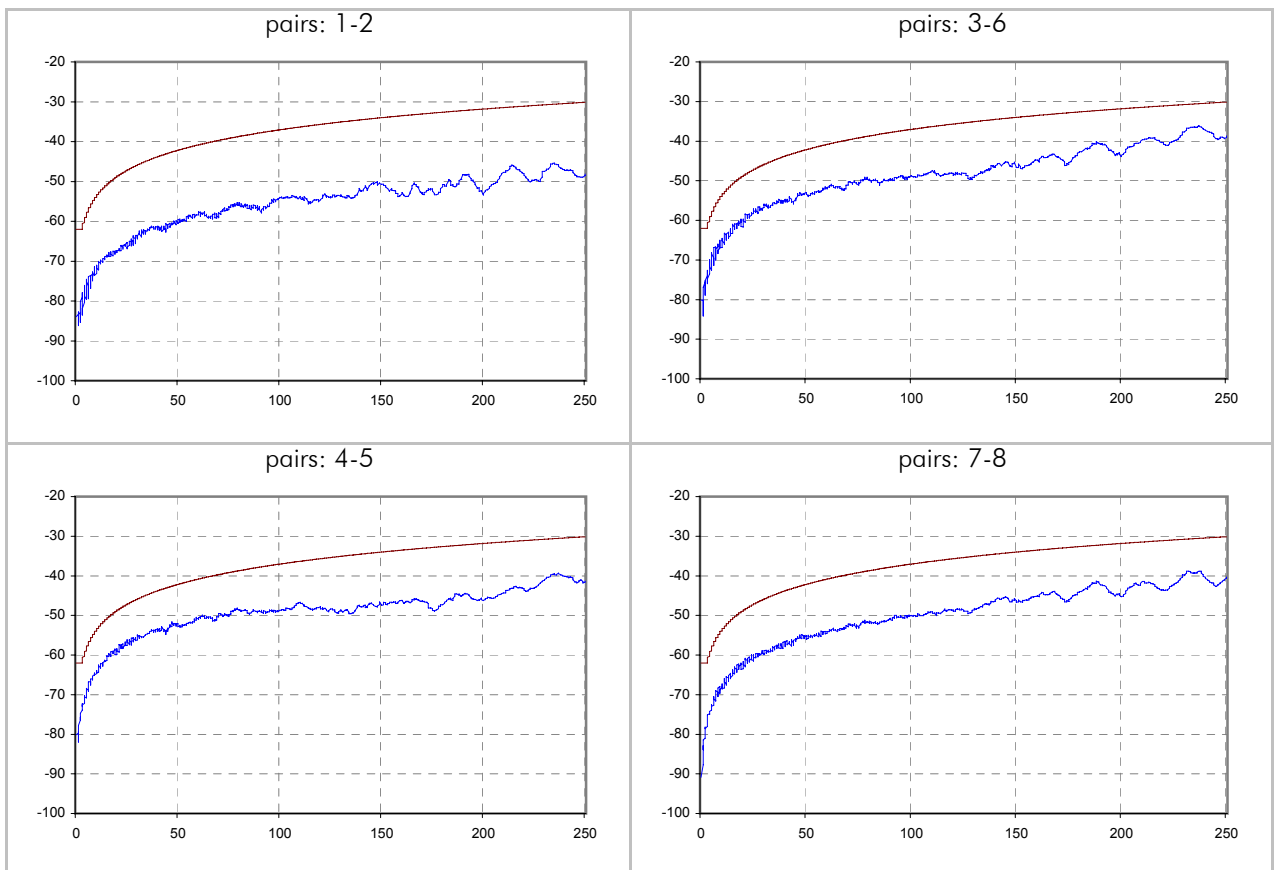
NEXT / dB (remote side - type 2 side)



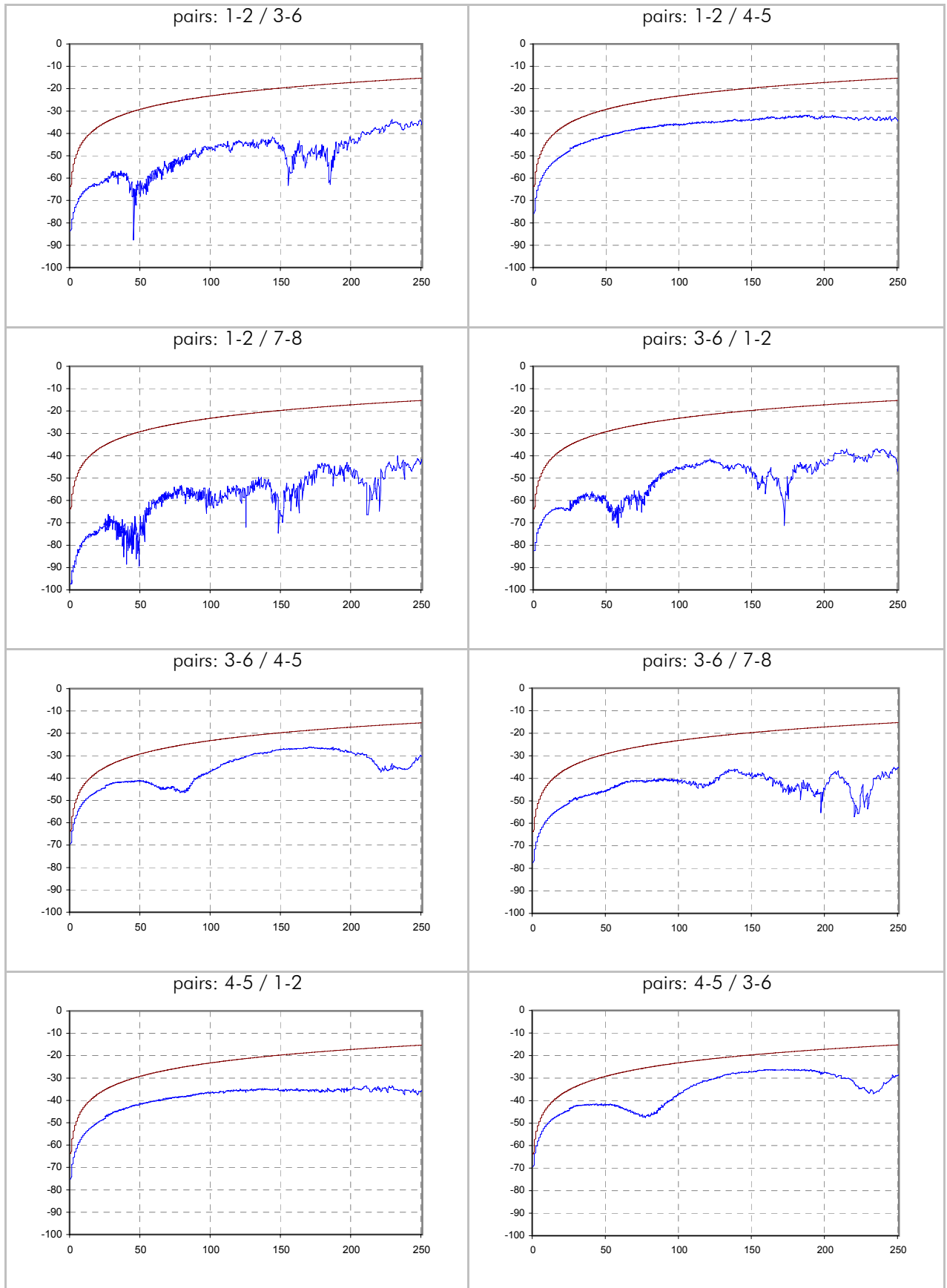
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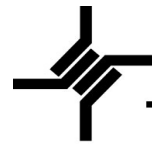


PSNEXT / dB (remote side - type 2 side)

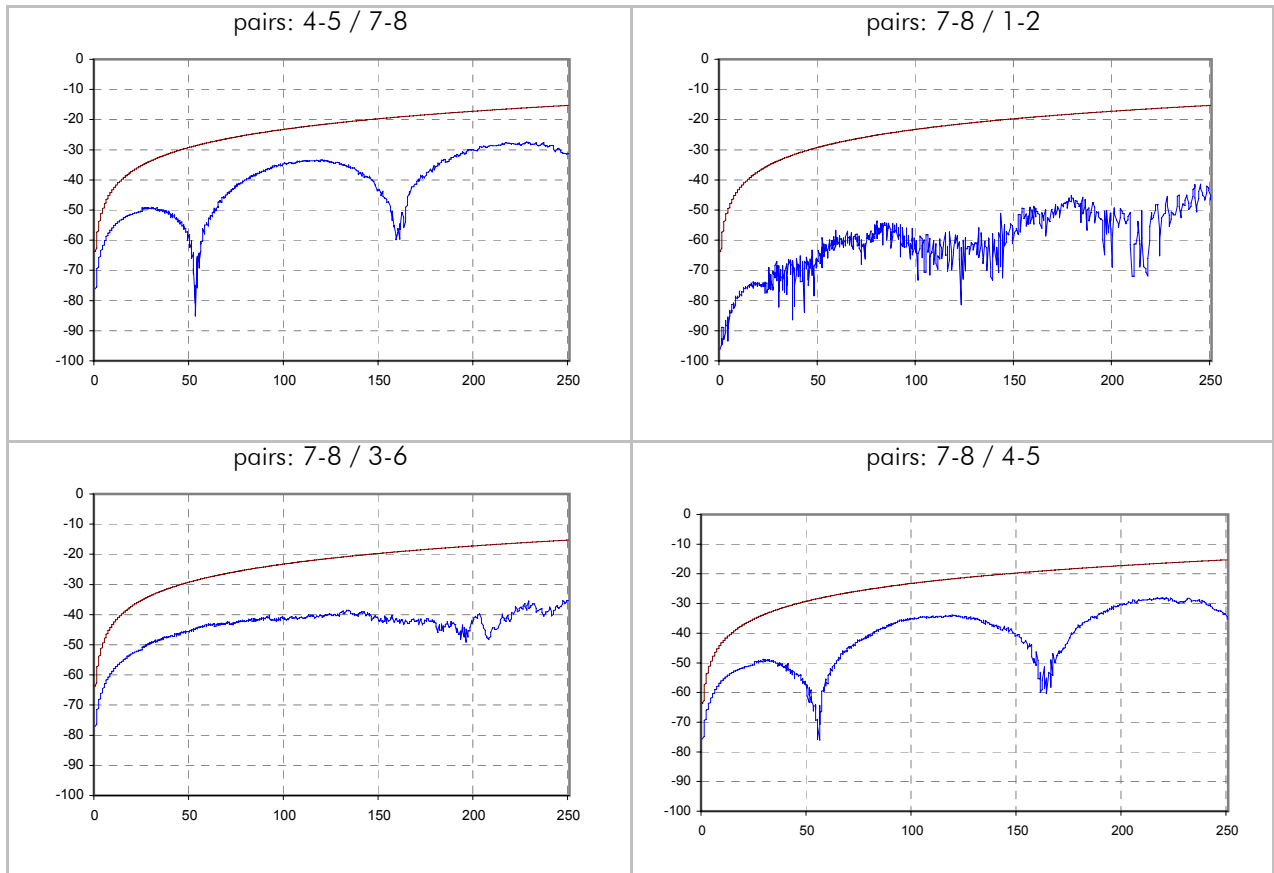


ELFEXT / dB (scanner side - type 1 side)

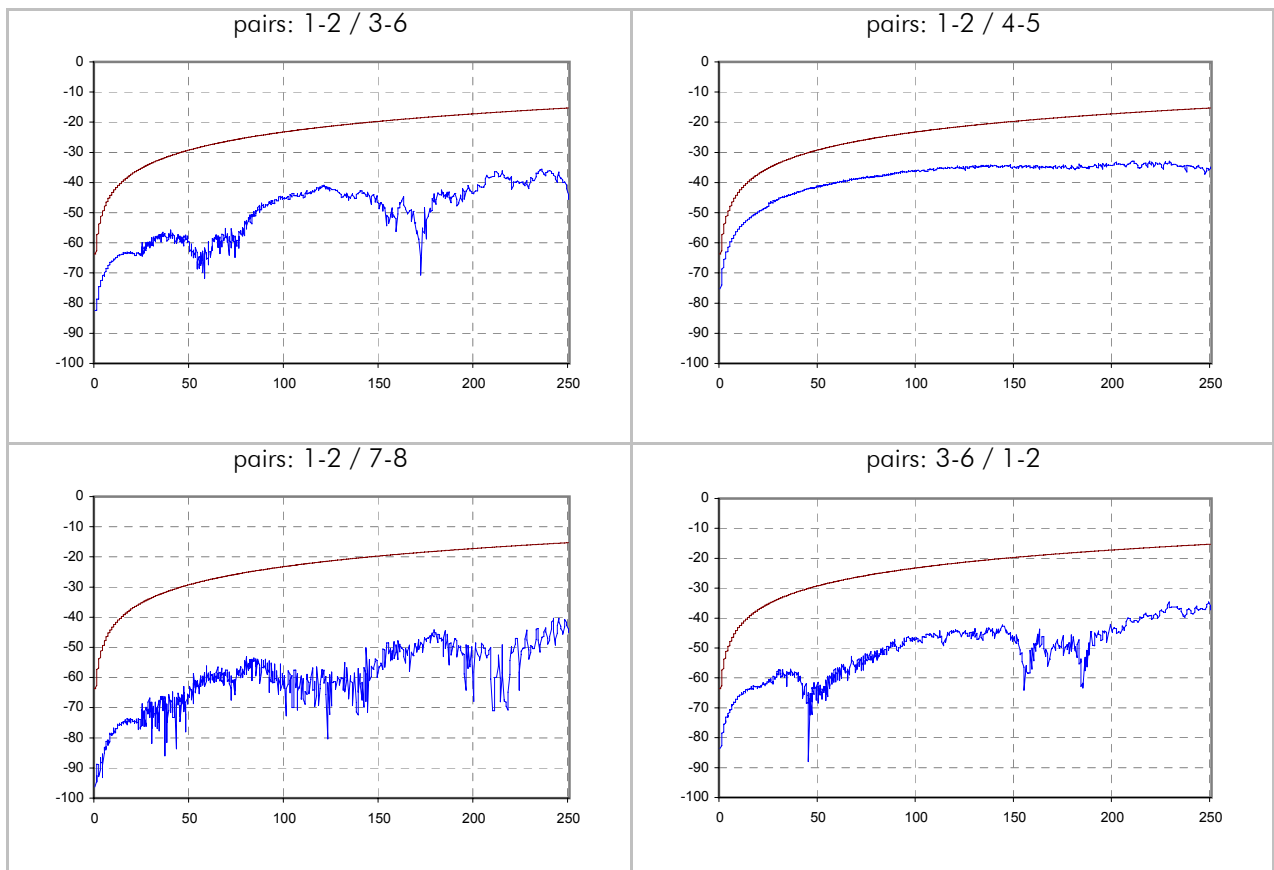




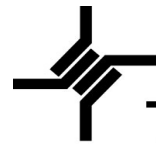
ELFEXT / dB (scanner side - type 1 side)



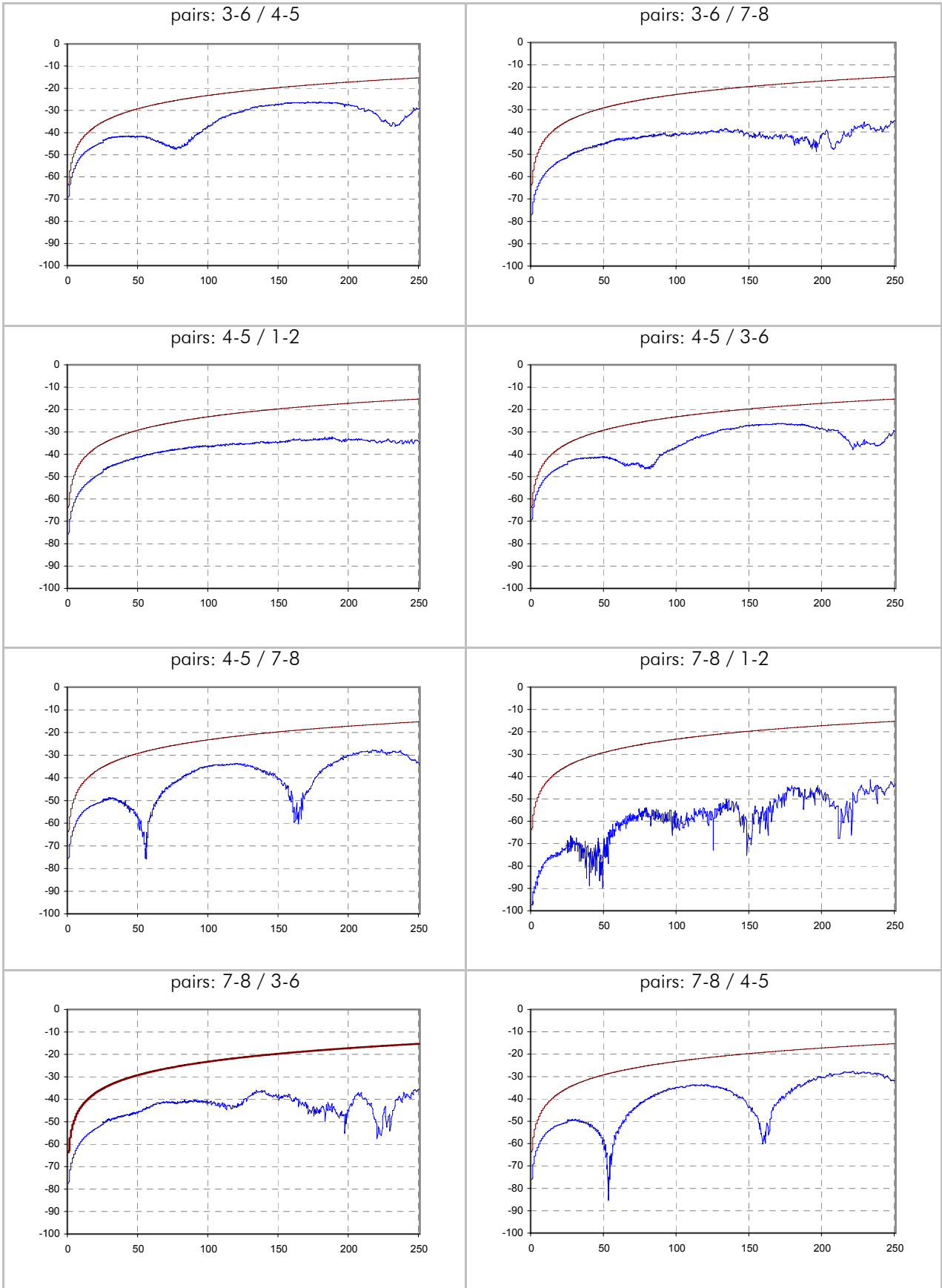
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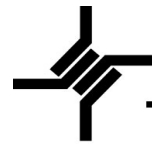




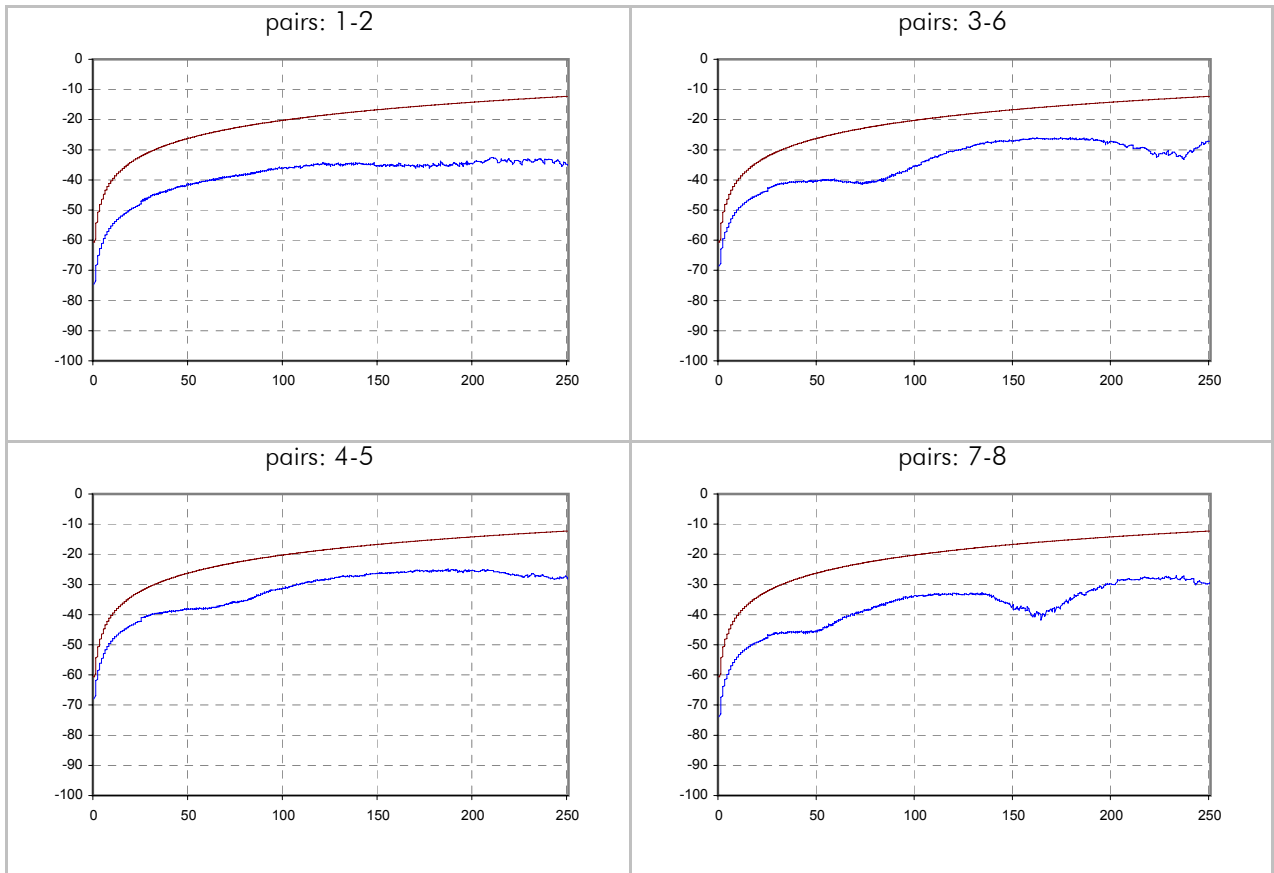


ELFEXT / dB (remote side - type 2 side)

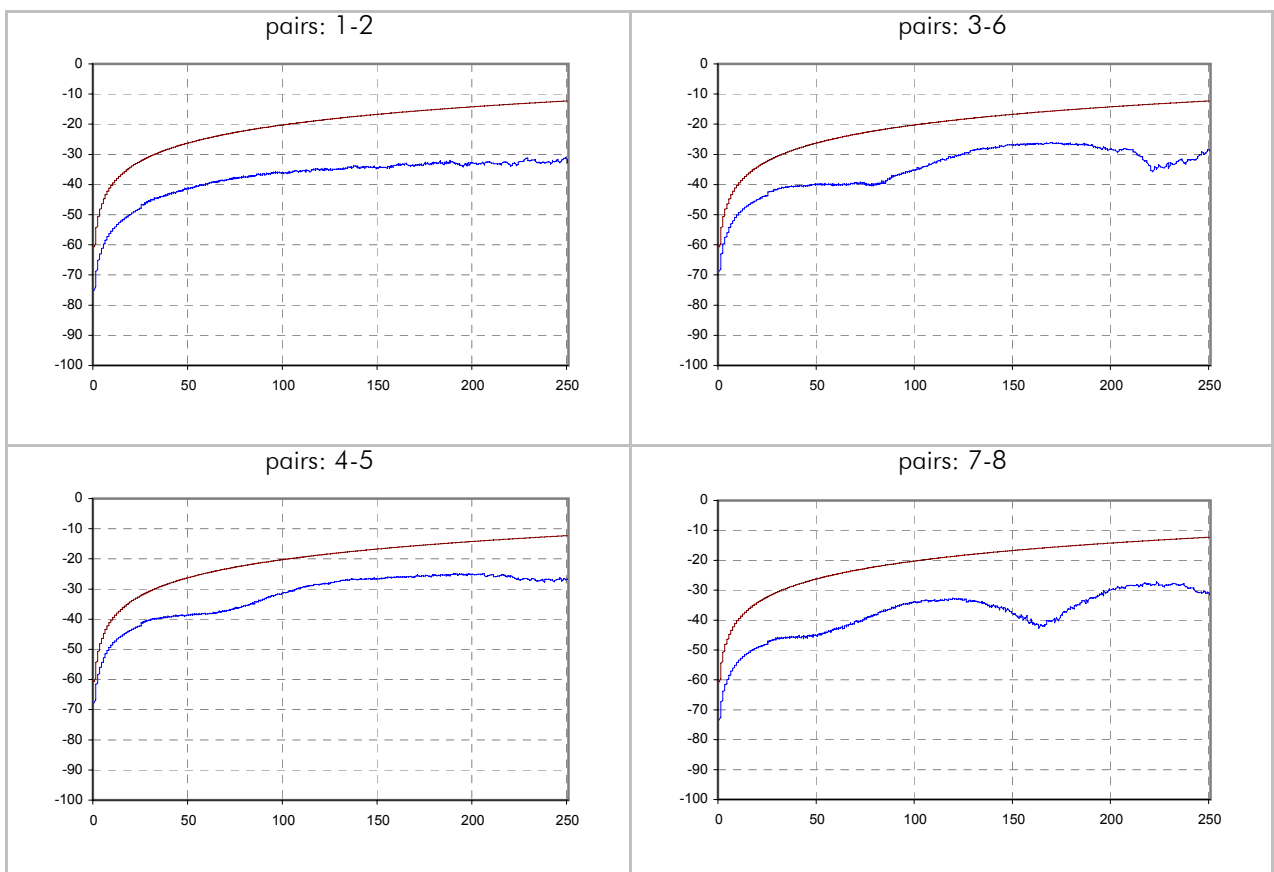




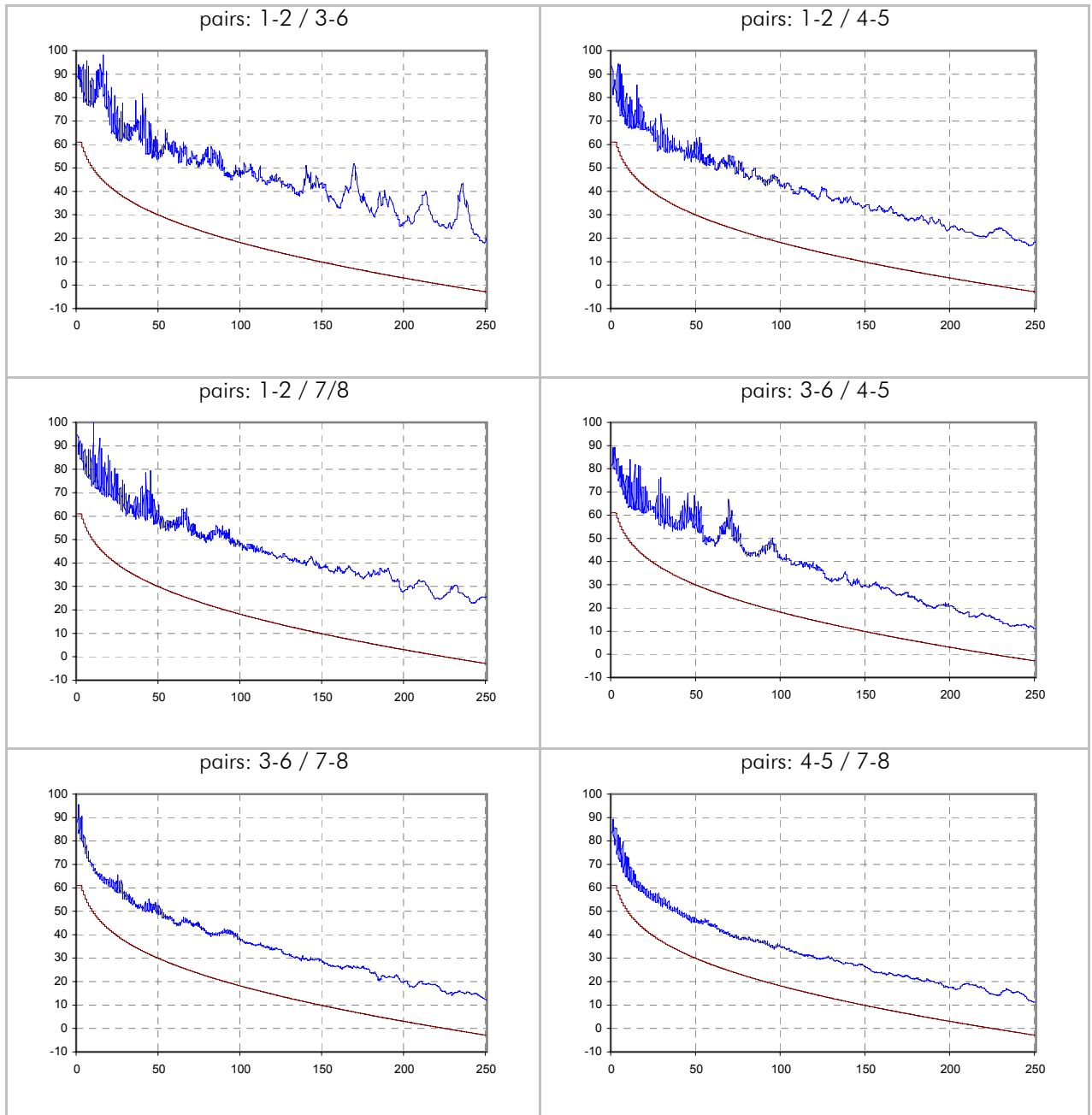
PSELFEXT / dB (scanner side - type 1 side)



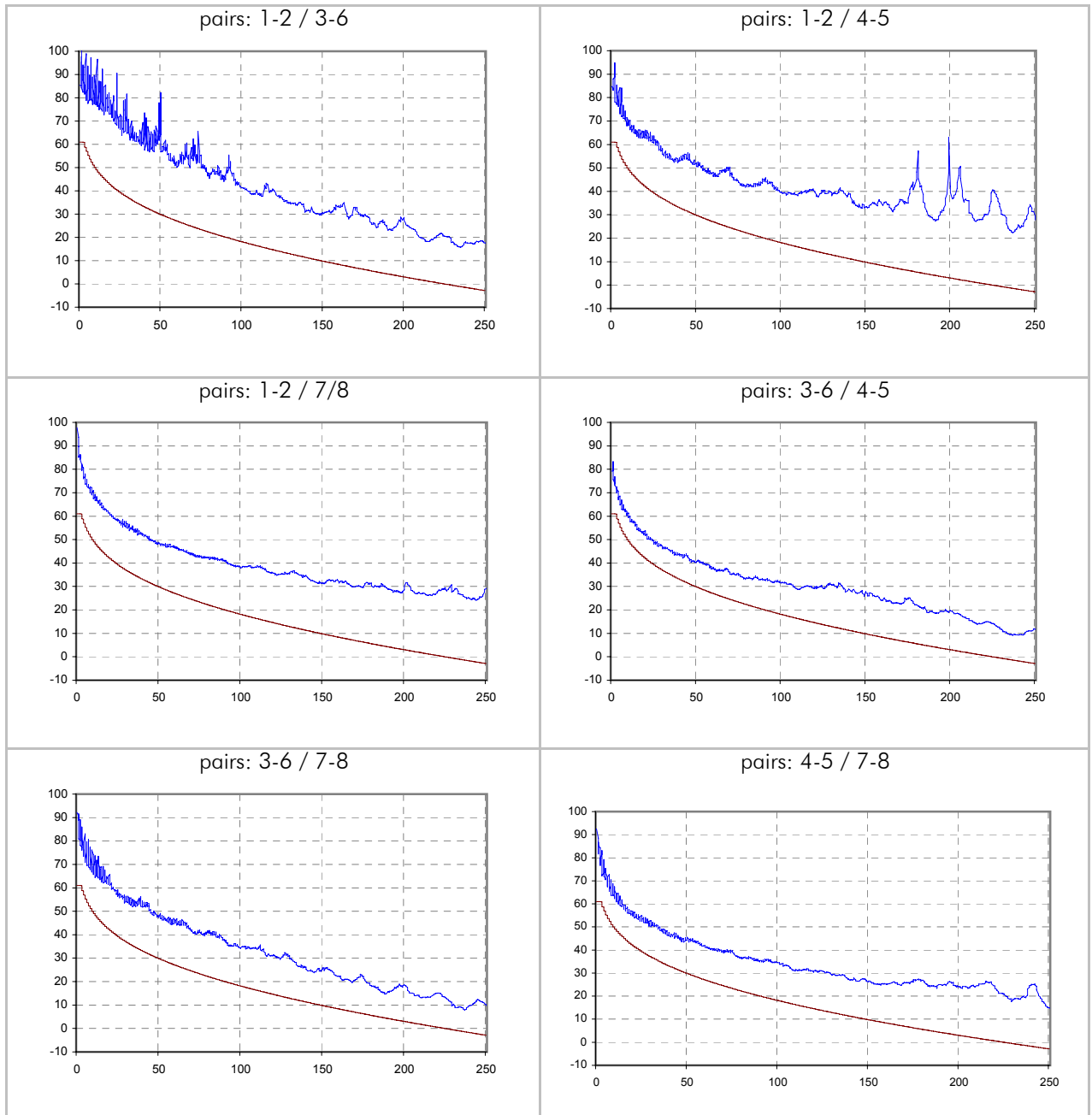
PSELFEXT / dB (remote side - type 2 side)



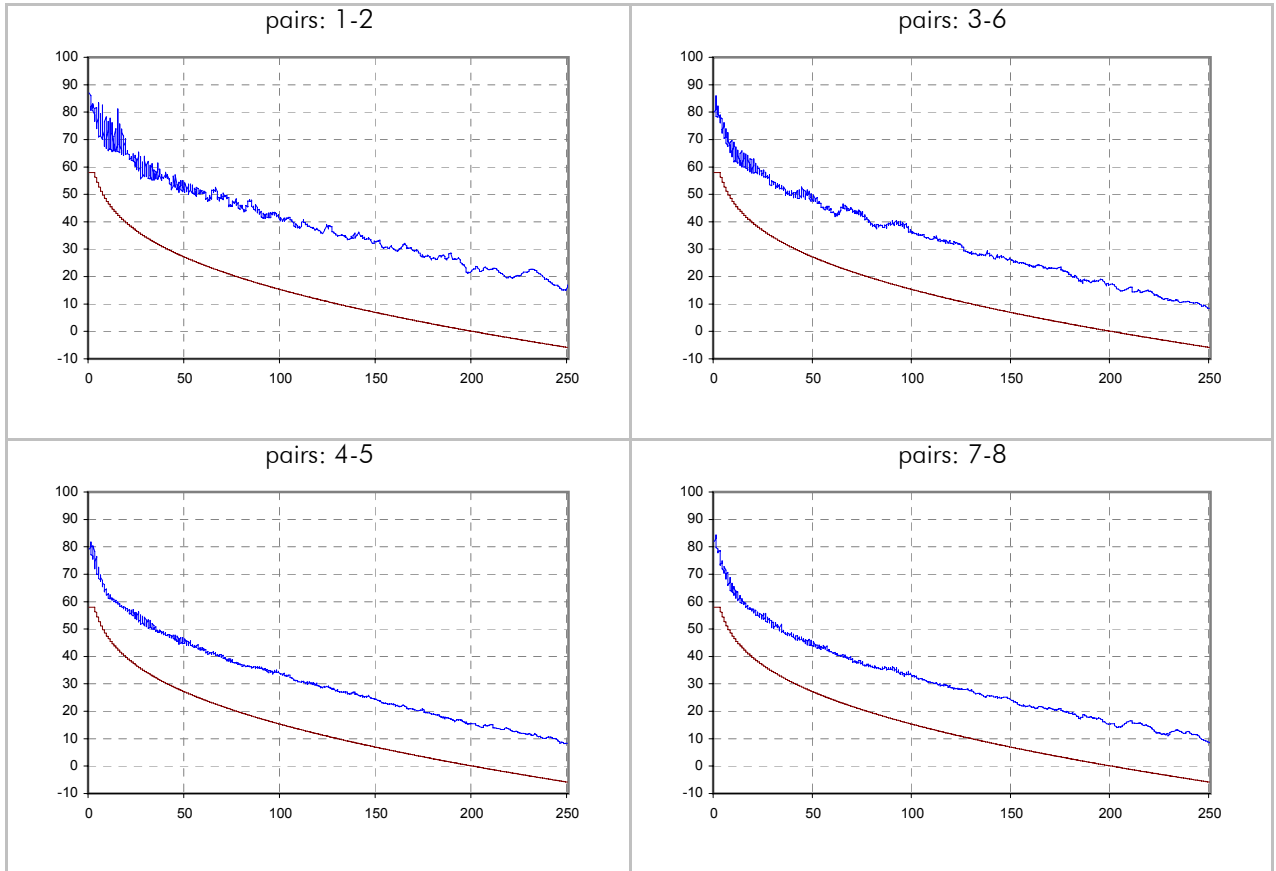
ACR / dB (scanner side - type 1 side)



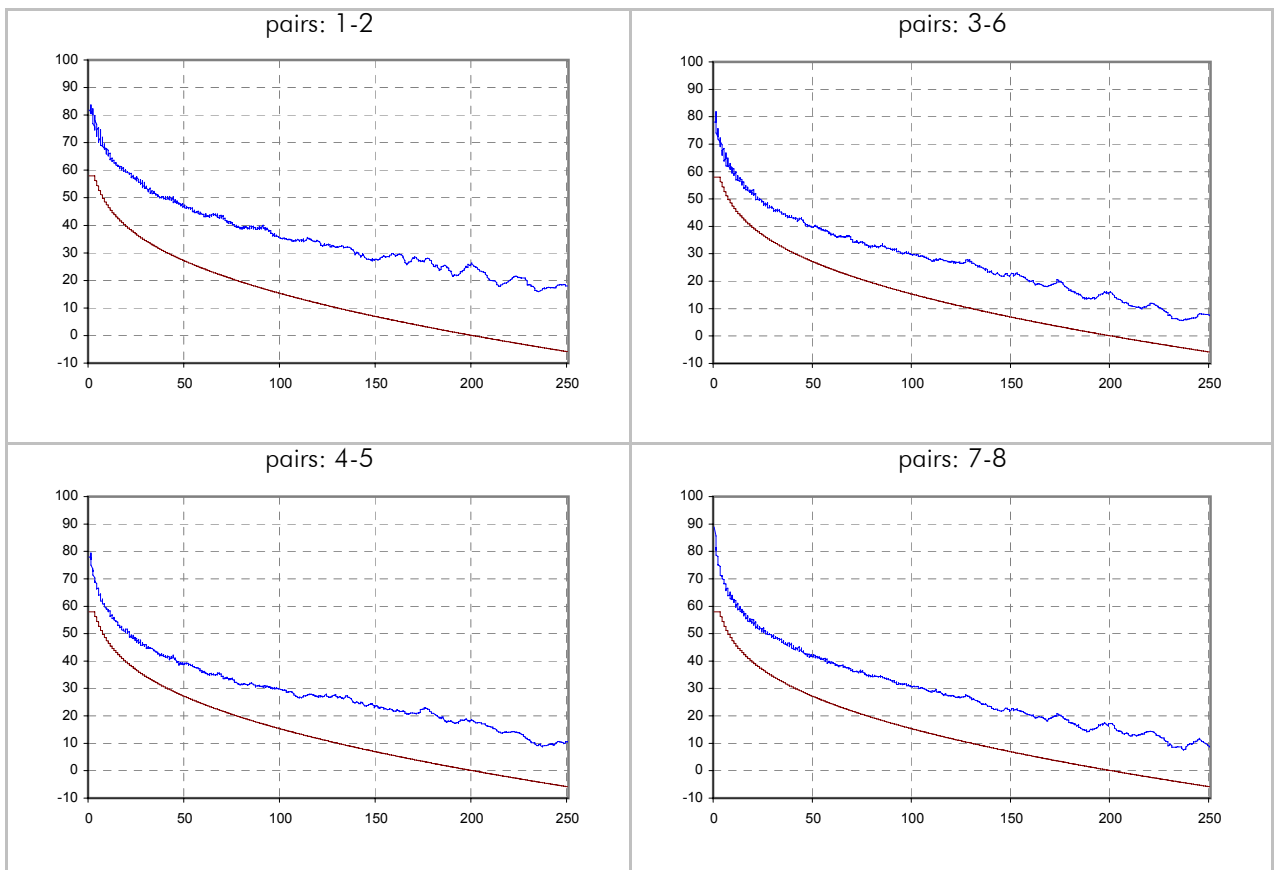
ACR / dB (remote side - type 2 side)



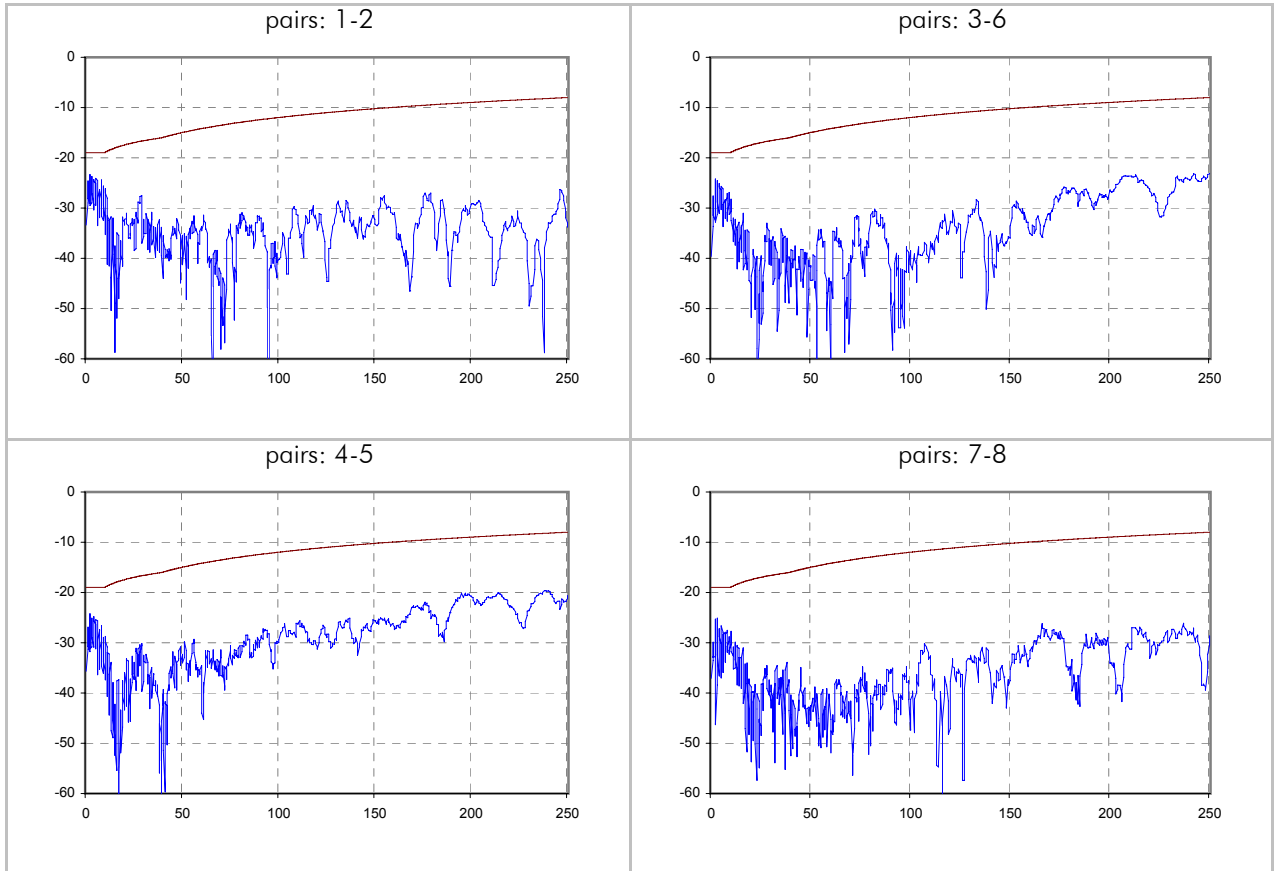
PSACR / dB (scanner side - type 1 side)



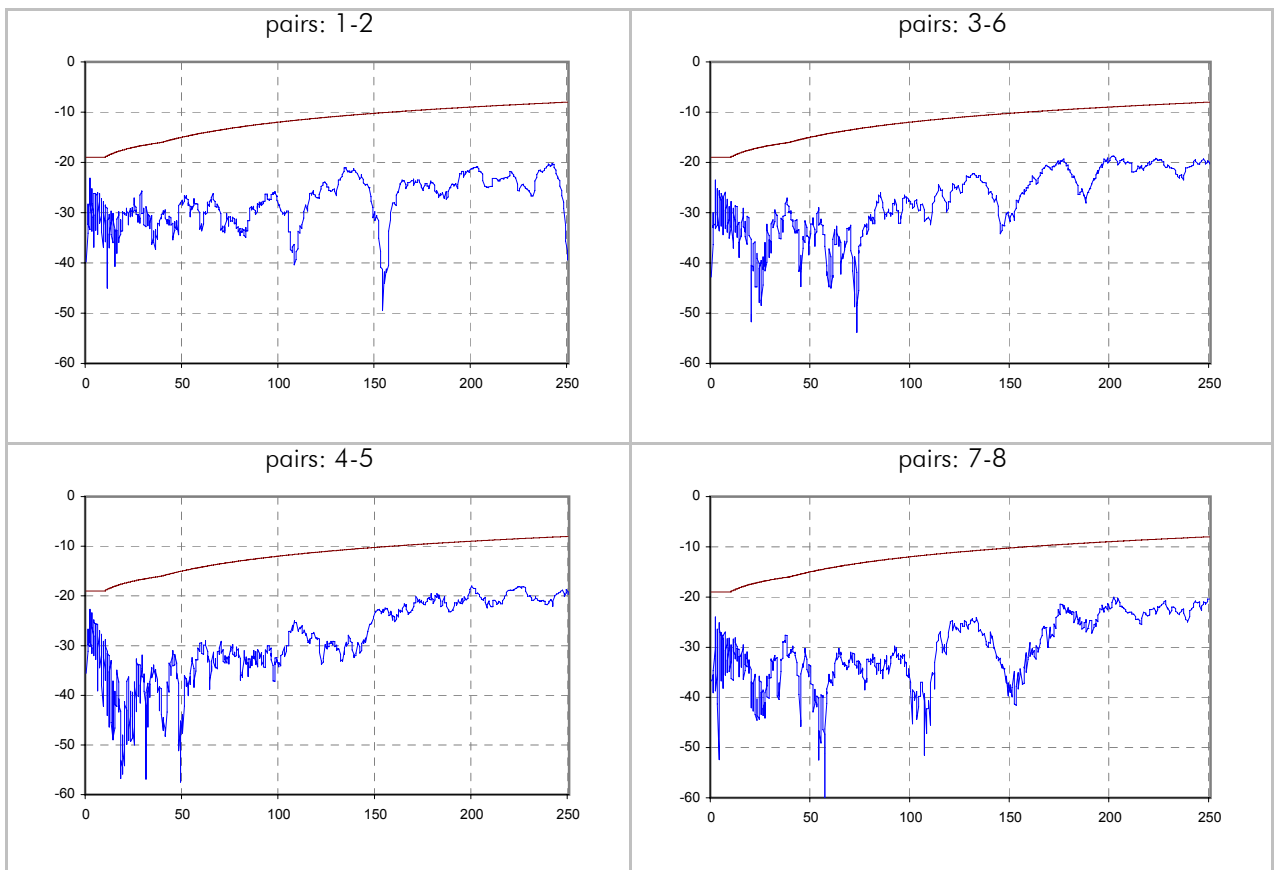
PSACR / dB (remote side - type 2 side)



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



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



Attenuation / dB

