

Reg.-Nr.: TTI-P-G010/98-00

## Test Report Nr. 2003-593-1136-RDE

Juni 26, 2003

### Transmission Performance Testing

**according to:** ISO/IEC 11801; DIN EN 50173 Ed. 2; TIA/EIA 568 B Draft 10  
Limits relating to Link Performance Class D

**Prepared for:** Telegärtner Karl Gärtner GmbH  
Lerchenstrasse 35  
D-71144 Steinenbronn/Germany

### Equipment under Test:

Part 1: Modular Patch Panel MPP MPD Cat.5E  
Part 2: Outlet AMJ45 8/8 UP Cat.5E  
Part 3: Fluke DSP-LIA101 + PM 06  
Permanent Link Adapter  
Installation Cable: 90m Draka Multimedia Cable CNS796201-01000S  
Silverline S-STP 4X2/0,55 LSOH Cat.6 Trend

**Date tested:** 2003-06-26

**Test Passed:** yes

**TestLocation:** ELMAC GmbH, Boschstrasse 2  
D-71149 Bondorf/Germany  
Tel.: ++49(0)7457/9441-0 eMail: info@elmac.de  
Fax.: ++49(0)7457/9441-99 www: http://www.elmac.de

Tested by: Schmidt 2003-06-26  
Date

Engineer in charge: Bälme 2003-06-26  
Date

## Products:

The electrical modul Modular Patch Panel MPP MPD Cat. 5E and Outlet AMJ45 8/8 UP Cat. 5E is used in the following products:

### Panel MPP MPD Cat. 5E

J02023A0017	Mod. Patch Panel Cat.5e MPP24-HS screened, RAL 7035
J02022A0022	Mod. Patch Panel Cat.5e 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 MPD6-HS 3HU/8PU screened
J02021A0024	Distributor Cat.6 MPD6-HS 3HU/8PU screened without front panel

### Outlet AMJ45 8/8 UP Cat.5e

J00020A0389	Outlet AMJ45 8/8 UP/50 screened, Cat.5e alpine white
J00020A0390	Outlet AMJ45 8/8 UP/50 screened, Cat.5e pearl white RAL 1013
J00020A0388	Outlet AMJ45 8/8 UP/0 screened, Cat.5e without cover plate

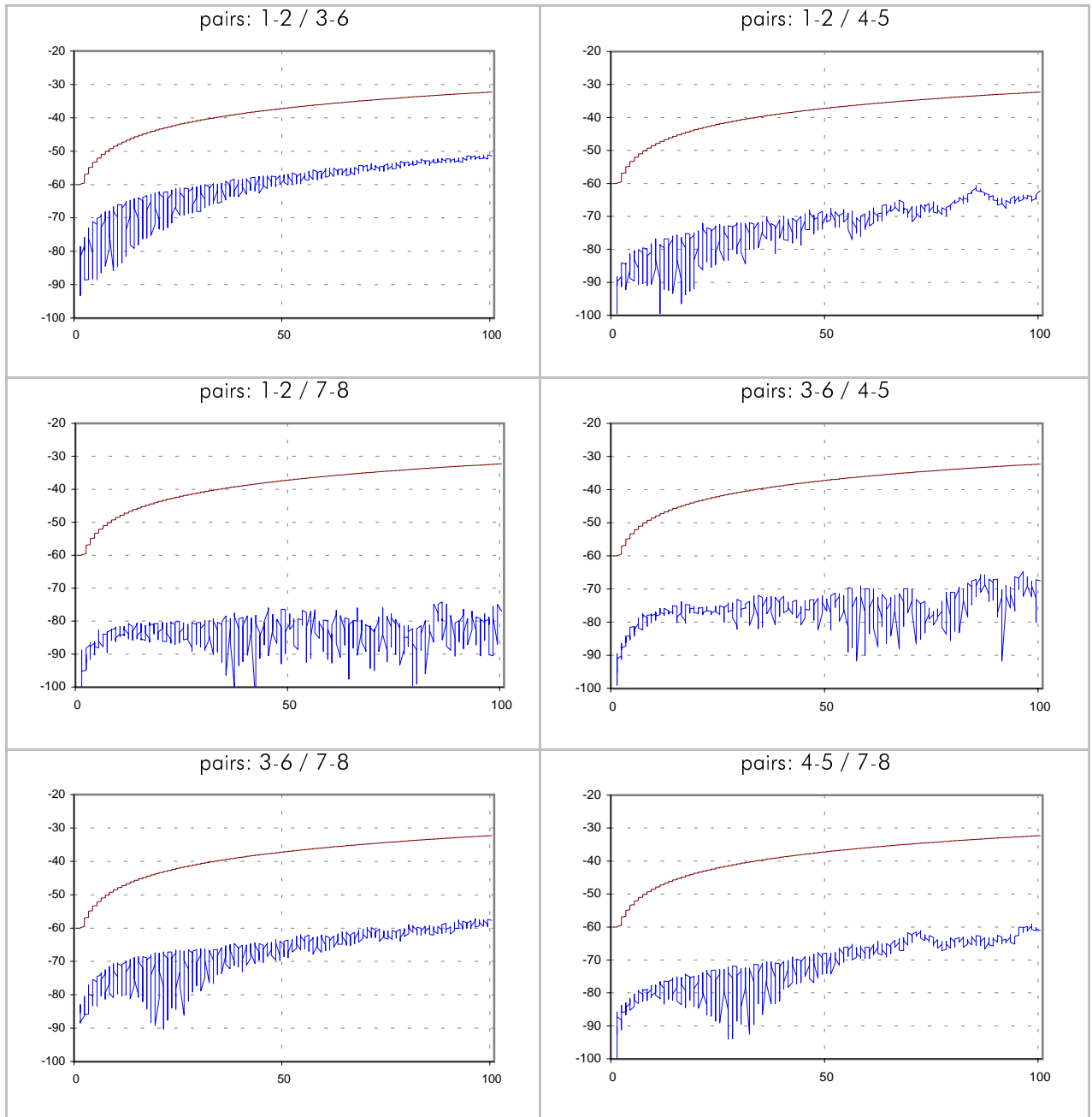
## Test Results

pairs	1-2	3-6	4-5	7-8	limit	skew / ns	limit
max Propagation delay / ns	391,0	402,0	393,0	399,0	488,8	11,0	43,0
min Attenuation margin / dB	0,6	0,6	0,7	0,6			
@ f / MHZ	4,6	4,5	4,5	4,6			
Attenuation limit / dB	-4,0	-4,0	-4,0	-4,0			
Attenuation @ 100 MHz / dB	-16,4	-16,7	-16,4	-16,4	-20,0		
min PSNEXT margin / dB	12,6	10,1	14,1	13,8			
@ f / MHZ	94,8	99,8	96,8	98,6			
PSNEXT limit / dB	-29,7	-29,3	-29,5	-29,4			
PSNEXT @ 100 MHz	-50,9	-50,1	-58,2	-55,7	-29,3		
min PSELFEXT margin / dB	17,8	12,1	14,7	16,1			
@ f / MHZ	1,9	1,9	1,0	1,6			
PSELFEXT limit / dB	-51,4	-51,4	-57,0	-52,9			
PSELFEXT @ 100 MHz	-36,1	-31,7	-36,1	-37,5	-17,0		
min PSACR margin / dB	15,9	13,3	17,6	17,3			
@ f / MHZ	85,0	94,8	95,0	87,4			
PSACR limit / dB	12,2	10,2	10,2	11,7			
PSACR @ 100 MHz	34,5	33,4	41,8	39,3	9,3		
min Return Loss margin / dB	4,6	3,6	3,1	2,6			
@ f / MHZ	1,7	1,7	1,7	1,7			
Return Loss limit / dB	-19,0	-19,0	-19,0	-19,0			
Return Loss @ 100 MHz	-29,6	-40,2	-34,4	-52,9	-12,0		

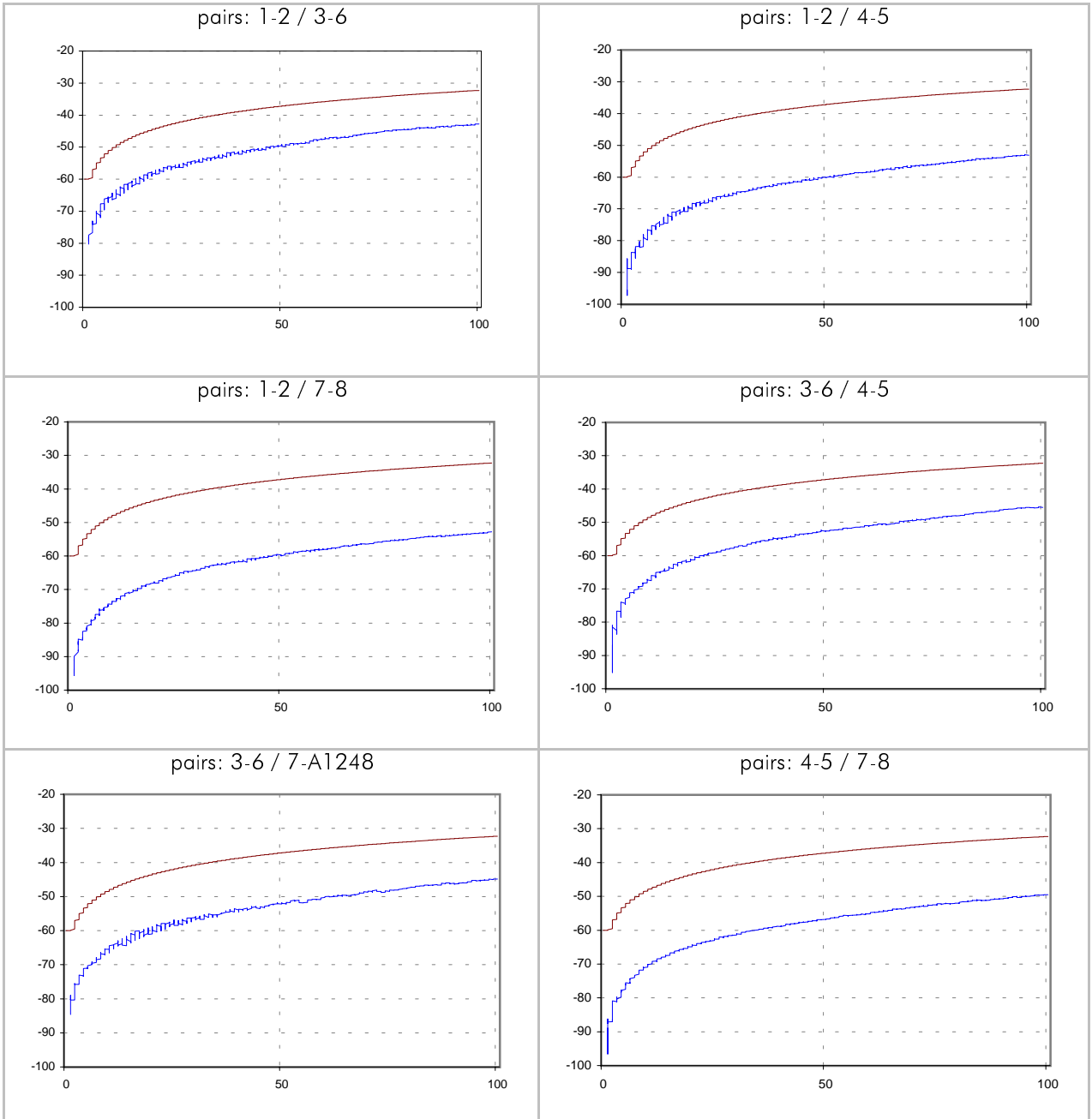
pairs	1-2 / 3-6	1-2 / 4-5	1-2 / 7-8	3-6 / 4-5	3-6 / 7-8	4-5 / 7-8	limit
min NEXT margin / dB	10,4	20,6	20,5	13,0	12,5	17,2	
@ f / MHZ	94,8	99,6	100,0	96,8	98,6	98,0	
Next limit / dB	-32,7	-32,3	-32,3	-32,5	-32,4	-32,4	
NEXT @ 100 MHz	-51,1	-63,4	-74,9	-67,2	-57,4	-60,7	-32,3
min ACR margin / dB	13,3	24,2	23,9	16,5	16,1	20,6	
@ f / MHZ	76,6	95,2	85,6	94,4	94,8	93,4	
ACR limit / dB	16,9	13,2	15,0	13,3	13,2	13,5	
ACR @ 100 MHz	34,4	47,0	58,5	50,8	41,0	44,3	12,3

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	25,5	12,1	24,4	36,9	13,1	25,8	
@ f / MHZ	51,8	1,0	1,0	1,1	2,1	1,0	
ELFEXT limit / dB	-25,7	-60,0	-60,0	-59,2	-53,6	-60,0	
min ELFEXT margin / dB	15,1	25,1	39,9	15,6	12,3	13,5	
@ f / MHZ	1,9	3,3	1,7	87,4	1,0	1,9	
ELFEXT limit / dB	-54,4	-49,7	-55,4	-21,2	-60,0	-54,4	
ELFEXT @ 100 MHz	-45,9	-35,9	-65,0	-67,4	-37,4	-58,6	-20,0
ELFEXT @ 100 MHz	-36,4	-46,6	-80,7	-36,6	-36,5	-37,5	

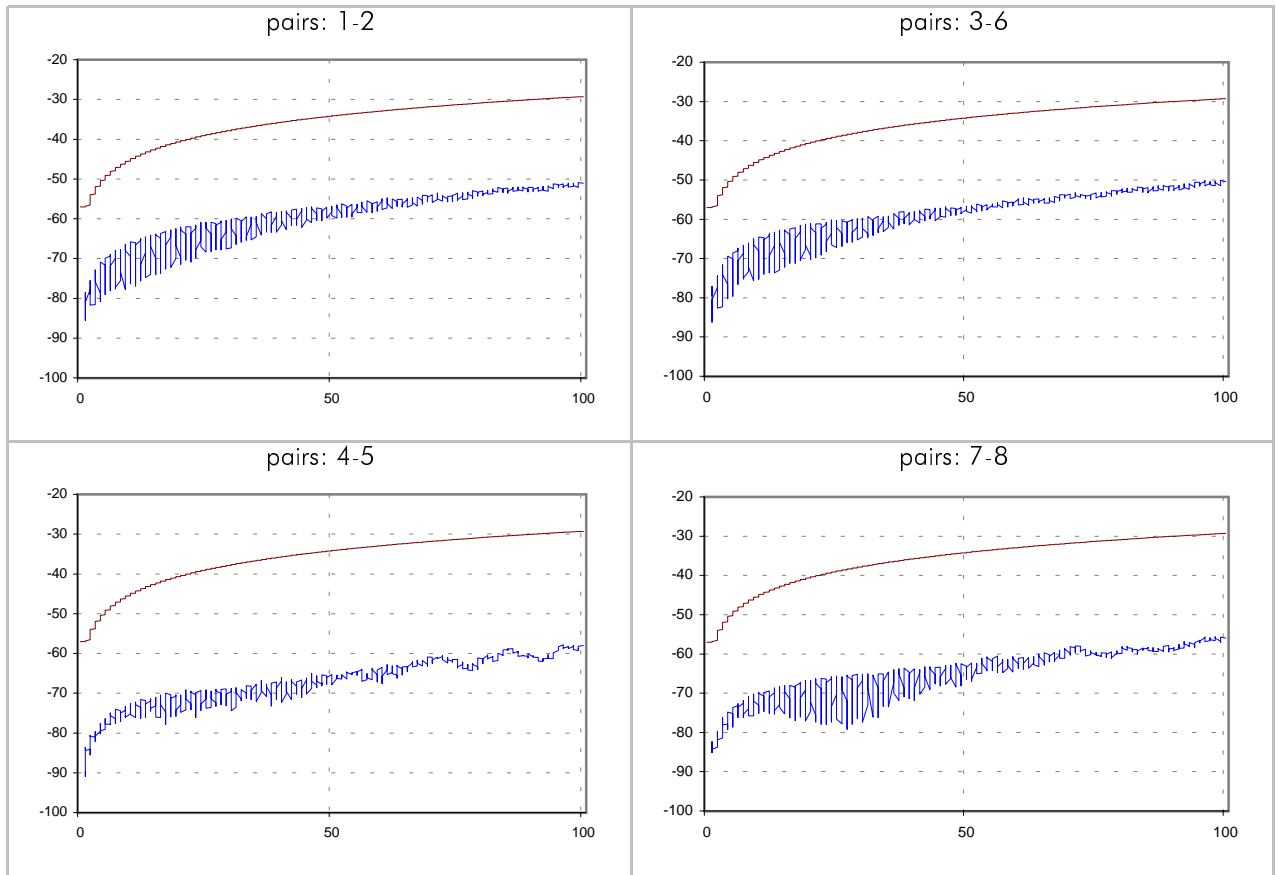
NEXT / dB (scanner side - type 1 side)



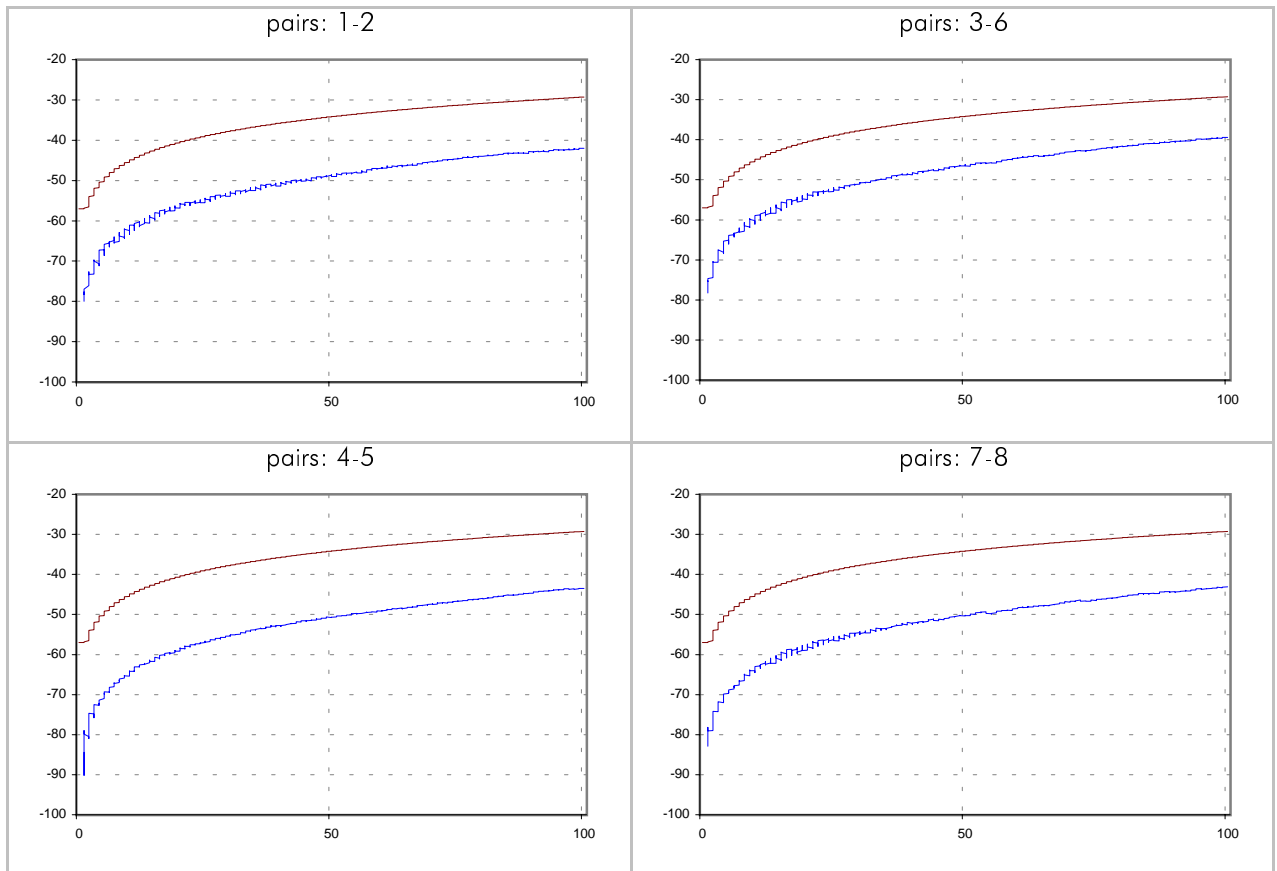
NEXT / dB (remote side - type 2 side)



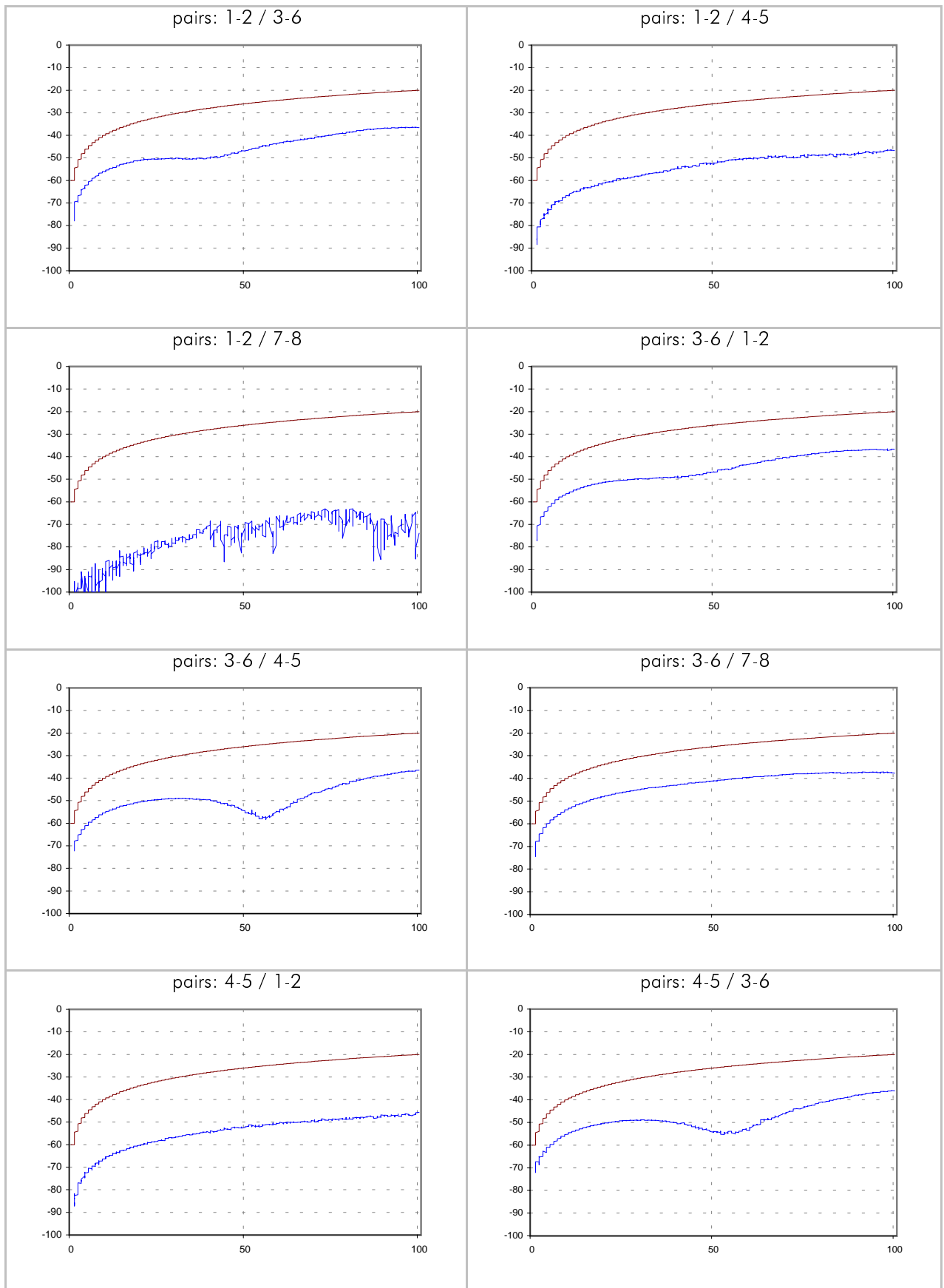
PSNEXT / dB (scanner side - type 1 side)



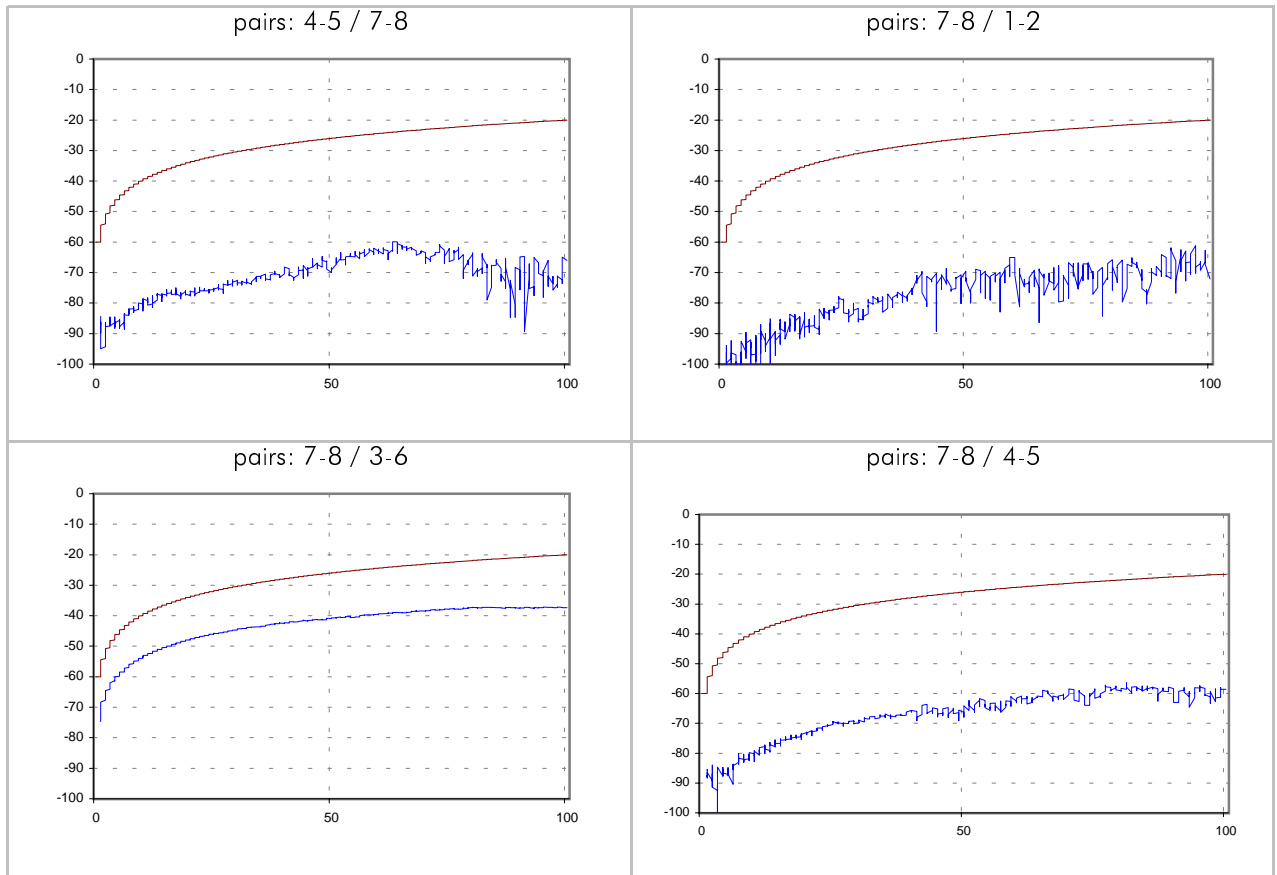
PSNEXT / dB (remote side - type 2 side)



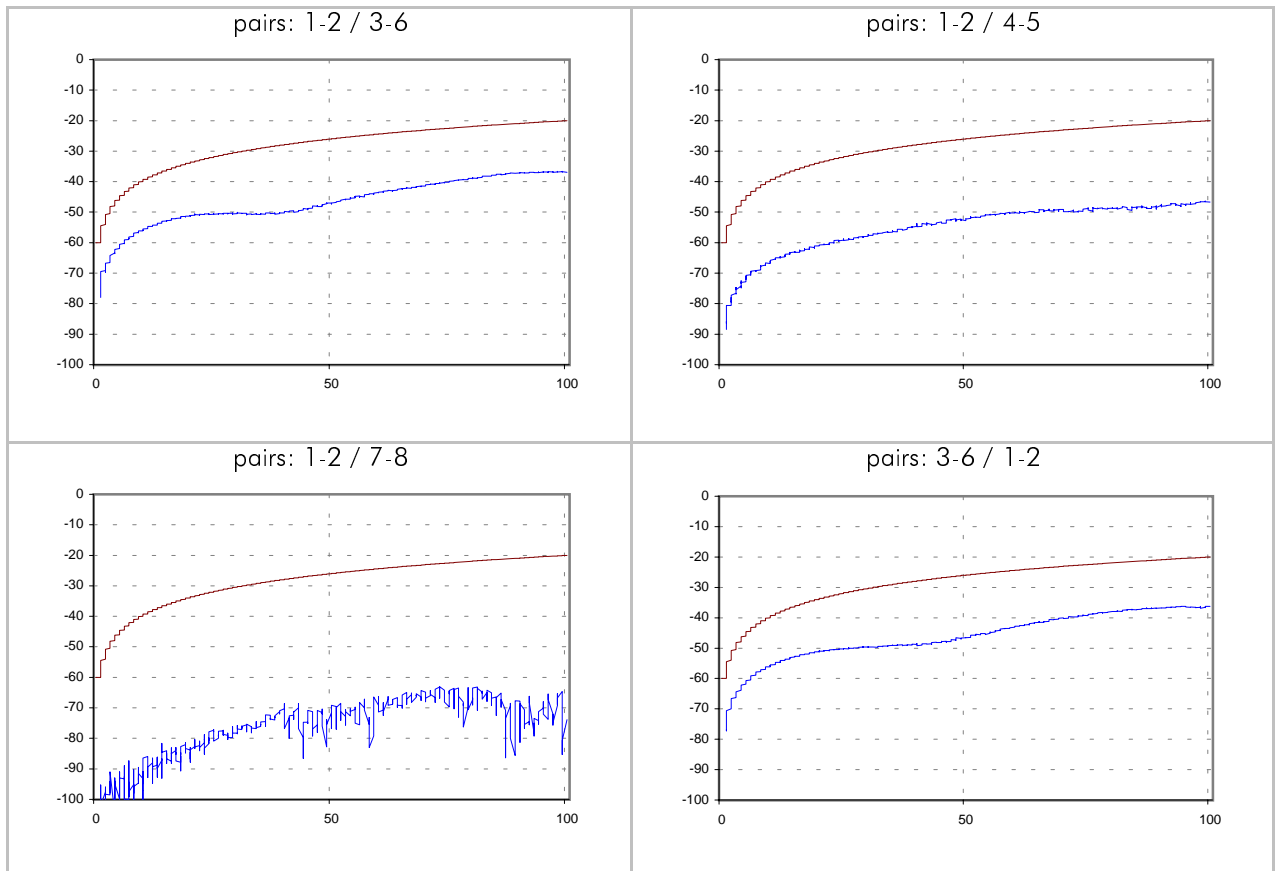
ELFEXT / dB (scanner side - type 1 side)



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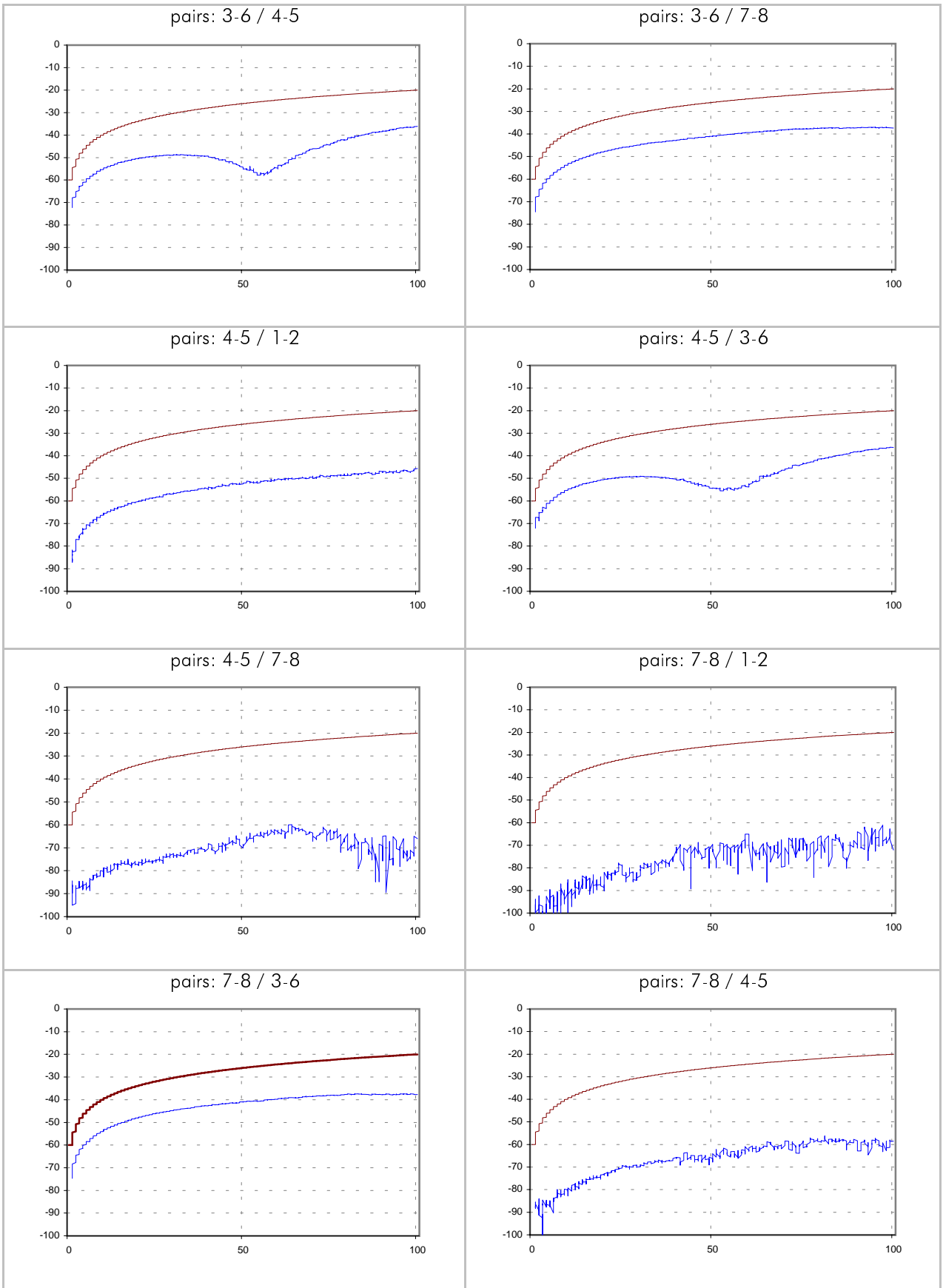


ELFEXT / dB (remote side - type 2 side)

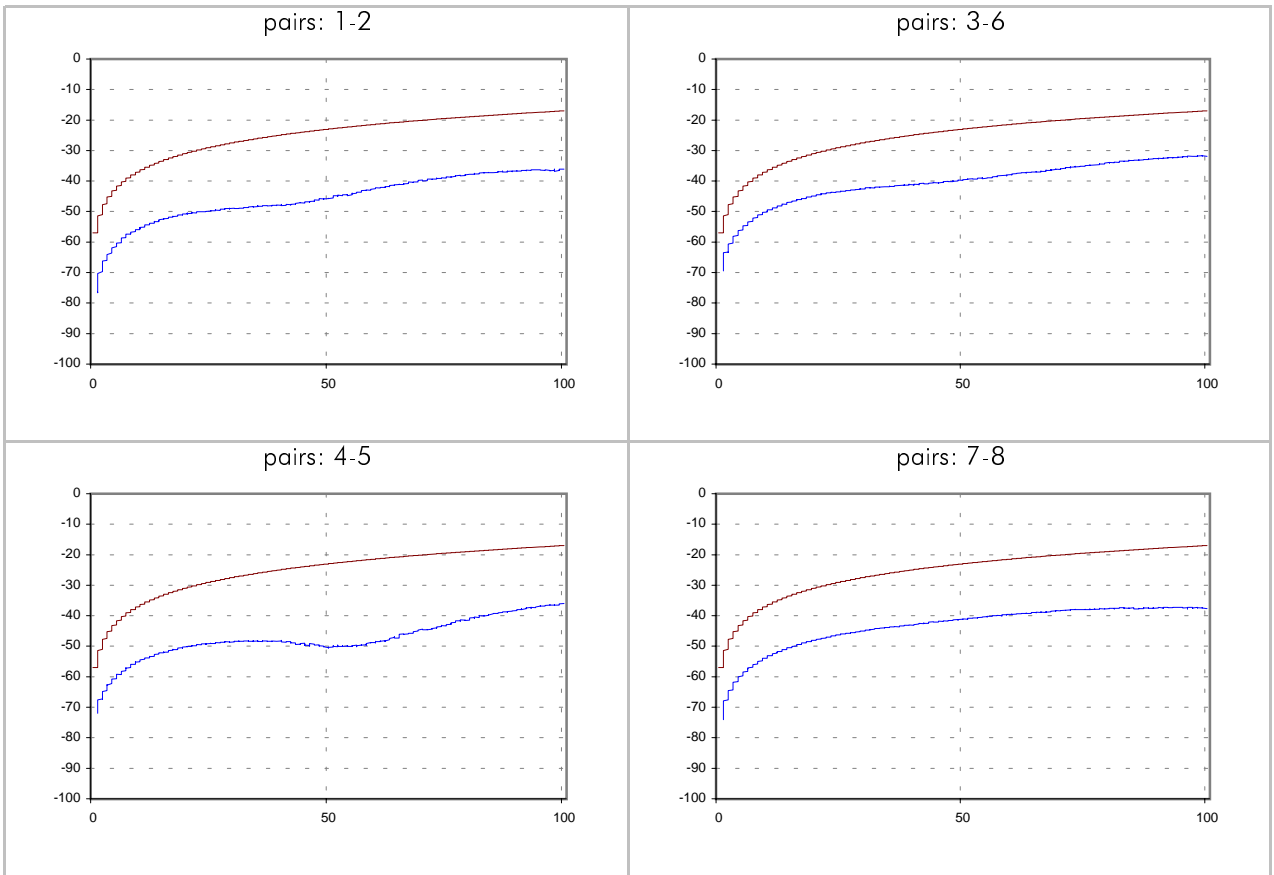




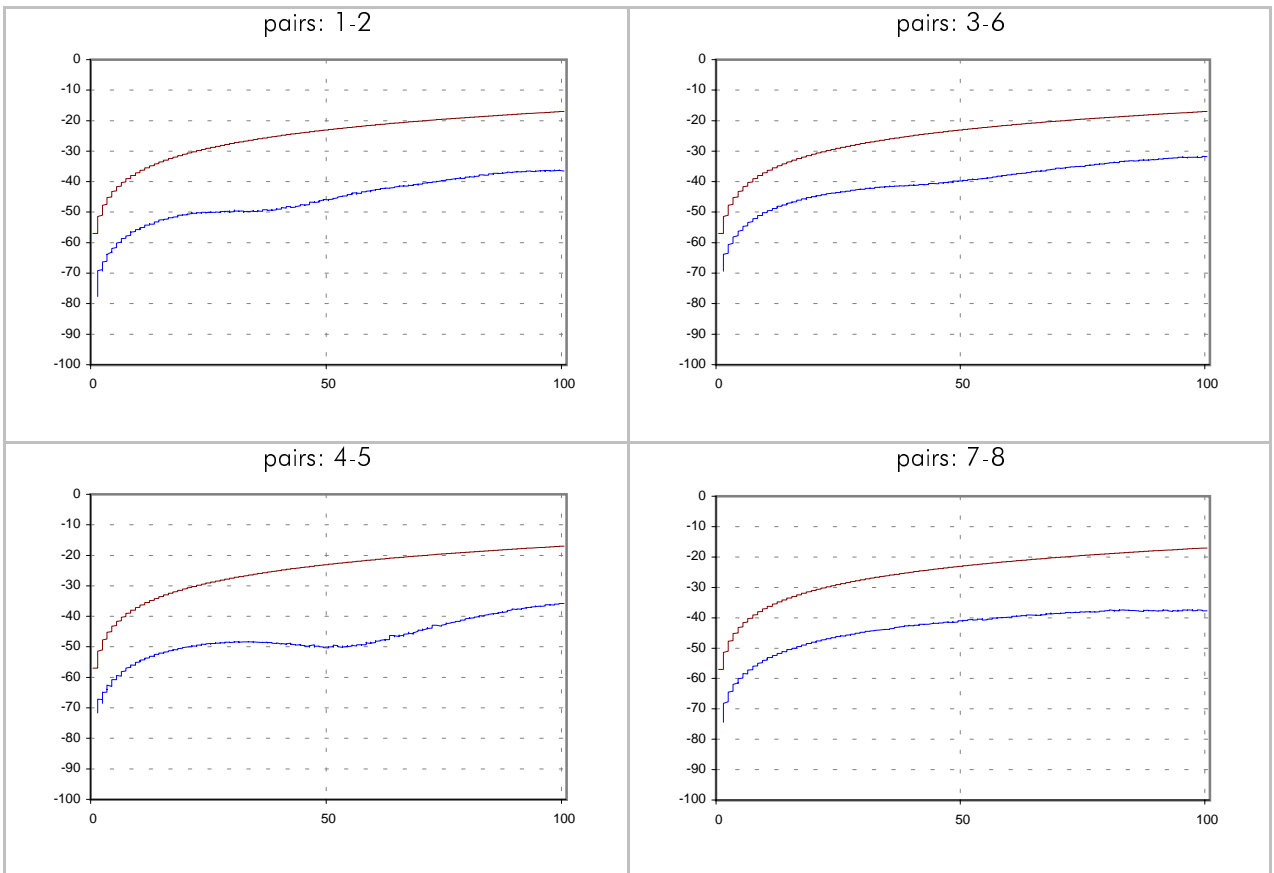
ELFEXT / dB (remote side - type 2 side)



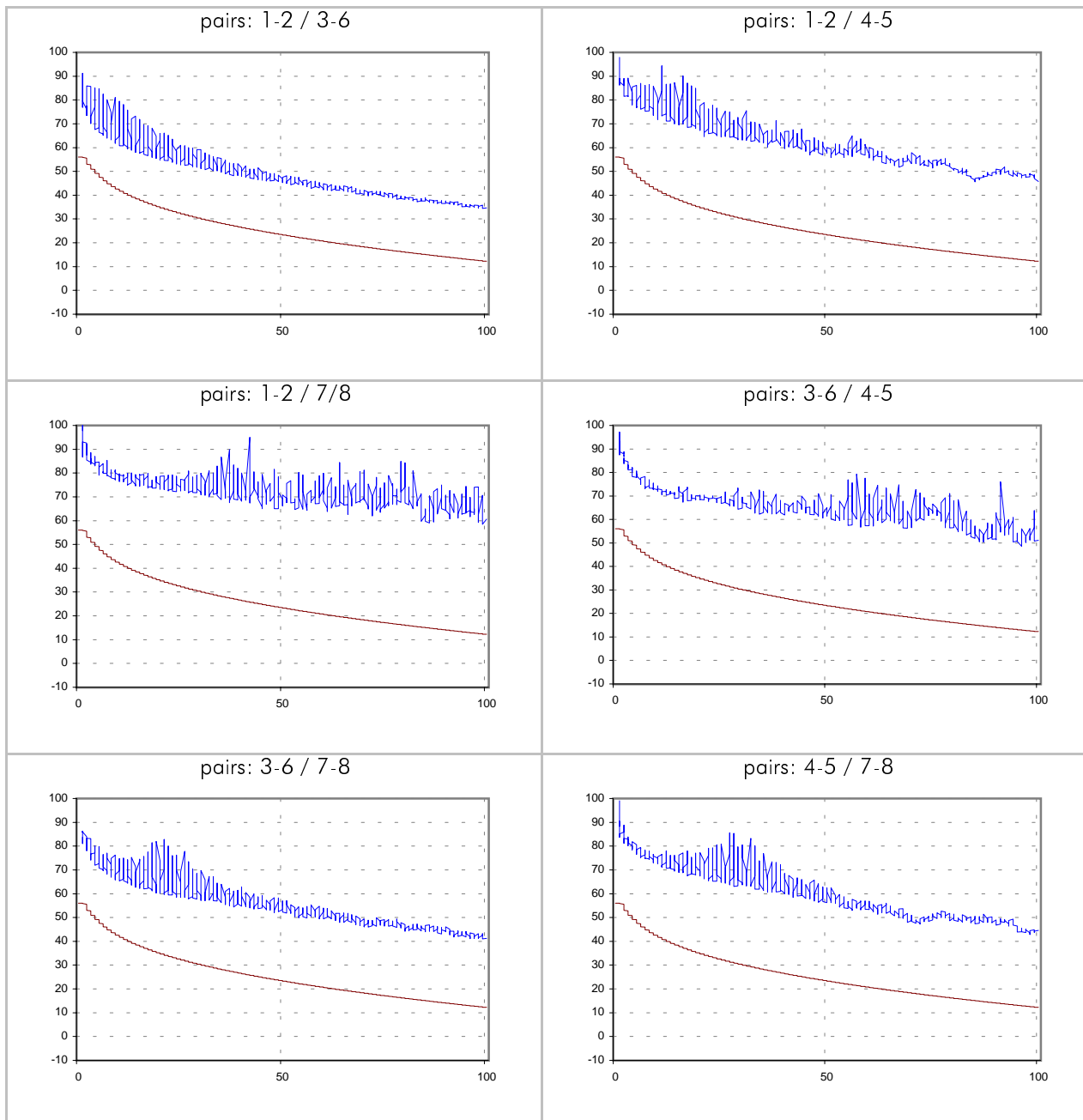
PSELFEXT / dB (scanner side - type 1 side)



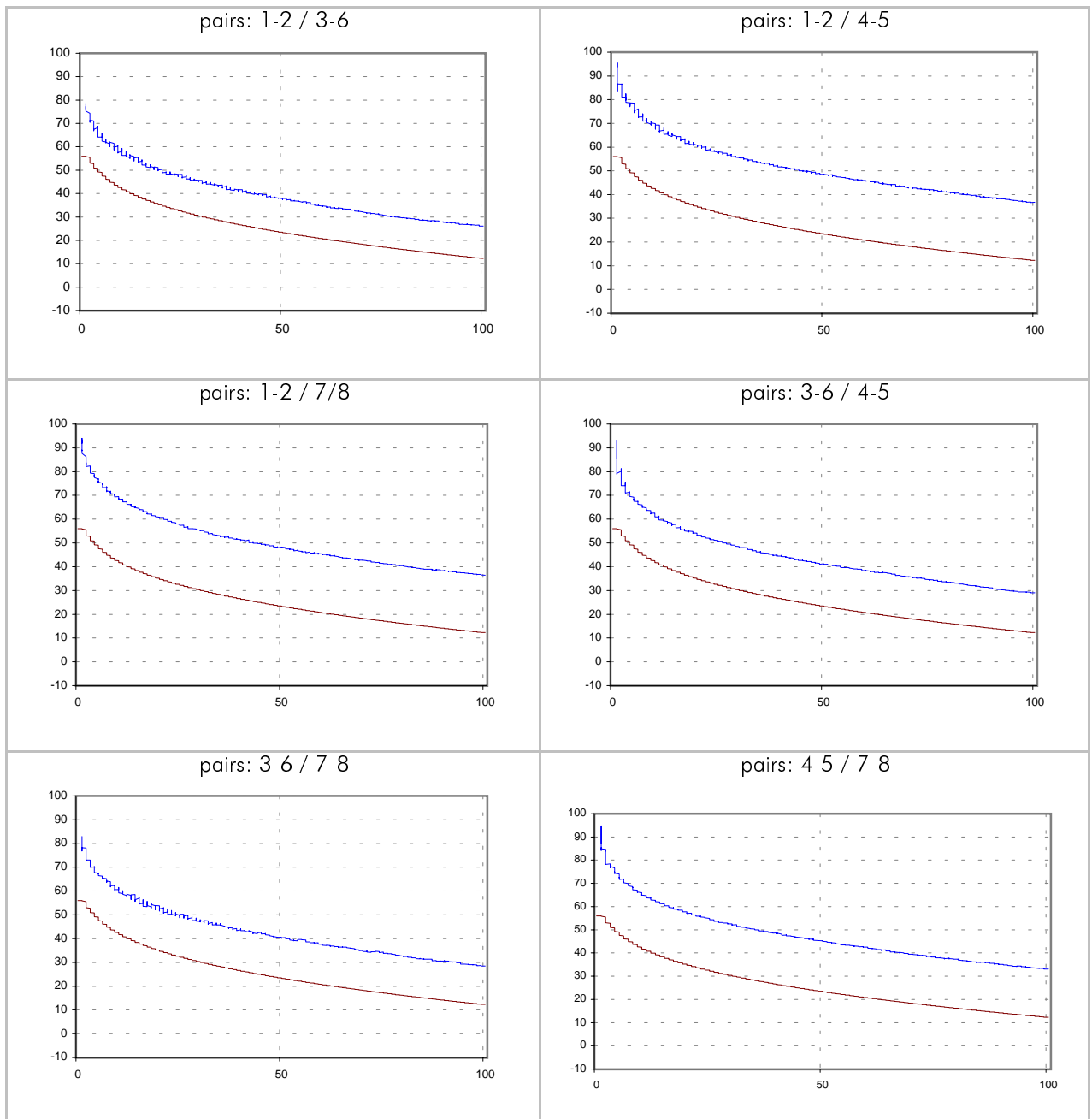
PSELFEXT / dB (remote side - type 2 side)



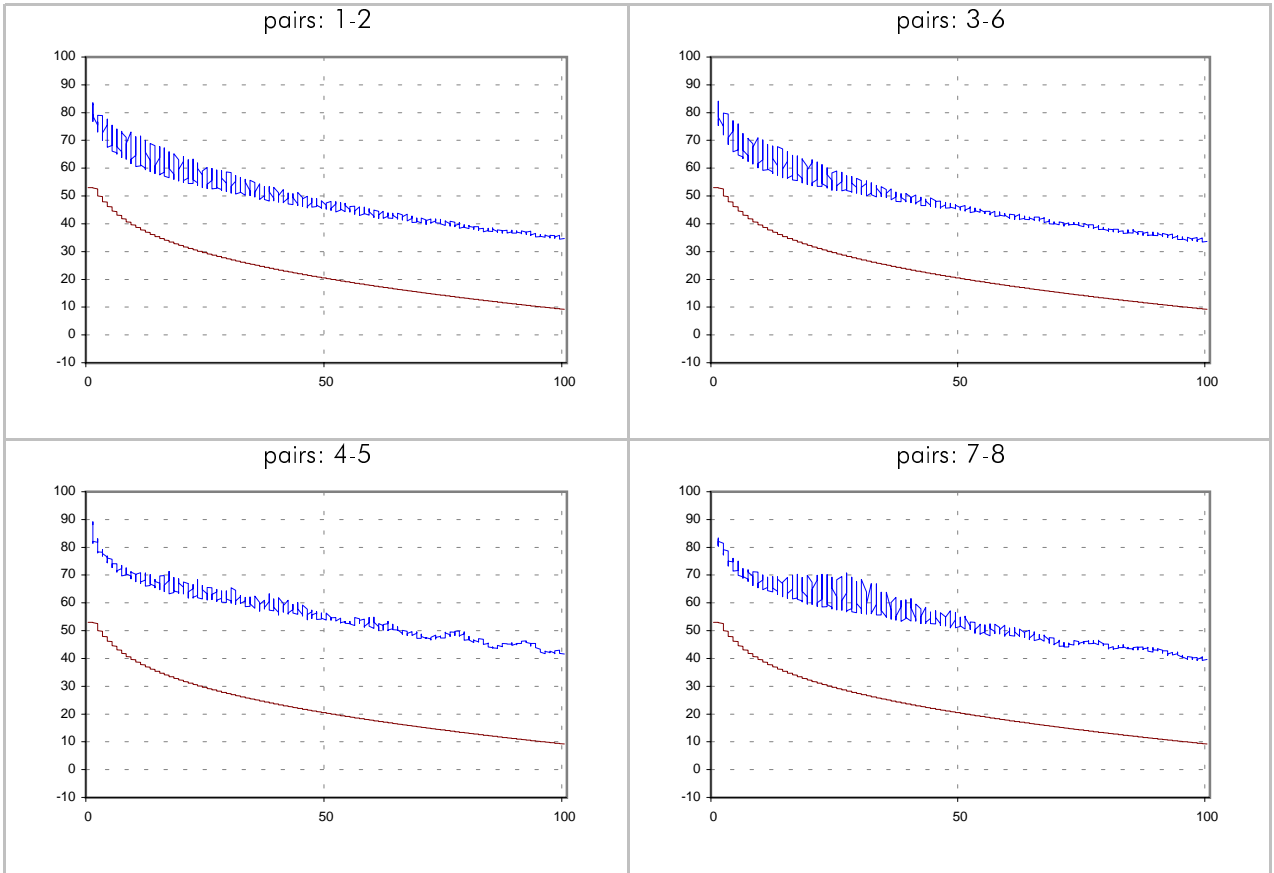
ACR / dB (scanner side - type 1 side)



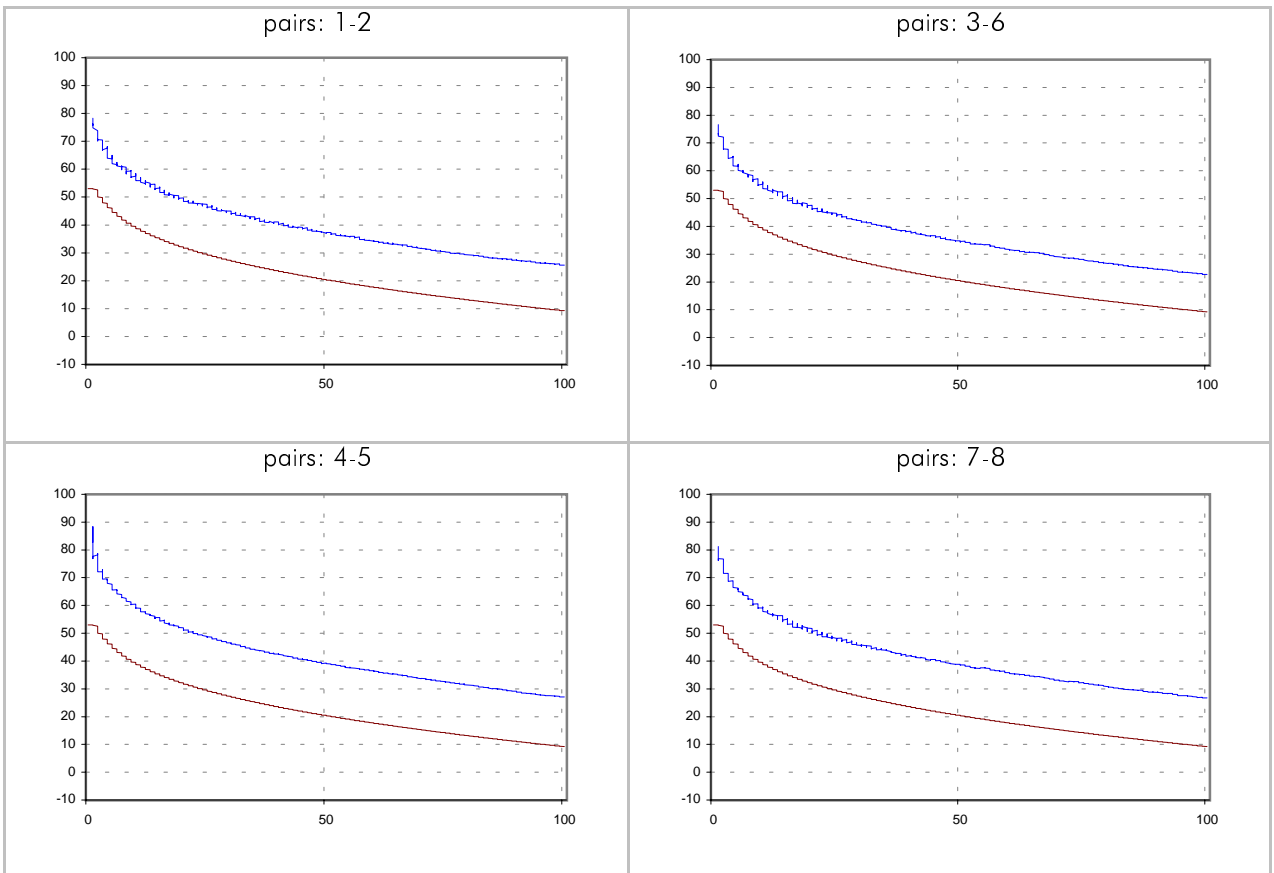
ACR / dB (remote side - type 2 side)



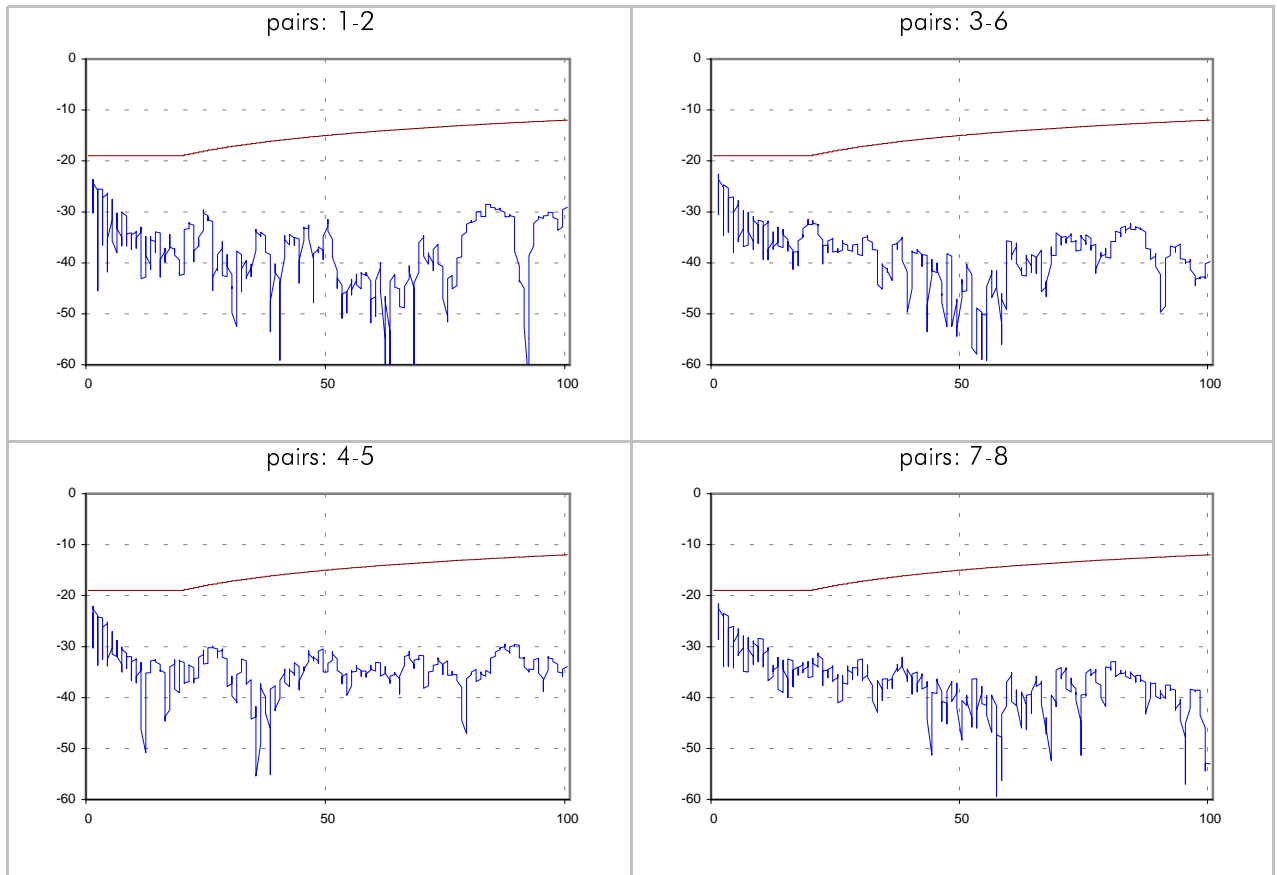
PSACR / dB (scanner side - type 1 side)



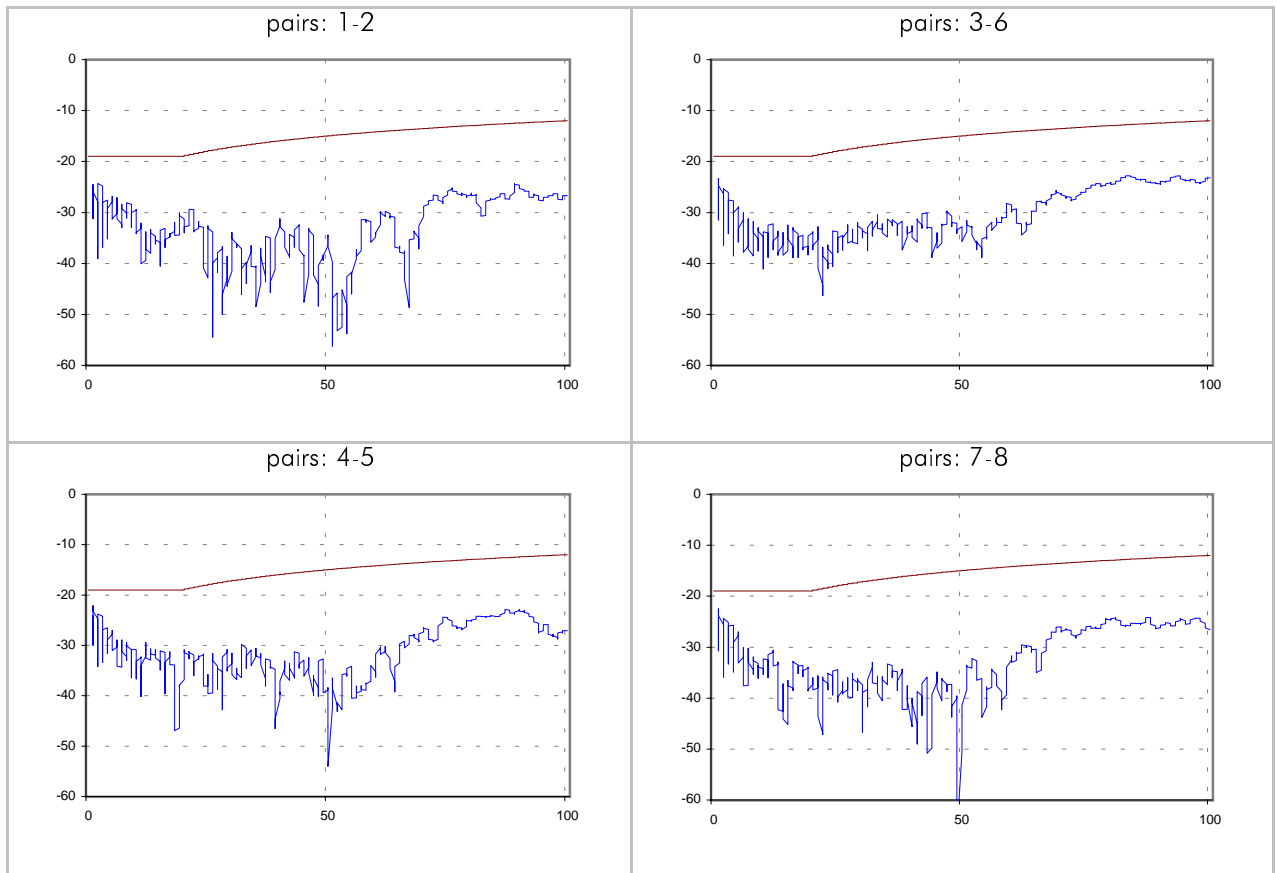
PSACR / dB (remote side - type 2 side)



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



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



Attenuation / dB

