

## Test Report No. EWA20026-41

### 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)<br>TG Measuring Cable Cat. 6 - 5m (2x)            |
| Part 4:             | M06015A0079 (2x)<br>Microtest Omniscanner 2 Channel Adapter Cat. 6 |
| Installation Cable: | Silverline Gold S-STP 4x2/0,58 LSFROH Cat. 7                       |

### 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 = -10,8 dB and @ 250 MHz = -8,6 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

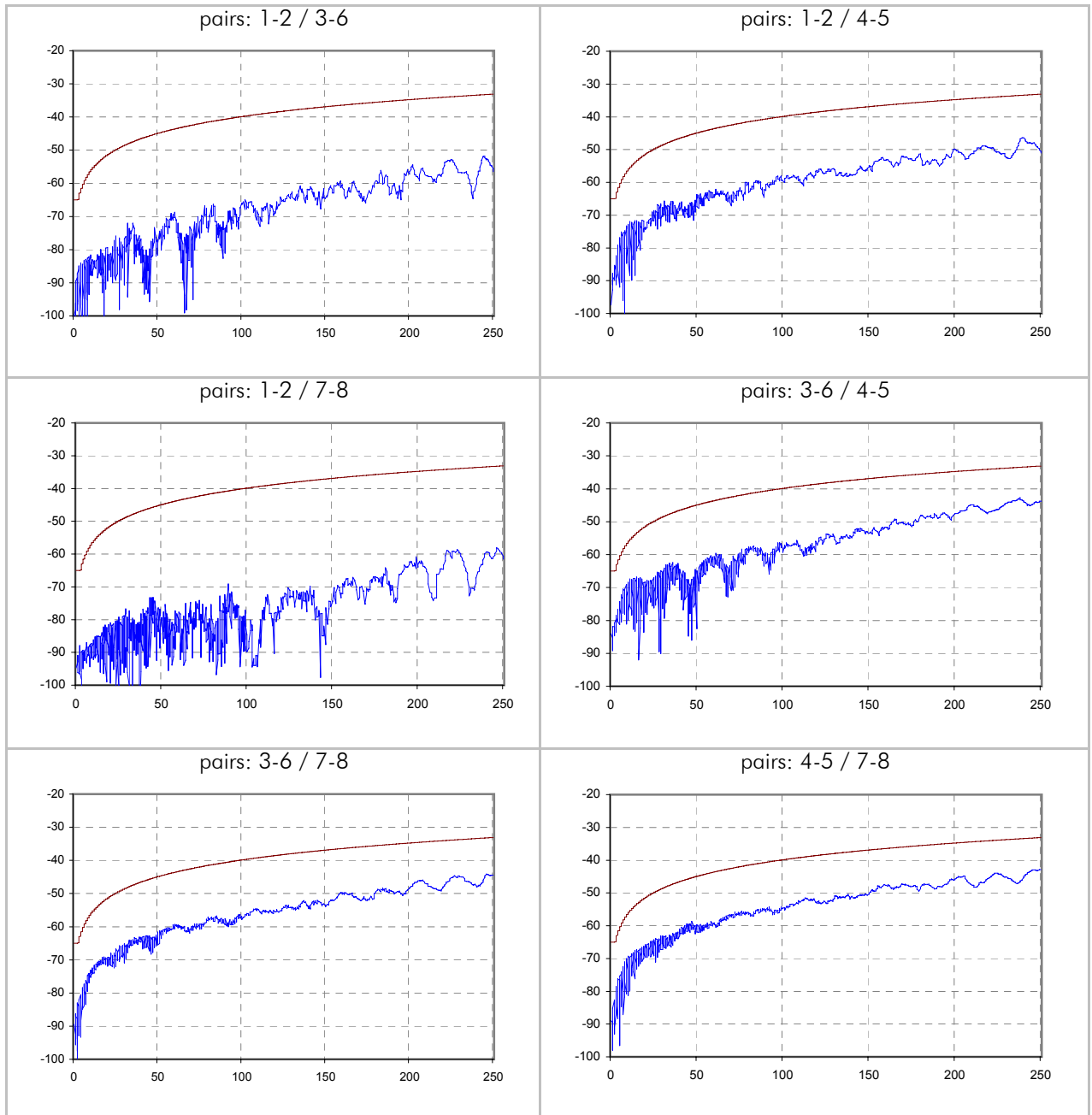
## Test Results

| pairs                       | 1-2   | 3-6   | 4-5   | 7-8   | limit | skew / ns | limit |
|-----------------------------|-------|-------|-------|-------|-------|-----------|-------|
| max Propagation delay / ns  | 454,0 | 466,0 | 456,0 | 462,0 | 546,3 | 12,0      | 50,0  |
| Attenuation @ 100 MHz / dB  | -18,6 | -19,2 | -18,7 | -19,0 | -21,7 |           |       |
| Attenuation @ 250 MHz / dB  | -29,5 | -30,8 | -30,3 | -30,9 | -21,7 |           |       |
| min PSNEXT margin / dB      | 13,4  | 5,1   | 7,8   | 8,0   |       |           |       |
| @ f / MHZ                   | 237,1 | 237,1 | 24,6  | 237,1 |       |           |       |
| PSNEXT limit / dB           | -30,6 | -30,6 | -47,5 | -30,6 |       |           |       |
| PSNEXT @ 100 MHz            | -58,8 | -49,1 | -49,3 | -51,5 | -37,1 |           |       |
| PSNEXT @ 250 MHz            | -47,3 | -38,5 | -39,9 | -40,6 | -30,2 |           |       |
| min PSELFEXT margin / dB    | 13,9  | 7,5   | 6,7   | 12,6  |       |           |       |
| @ f / MHZ                   | 1,0   | 1,0   | 1,0   | 1,2   |       |           |       |
| PSELFEXT limit / dB         | -60,6 | -60,6 | -60,6 | -58,8 |       |           |       |
| PSELFEXT @ 100 MHz          | -38,6 | -29,5 | -29,3 | -40,3 | -20,3 |           |       |
| PSELFEXT @ 250 MHz          | -30,2 | -26,3 | -26,6 | -27,2 | -12,3 |           |       |
| min PSACR margin / dB       | 18,5  | 9,3   | 9,0   | 13,0  |       |           |       |
| @ f / MHZ                   | 6,8   | 237,1 | 24,6  | 235,3 |       |           |       |
| PSACR limit / dB            | 51,3  | -4,3  | 37,1  | -4,1  |       |           |       |
| PSACR @ 100 MHz             | 40,6  | 34,7  | 33,1  | 33,9  | 15,4  |           |       |
| PSACR @ 250 MHz             | 19,0  | 10,1  | 11,0  | 10,0  | -5,7  |           |       |
| min Return Loss margin / dB | 3,5   | 4,3   | 3,5   | 4,3   |       |           |       |
| @ f / MHZ                   | 2,5   | 3,4   | 2,5   | 2,3   |       |           |       |
| Return Loss limit / dB      | -19,0 | -19,0 | -19,0 | -19,0 |       |           |       |

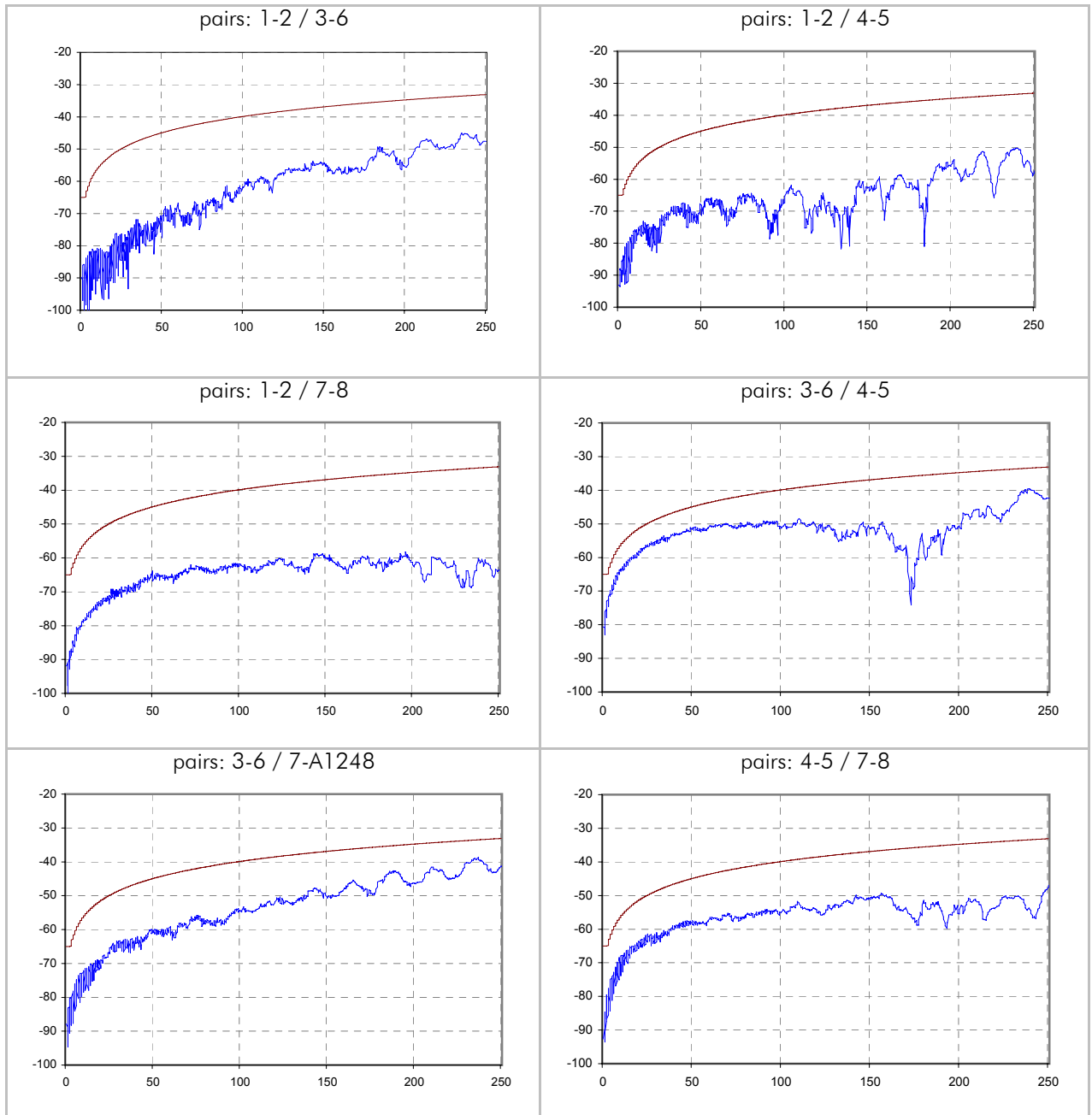
| pairs                | 1-2 / 3-6 | 1-2 / 4-5 | 1-2 / 7-8 | 3-6 / 4-5 | 3-6 / 7-8 | 4-5 / 7-8 | limit |
|----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| min NEXT margin / dB | 11,4      | 13,0      | 18,9      | 5,8       | 5,2       | 9,8       |       |
| @ f / MHZ            | 235,3     | 239,8     | 50,2      | 34,7      | 237,1     | 245,6     |       |
| Next limit / dB      | -33,6     | -33,4     | -45,0     | -47,7     | -33,5     | -33,2     |       |
| NEXT @ 100 MHz       | -63,0     | -59,4     | -62,7     | -50,7     | -54,7     | -54,7     | -39,9 |
| NEXT @ 250 MHz       | -47,6     | -50,1     | -59,9     | -42,3     | -41,7     | -42,9     | -33,1 |
| min ACR margin / dB  | 15,6      | 16,5      | 20,5      | 7,0       | 9,5       | 12,3      |       |
| @ f / MHZ            | 235,3     | 6,8       | 50,2      | 34,7      | 235,3     | 9,7       |       |
| ACR limit / dB       | -1,2      | 53,9      | 29,9      | 35,3      | -1,2      | 50,3      |       |
| ACR @ 100 MHz        | 43,8      | 40,7      | 43,8      | 31,5      | 35,5      | 35,7      | 18,2  |
| ACR @ 250 MHz        | 16,8      | 19,8      | 29,0      | 11,5      | 10,8      | 12,0      | -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 | 19,2      | 11,5      | 24,0      | 5,2       | 11,8      | 11,5      |       |
| @ f / MHZ              | 1,0       | 1,2       | 201,1     | 1,0       | 221,8     | 144,9     |       |
| ELFEXT limit / dB      | -63,6     | -61,8     | -17,2     | -63,6     | -16,3     | -20,0     |       |
| min ELFEXT margin / dB | 19,2      | 11,4      | 23,2      | 5,1       | 12,2      | 10,9      |       |
| @ f / MHZ              | 1,0       | 2,5       | 201,1     | 1,0       | 248,8     | 144,9     |       |
| ELFEXT limit / dB      | -63,6     | -55,2     | -17,2     | -63,6     | -15,3     | -20,0     |       |
| ELFEXT @ 100 MHz       | -52,0     | -39,0     | -53,0     | -29,5     | -47,5     | -41,7     | -23,3 |
| ELFEXT @ 250 MHz       | -45,2     | -30,2     | -40,8     | -30,2     | -27,9     | -34,1     | -15,3 |
| ELFEXT @ 100 MHz       | -51,4     | -38,9     | -52,6     | -30,0     | -47,7     | -41,5     | -23,3 |
| ELFEXT @ 250 MHz       | -43,9     | -29,5     | -39,4     | -30,8     | -27,8     | -33,4     | -15,3 |

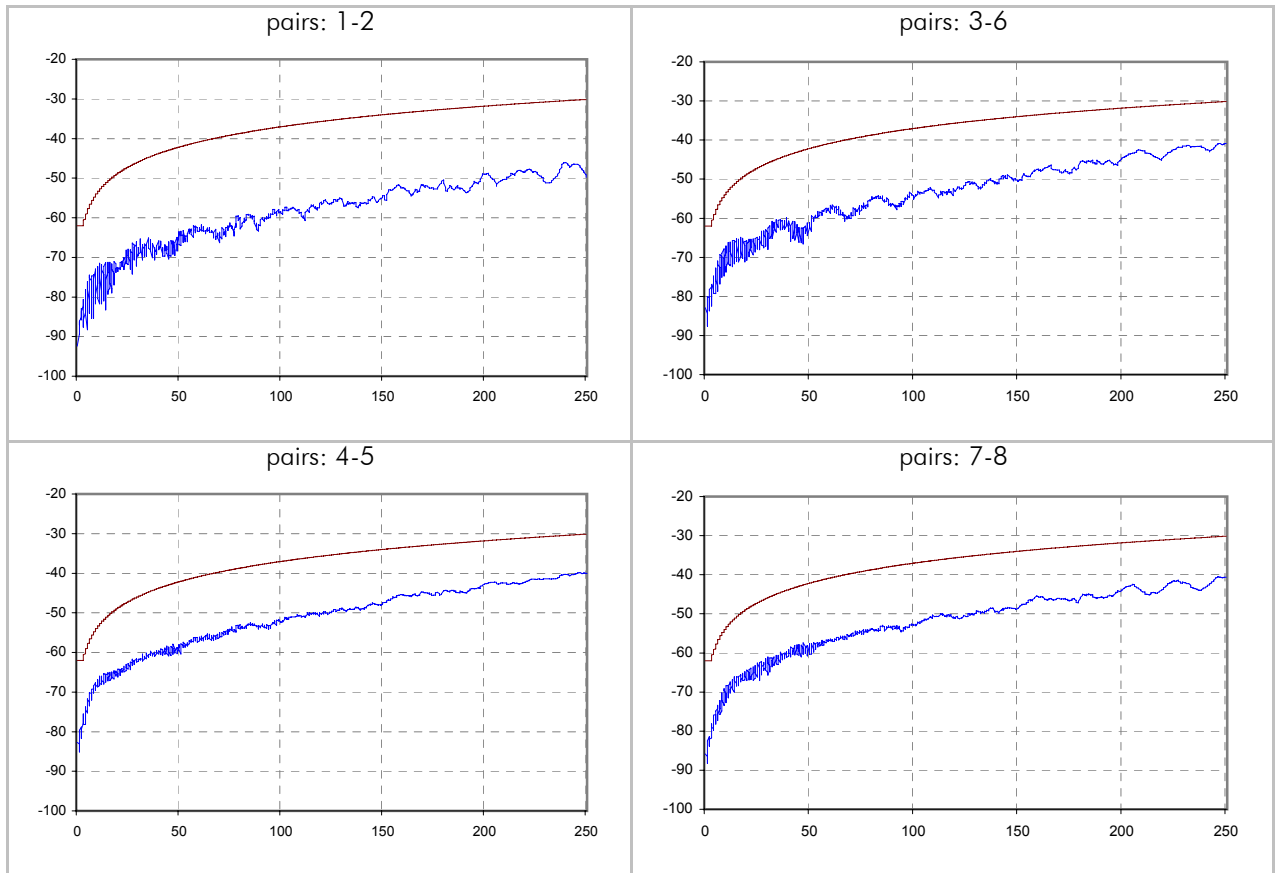
NEXT / dB (scanner side - type 1 side)



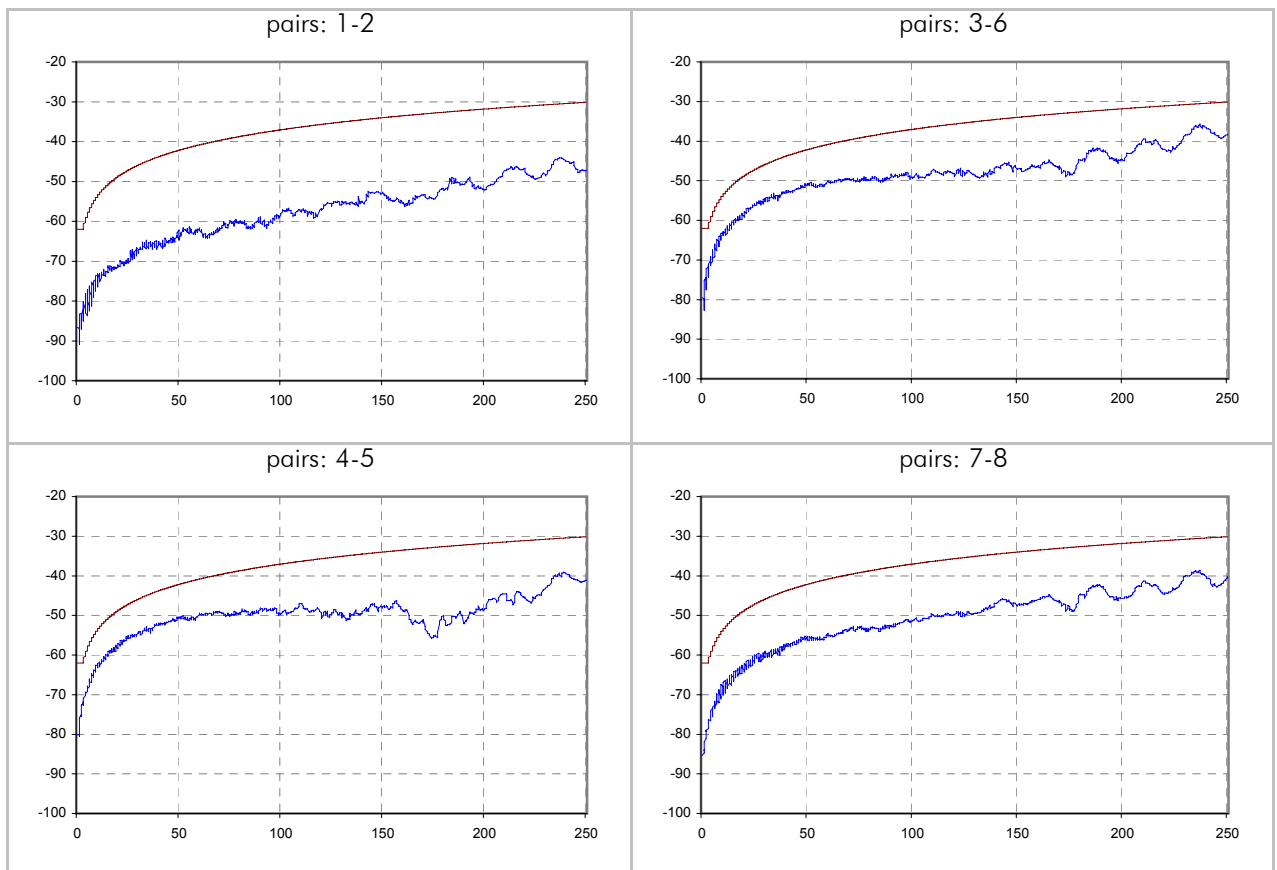
NEXT / dB (remote side - type 2 side)



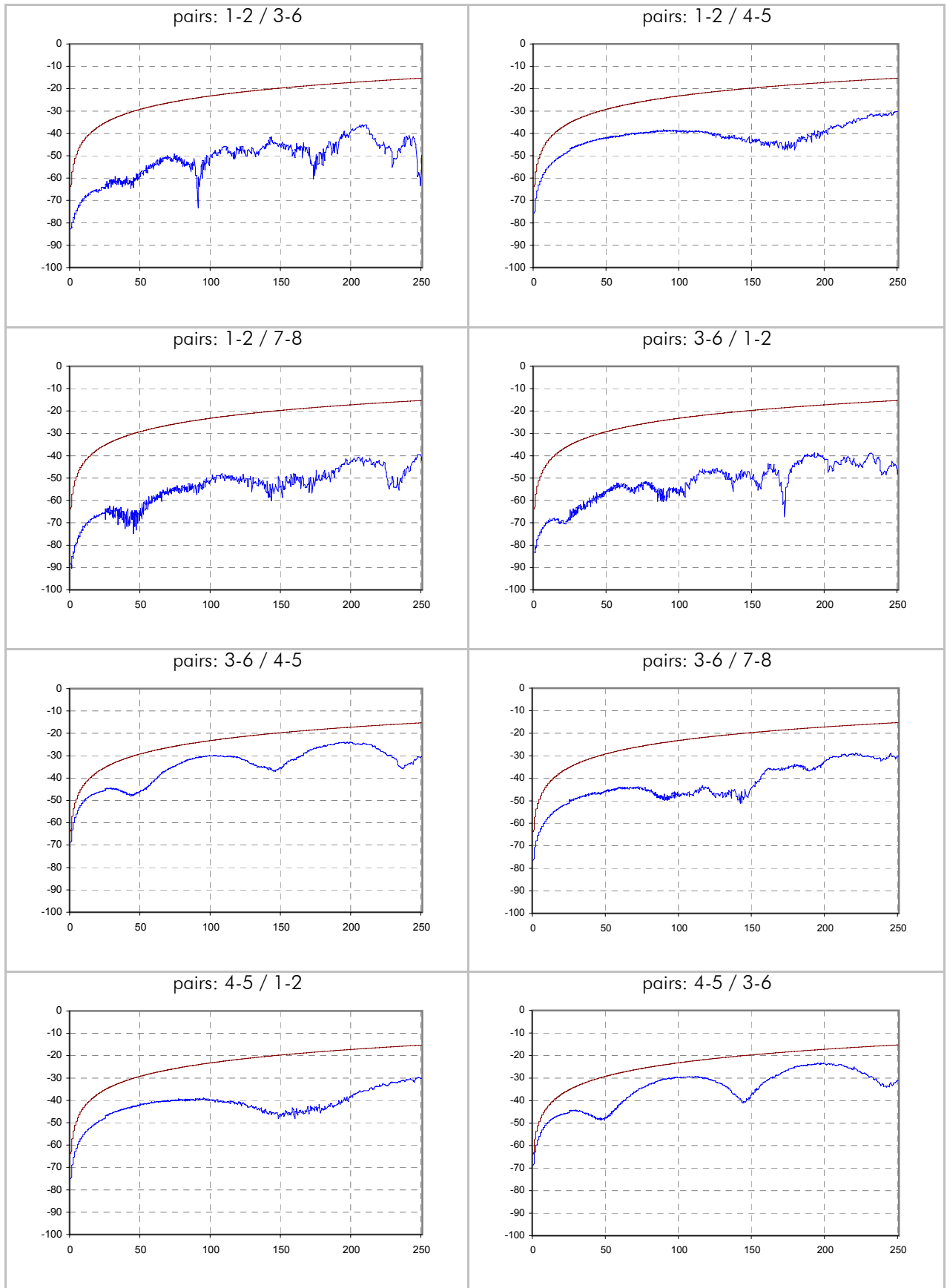
PSNEXT / dB (scanner side - type 1 side)



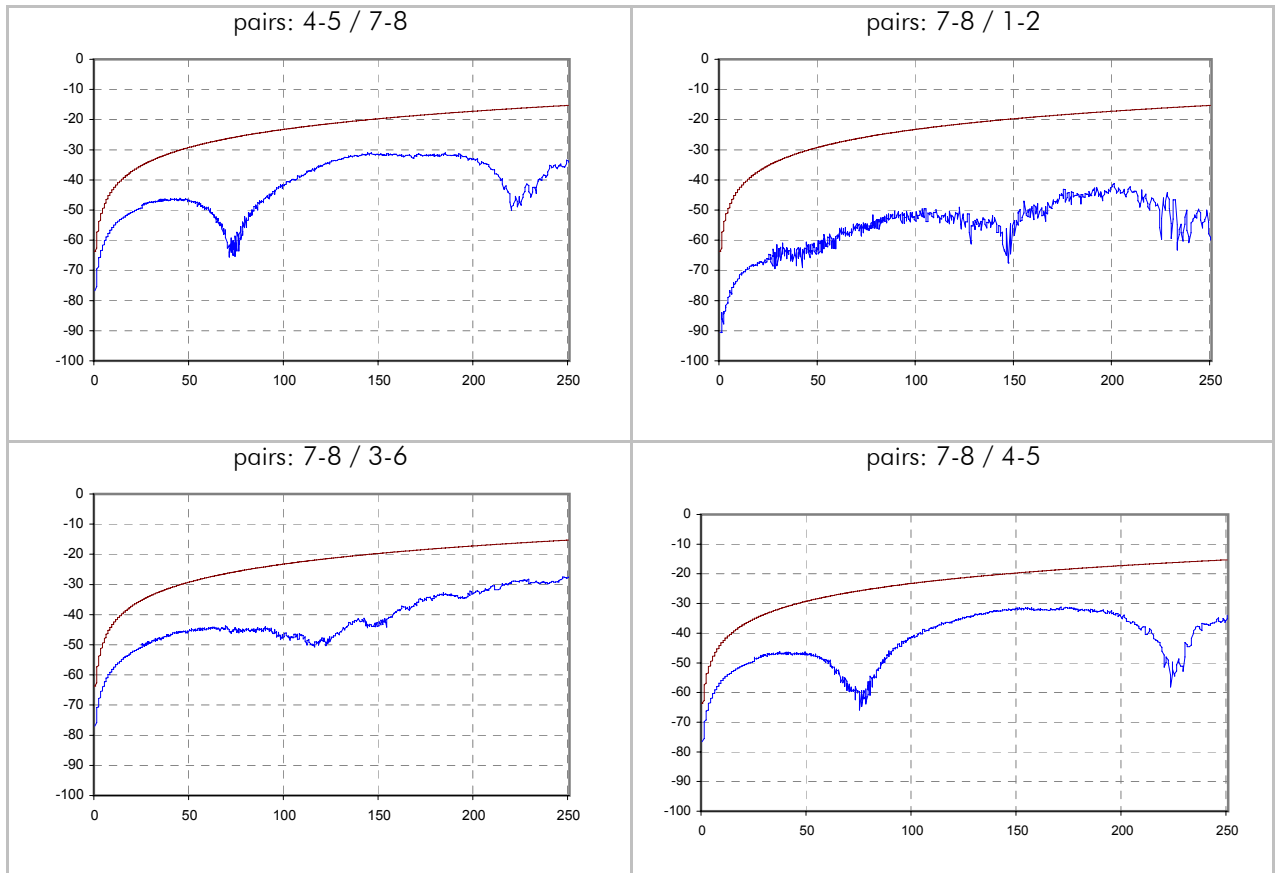
PSNEXT / dB (remote side - type 2 side)



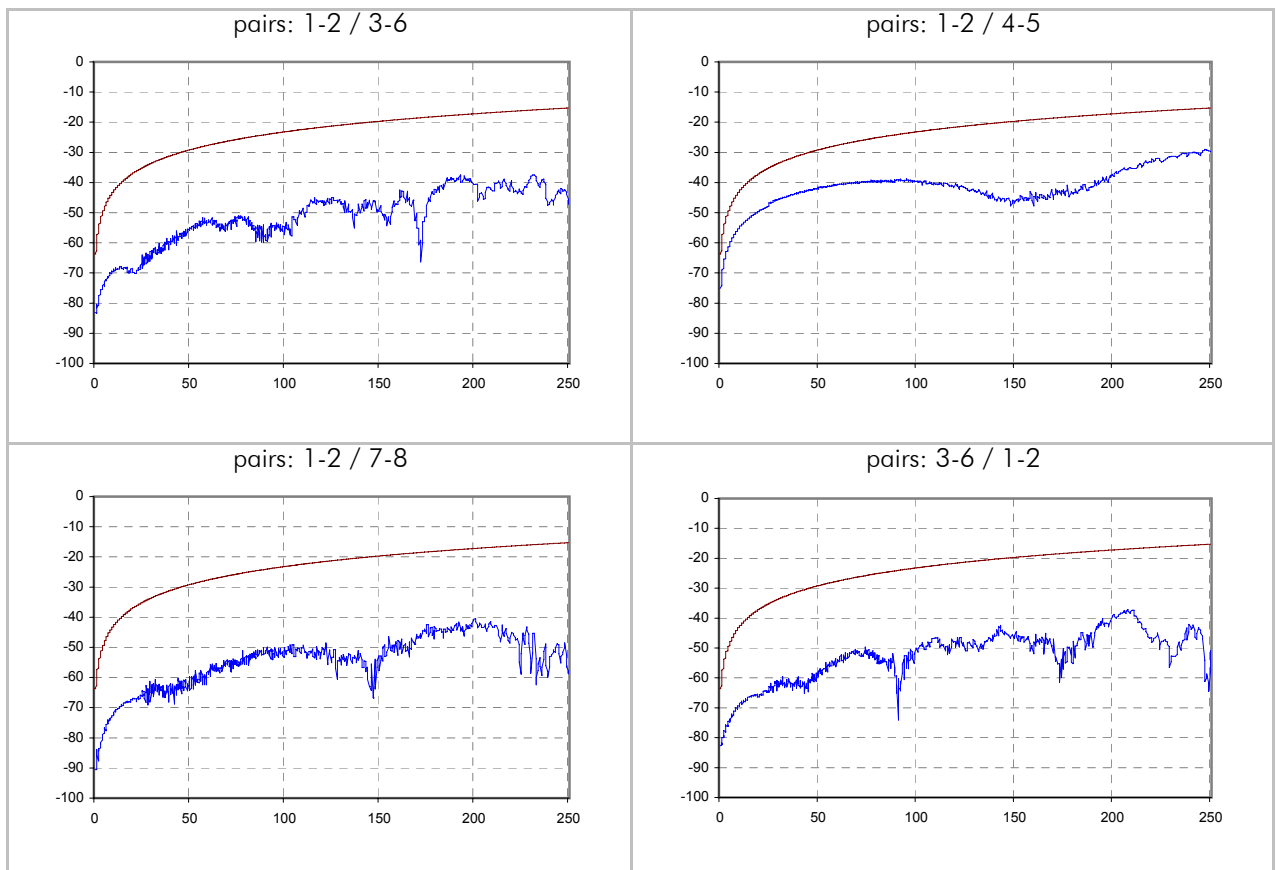
ELFEXT / dB (scanner side - type 1 side)



ELFEXT / dB (scanner side - type 1 side)

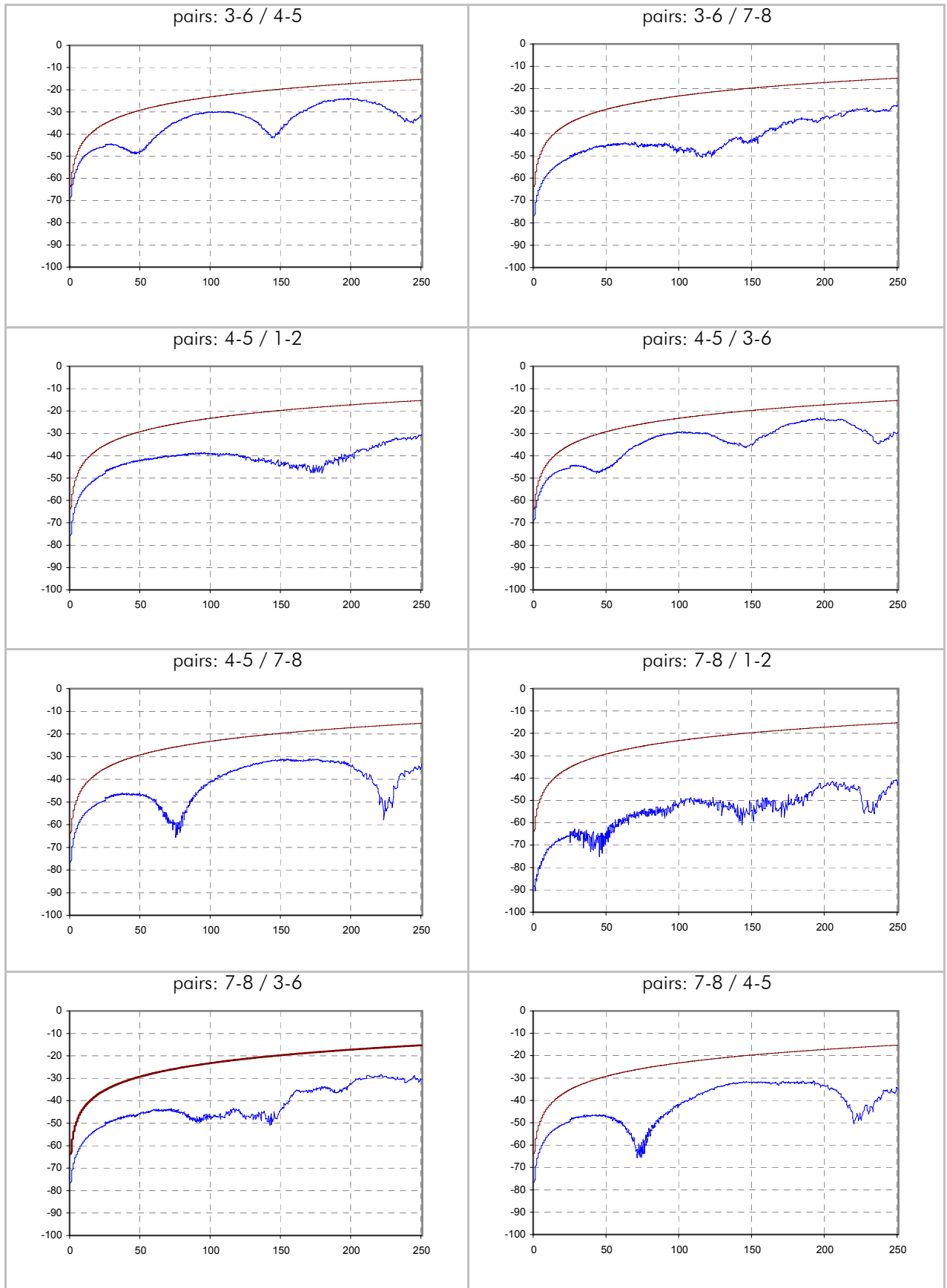


ELFEXT / dB (remote side - type 2 side)

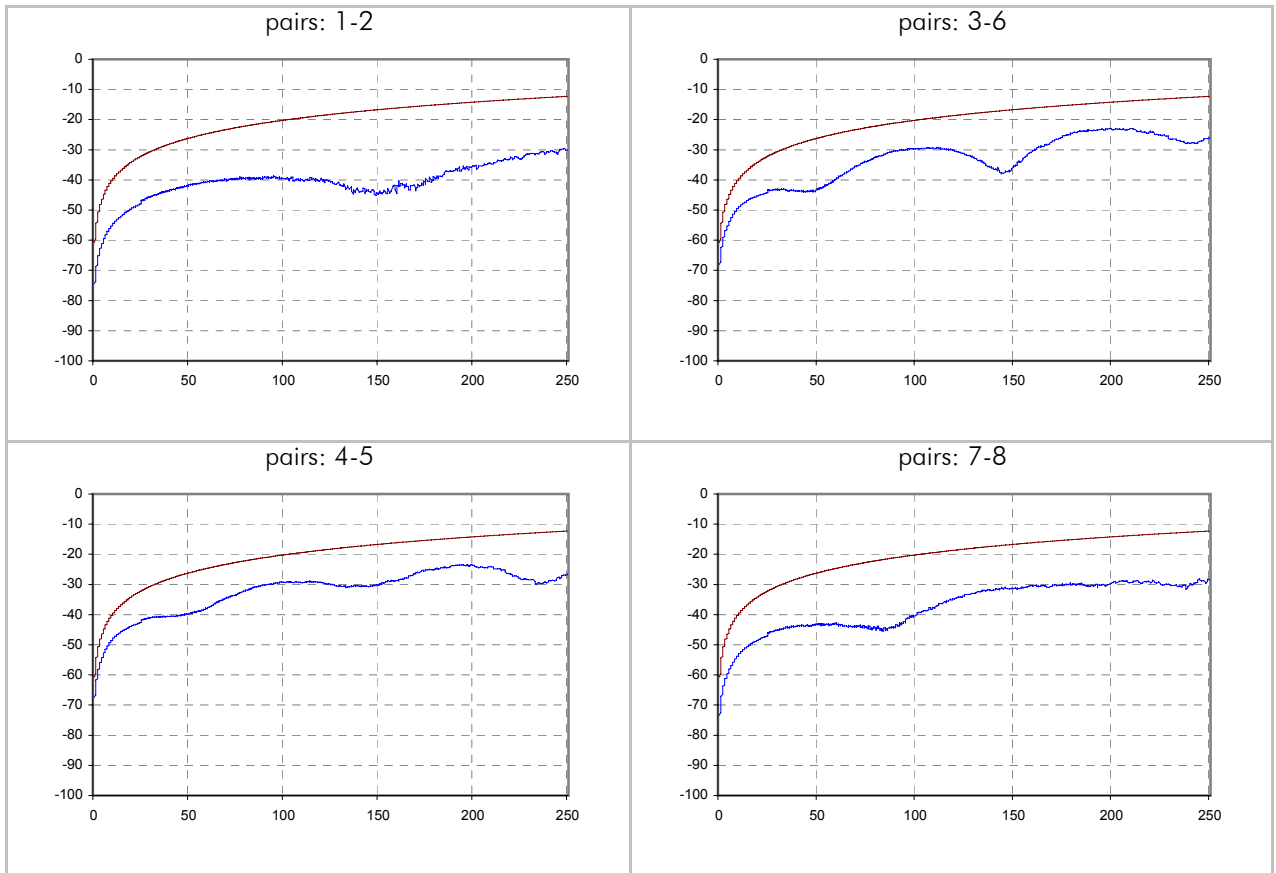




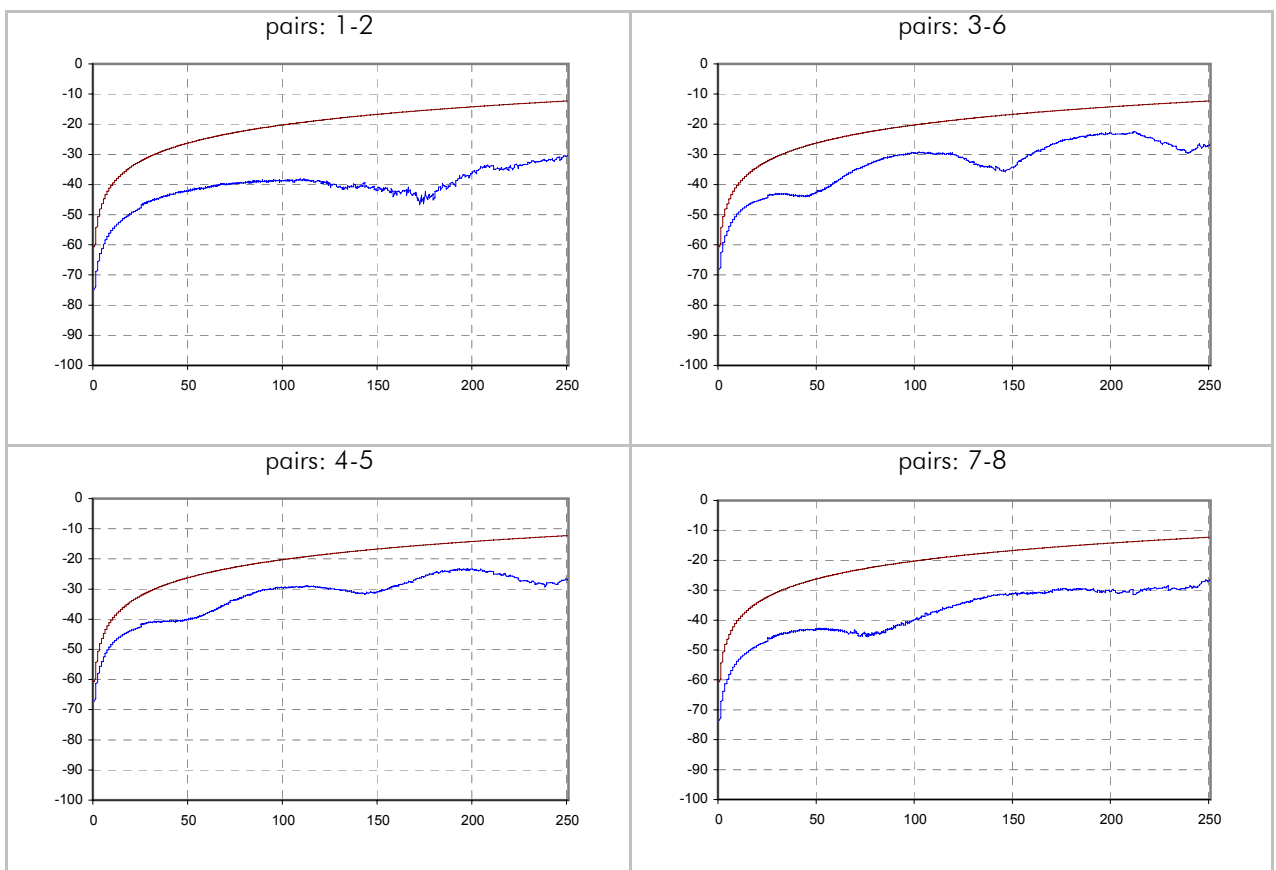
ELFEXT / dB (remote side - type 2 side)



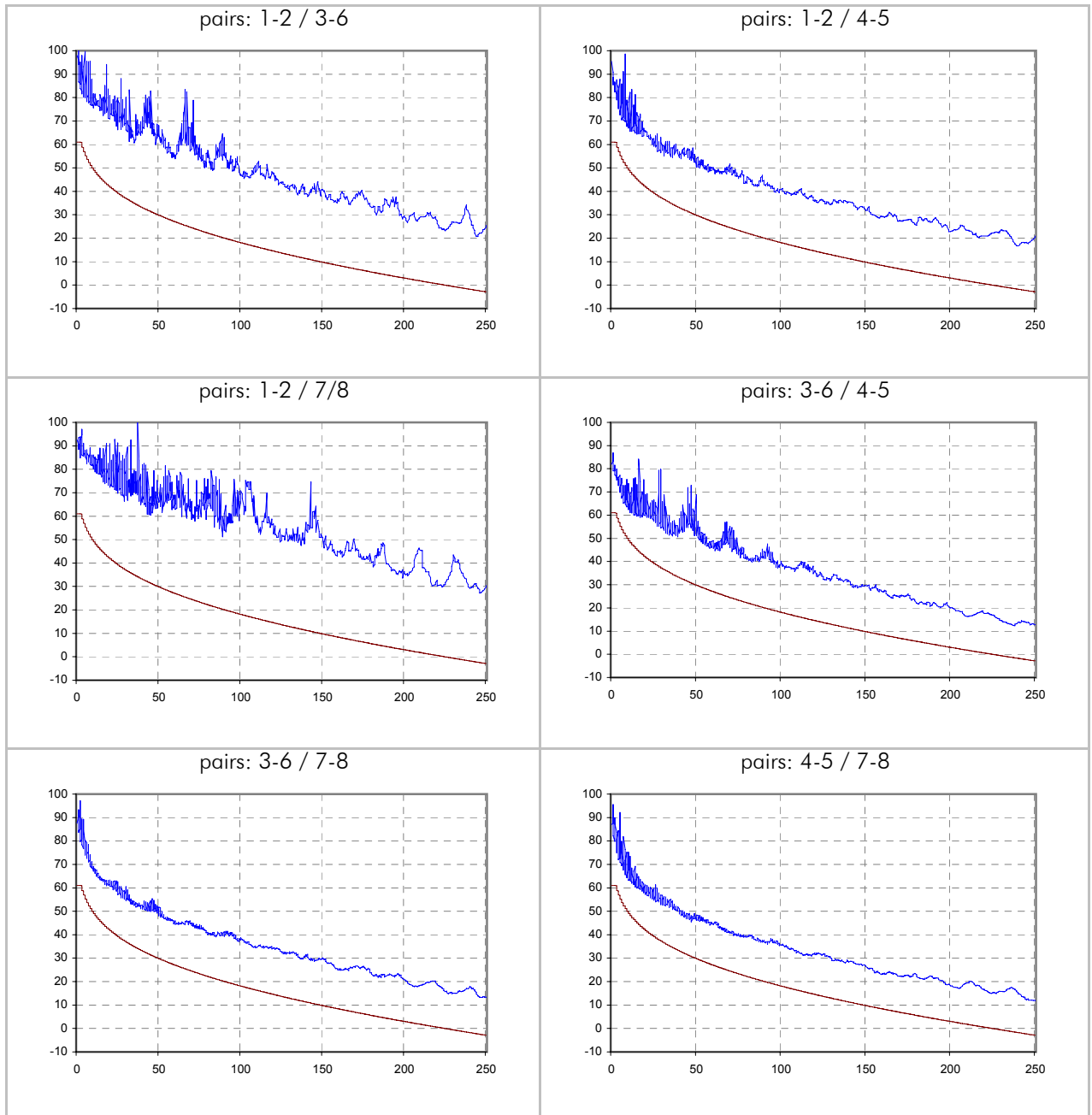
PSELFEXT / dB (scanner side - type 1 side)



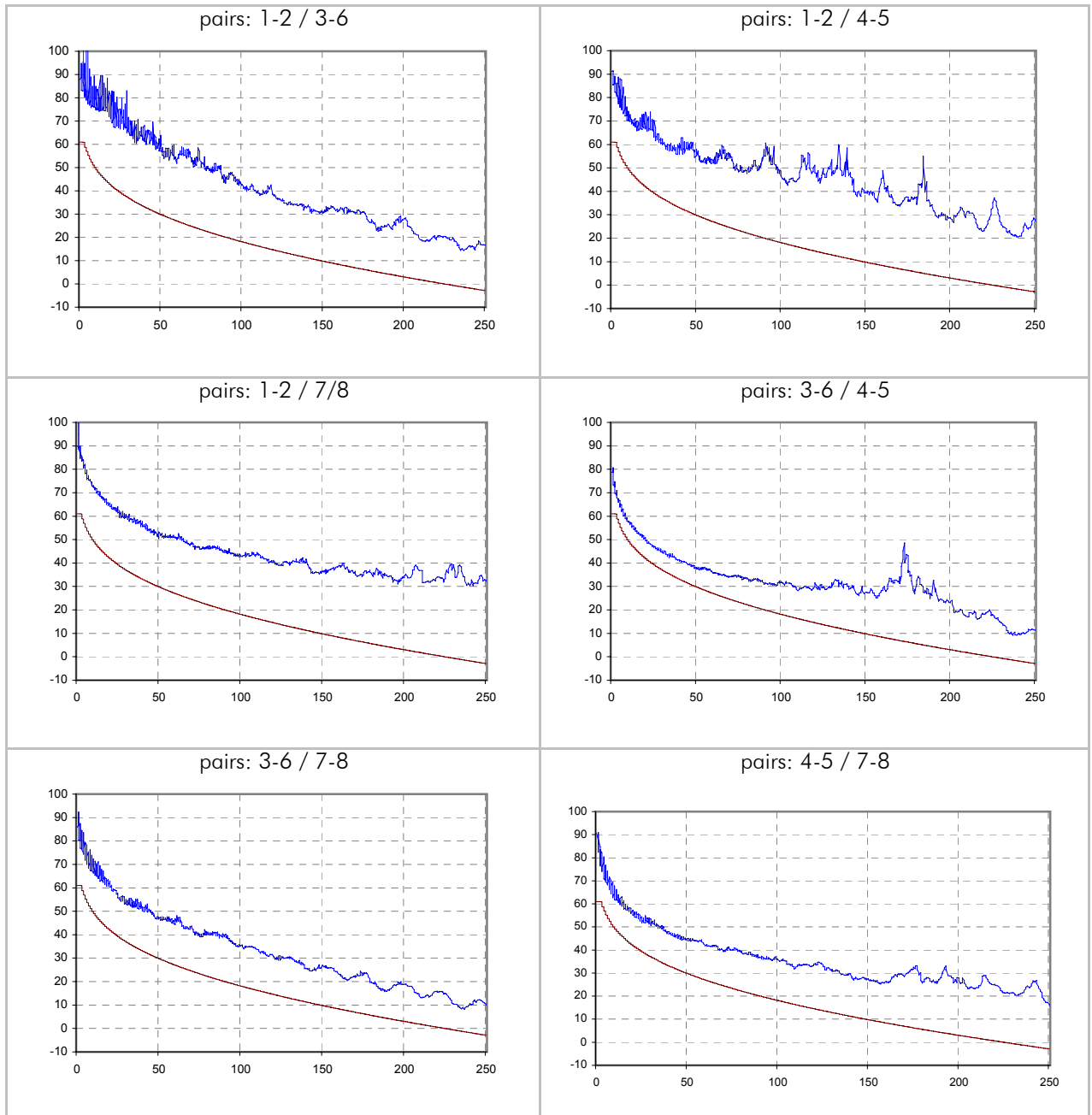
PSELFEXT / dB (remote side - type 2 side)



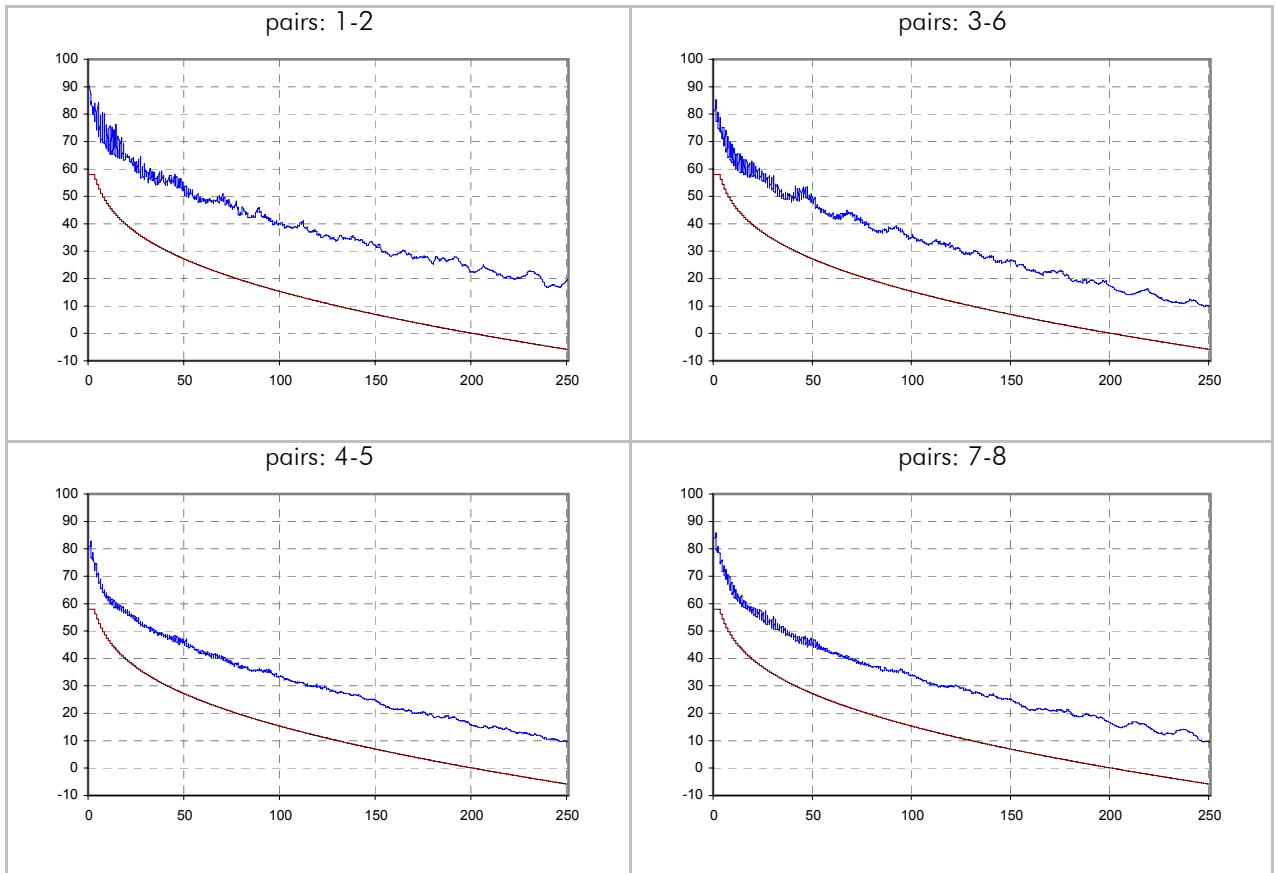
ACR / dB (scanner side - type 1 side)



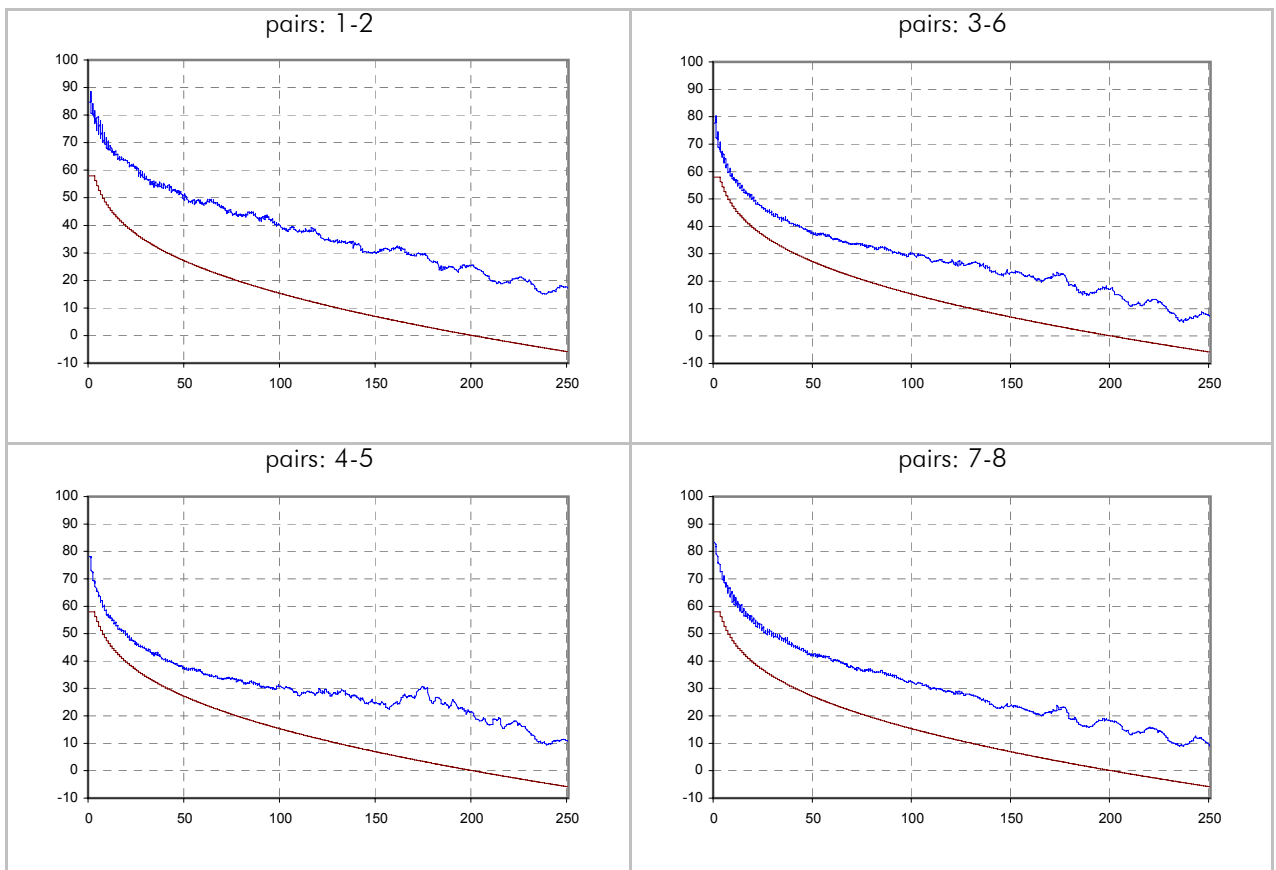
ACR / dB (remote side - type 2 side)



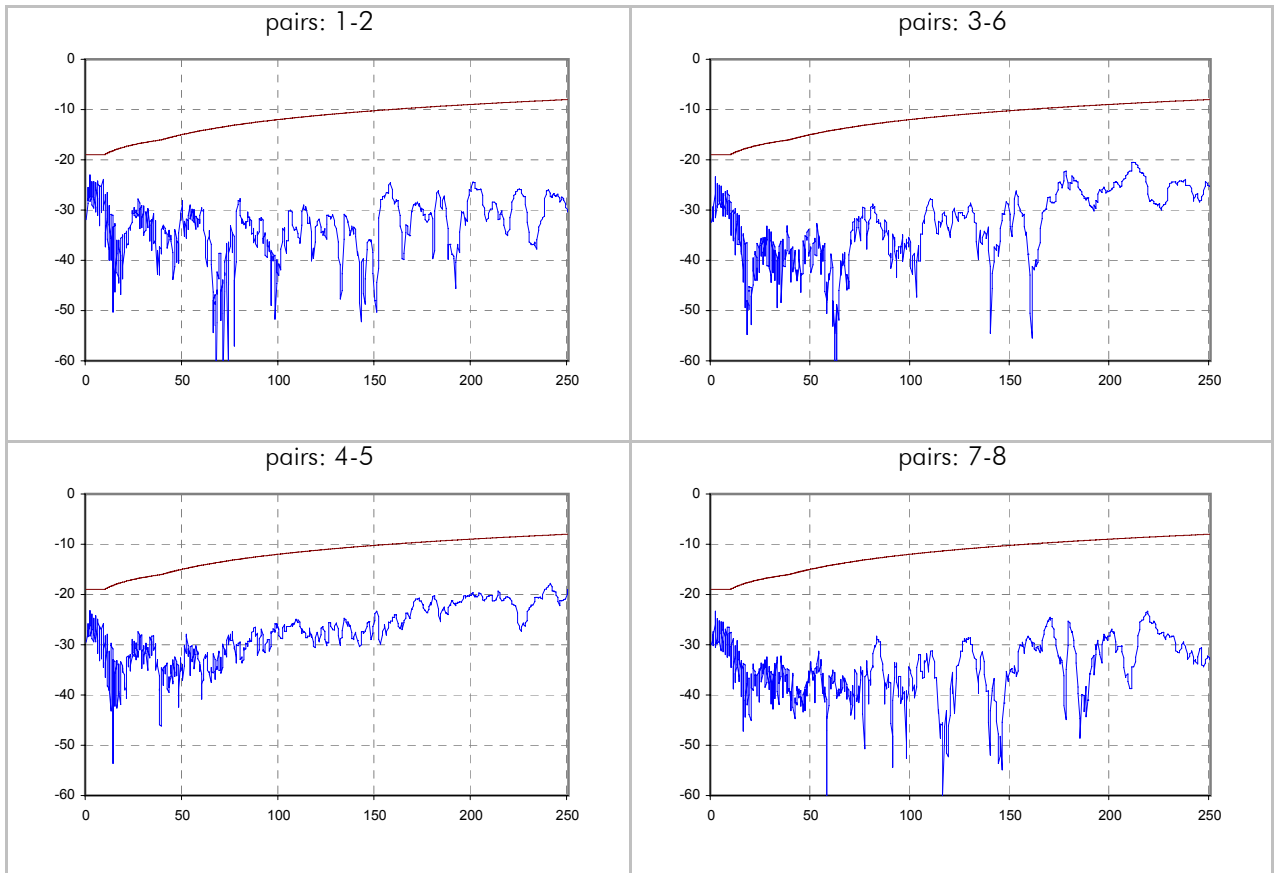
PSACR / dB (scanner side - type 1 side)



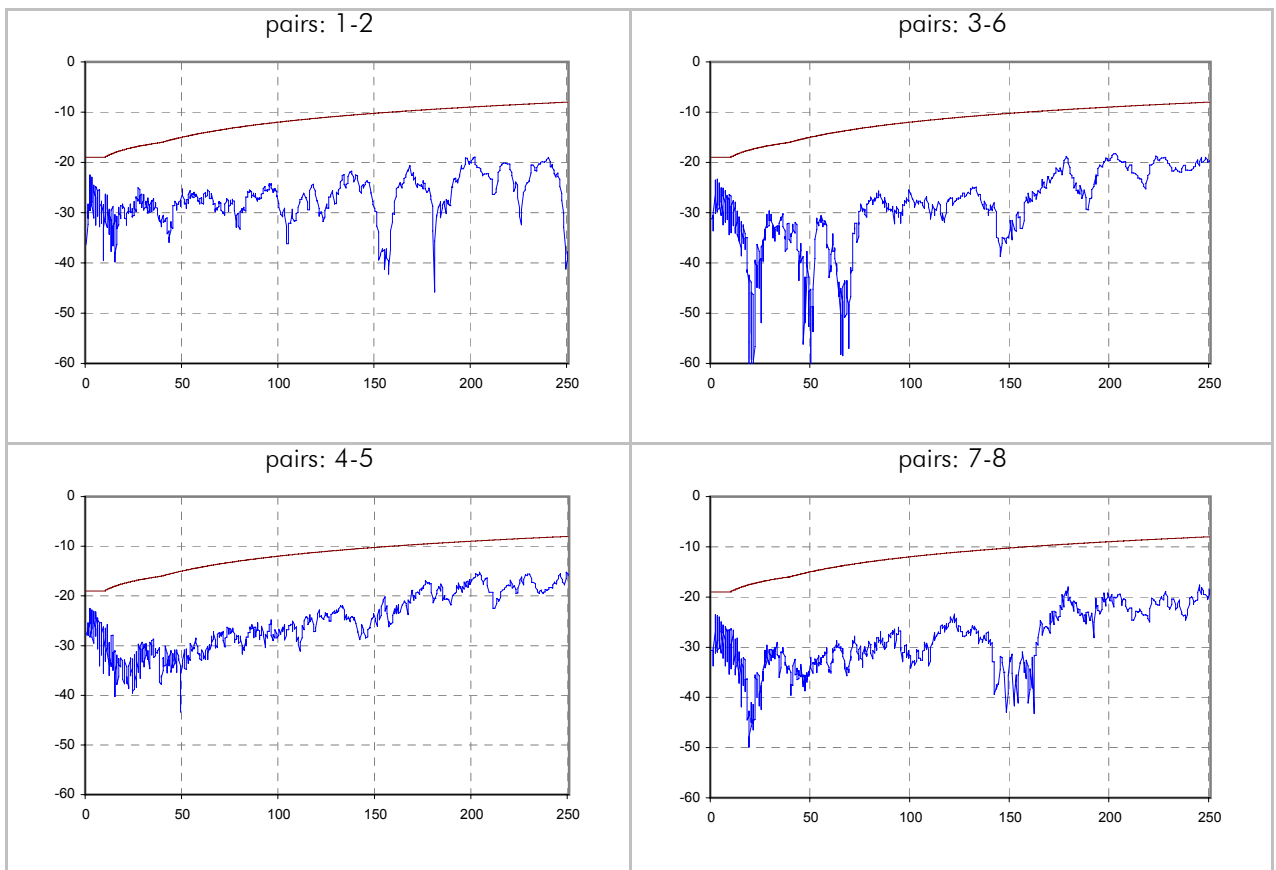
PSACR / dB (remote side - type 2 side)



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



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



Attenuation / dB

