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## 2.4.4.4.5. Sampling rate and decimations

Decimations and time scales of a buffer are given in the tables below.

STEMlab 125-14 & STEMlab 125-10:

| Decimation | Sampling Rate | Time scale/length of a buffer | Trigger delay in samples | Trigger delay in time |
|------------|---------------|-------------------------------|--------------------------|-----------------------|
| 1          | 125 MS/s      | 131.072 $\mu$ s               | from - 8192 to x         | -6.55                 |
| 8          | 15.6 MS/s     | 1.049 ms                      | from - 8192 to x         | -5.24                 |
| 64         | 1.953 MS/s    | 8.389 ms                      | from - 8192 to x         | -4.19                 |
| 1024       | 122.07 kS/s   | 134.218 ms                    | from - 8192 to x         | -6.71                 |
| 8192       | 15.258 kS/s   | 1.074 s                       | from - 8192 to x         | -5.36                 |
| 65536      | 1.907 kS/s    | 8.590 s                       | from - 8192 to x         | -4.29                 |

SDRlab 122-16:

| Decimation | Sampling Rate | Time scale/length of a buffer | Trigger delay in samples | Trigger delay in time |
|------------|---------------|-------------------------------|--------------------------|-----------------------|
| 1          | 122.8 MS/s    | 133.42 $\mu$ s                | from - 8192 to x         | -6.67                 |
| 8          | 15.35 MS/s    | 1.067 ms                      | from - 8192 to x         | -5.33                 |
| 64         | 1.918 MS/s    | 8.538 ms                      | from - 8192 to x         | -4.26                 |
| 1024       | 119.92 MS/s   | 136.622 ms                    | from - 8192 to x         | -6.83                 |
| 8192       | 14.99 kS/s    | 1.092 s                       | from - 8192 to x         | -5.46                 |
| 65536      | 1.8737 kS/s   | 8.743 s                       | from - 8192 to x         | -4.37                 |

SIGNALlab 250-12:

| Decimation | Sampling Rate | Time scale/length of a buffer | Trigger delay in samples | Trigger delay in time |
|------------|---------------|-------------------------------|--------------------------|-----------------------|
| 1          | 250 MS/s      | 65.536 $\mu$ s                | from - 8192 to x         | -3.22                 |

|       |             |           |                  |       |
|-------|-------------|-----------|------------------|-------|
| 8     | 31.250 MS/s | 0.524 ms  | from - 8192 to x | -2.62 |
| 64    | 3.906 MS/s  | 4.194 ms  | from - 8192 to x | -2.09 |
| 1024  | 244.14 kS/s | 67.108 ms | from - 8192 to x | -3.35 |
| 8192  | 30.517 kS/s | 0.536 s   | from - 8192 to x | -2.68 |
| 65536 | 3.814 kS/s  | 4.294 s   | from - 8192 to x | -2.14 |