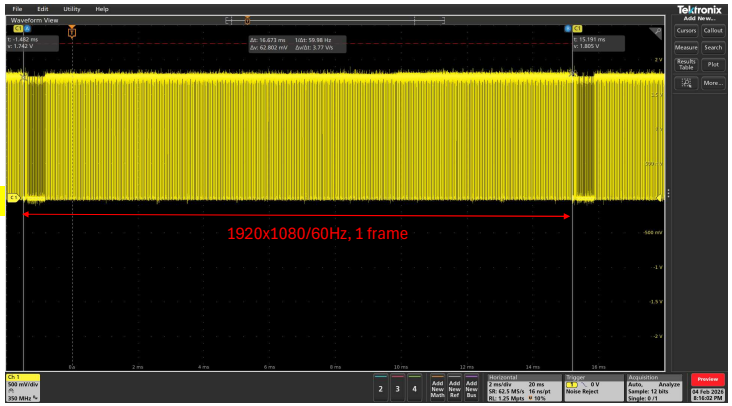FP_DE