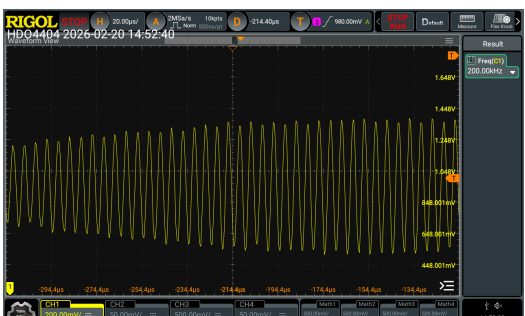




# NanoSDR-TX – Captured Waveforms

Six oscilloscope/spectrum captures from a real FPGA-based SDR transmitter project (NanoSDR-TX, Tang Nano 4K, see `nano_sdr.md` in this folder), collected below in a single table - a compact way to review a batch of related images side by side instead of scrolling past them one at a time.

| Capture                                                                             | Description                                                                                                                          |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
|    | 1-bit PDM output waveform, shown before and after the RC low-pass filter.                                                            |
|   | Spectrum of the unfiltered 10 kHz carrier straight out of the PDM output - shows the harmonic content the RC filter needs to remove. |
|  | AM modulation captured from <code>send_am.py</code> , audio tone driving the sigma-delta DAC.                                        |
|  | Close-up of the carrier waveform after filtering.                                                                                    |



| Capture                                                                           | Description                                                                                                                            |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
|  | Decoding QPSK through the 1-bit sigma-delta converter with only a simple RC filter as the reconstruction filter - noisy, but it works. |
|  | Same QPSK signal for comparison, this time through a proper DA converter and a high-quality low-pass filter.                           |

**A note on the comments above:** %%text%% is MD Visor's inline editorial-comment syntax - it shows up highlighted in the live preview (as seen twice in this document) so a reviewer's notes stay visible while editing, but it's **always stripped out of the exported/printed PDF** automatically. No need to hunt down and delete review notes before sending a document out.