Original Image **Color Space** Chroma **Patchify** Transform downsampling Flatten and Stack **Patches** Basis maps **Encoded Image**  $X_{C_B}$  $U_{C_B}$  $V_{C_B}$ Reshape Lossless Image **Integer Matrix**  $X_{Y}$  $U_{Y}$ Compression Factorization **Factors** Coefficient maps  $X_{C_R}$  $\boldsymbol{U}_{C_R}$