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D405 Sample Depth Images

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RealSense
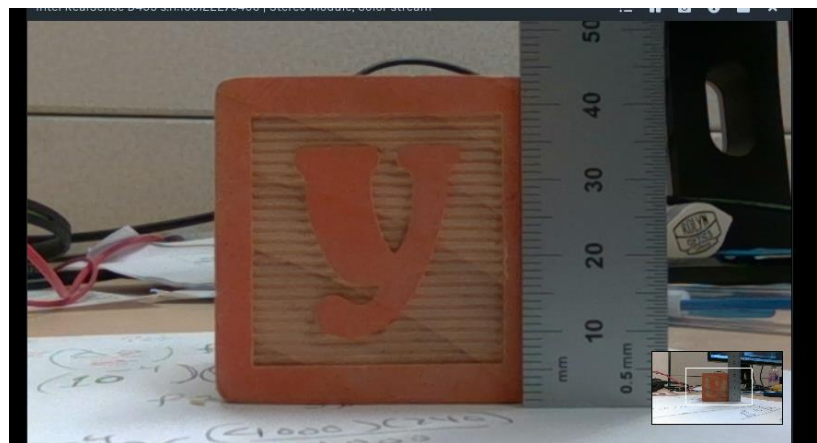
intel.

D405 Depth Image Capture Setup

D405 placed ~100mm from wood block test object
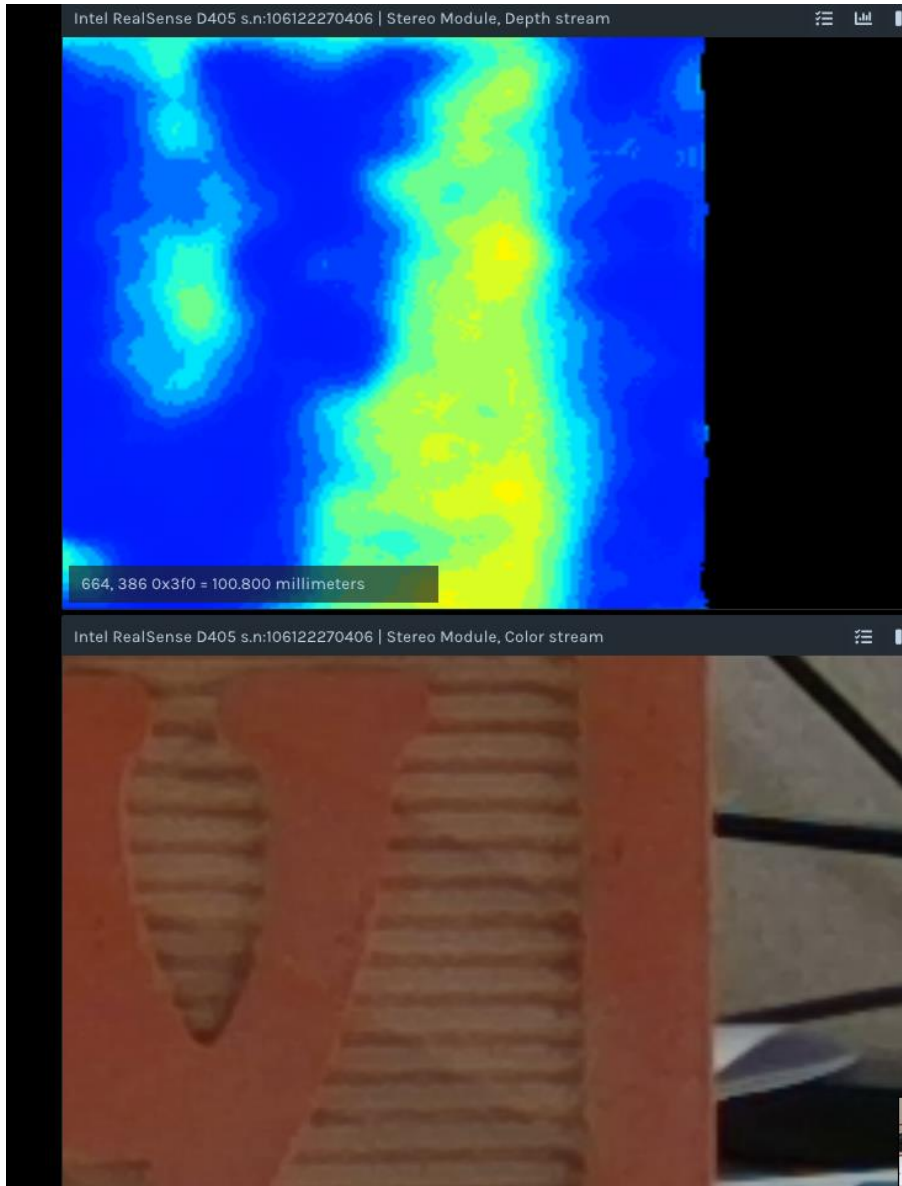
Wood block is ~40mm cube with surface features carved into each face
"Y" has height of ~1.0 +/- 0.2mm above ridged surface. Ridges are spaced by ~1mm and are <0.2mm high
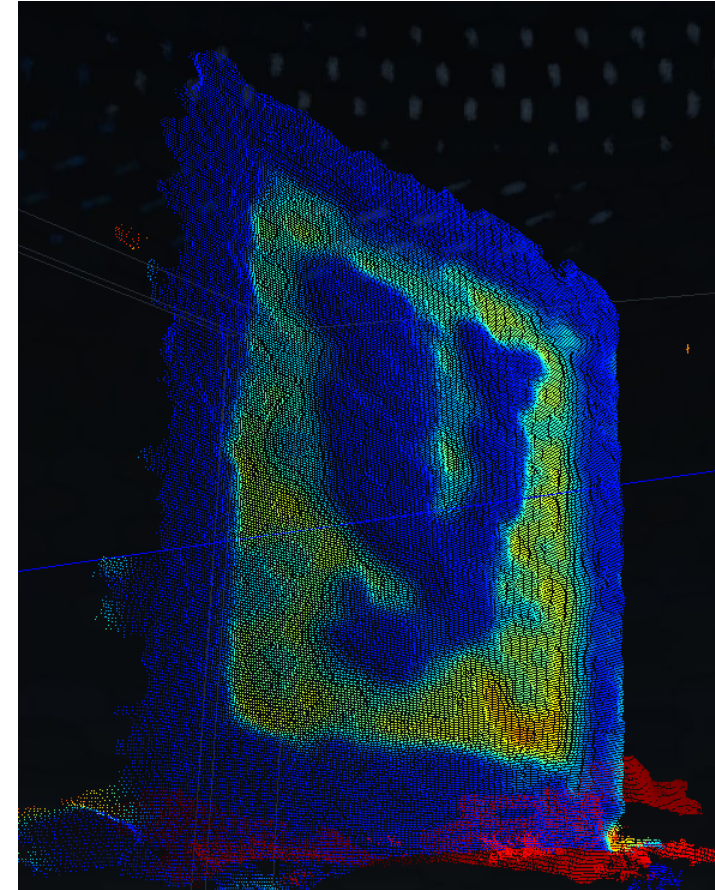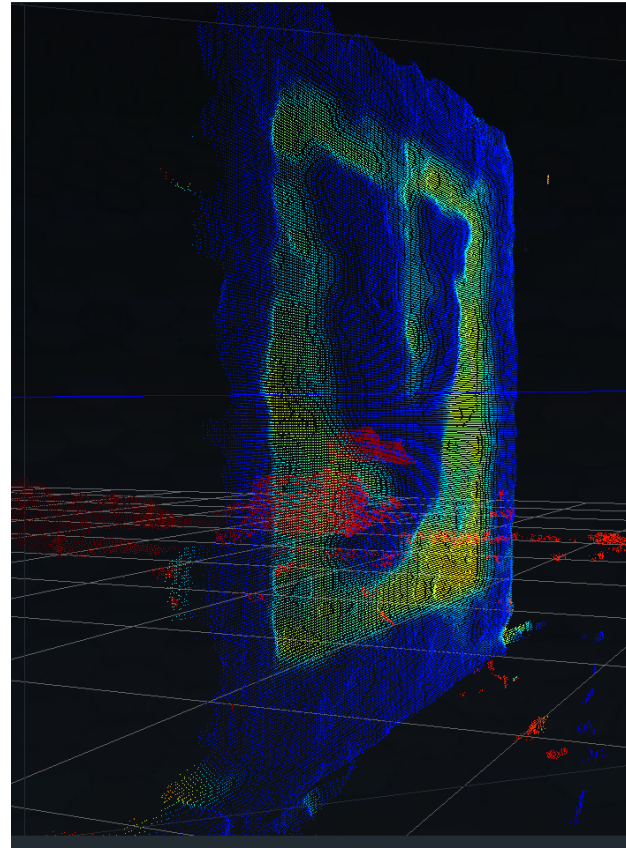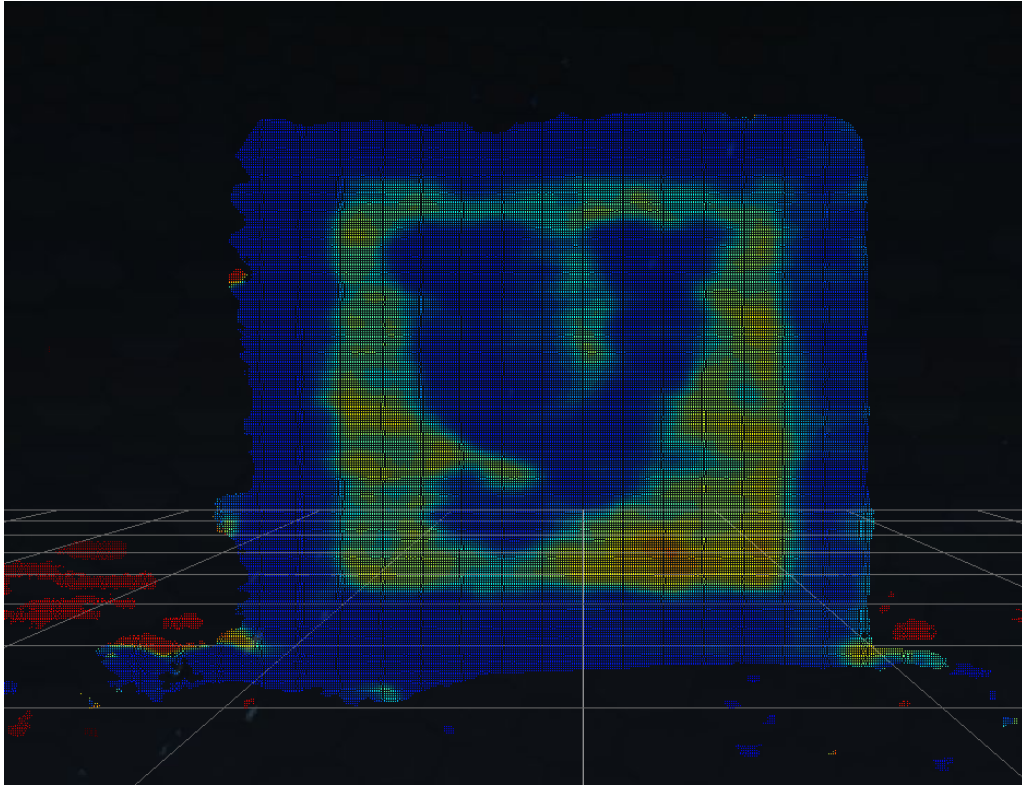
D405 Depth Image Sample

Depth (top) and corresponding RGB (bottom) images of wood block. Default depth settings and HD resolution used. Moderate temporal filtering is applied to improve image quality. The ~1mm relief features are resolvable with noise/variation of ~0.2 – 0.3mm. Further improvement may be possible.

Depth Image – Zoomed In

Enlarged portion of depth and RGB images indicating spatial (x, y) resolution
Depth edges span ~5 pixels.
RGB image has 1-2 pixel resolution.
Each pixel ~0.15mm.

3D Point Cloud

3D point cloud images corresponding to depth image. Provides some indication of depth and spatial resolution achievable.
Z step size is 0.1mm.