Calculating inter band time delay
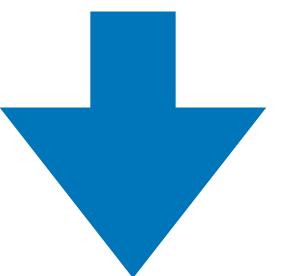
GSD ~ 3.7 m

V_{sat} = 7600m/s

sensor width w = 660px

Time delay/band ~ 321ms

$\Delta t_{\text{blue}-\text{red}}$ ~ 321ms

$\Delta t_{\text{red}-\text{green}}$ ~ 642ms

Calculating inter band time delay : Overlap

8% band overlap

V_{sat}

t_0, t_2, t_4 $1:1$ $8\,\%$
t_0, t_1, t_4 $1:3$ $16\,\%$
t_0, t_1, t_3 $1:2$ $76\,\%$

Position

Blue

Red

Green 1

Green 2

$\Delta t_{\text{blue}-\text{red}} = 0.92(1 \times 295.3) + 0.08(2 \times 295.3) \approx 319 \text{ ms}$

$\Delta t_{\text{red}-\text{green}} = 0.76(2 \times 295.3) + 0.16(3 \times 295.61) + 0.08(2 \times 295.3) \approx 638 \text{ ms}$

t_0 t_1 t_2 t_3 t_4

$295.3ms \rightarrow$ $295.3ms \rightarrow$ $295.3ms$ $\rightarrow$ $295.3ms$ $\rightarrow$

time