Vision through smoke/fire detection SWIR VS Visible wavelengths

Setup

- WiDy SenS in Logarithmic (LOG) mode . No saturation : allows for clear visibility of the firehouse
- State-of-the-art visible camera (Sony IMX sensor)

Results

- Visibility in the SWIR band is almost unaffected by smoke
- Working in the higher part of the spectrum (e.g. 1550nm) allows for a slightly sharper image
- If additional lighting is required, working at 1550nm will give great results. Illuminators at this wavelength are widely commercially available.

1550 nm

Visible

SWIR full band

Results

- SWIR wavelengths allow detection of radiated heat at much lower temperatures than visible
- LOG mode allows a clear vision of the fire house without saturation

SWIR

Visible

Results

- Unlike higher wavelengths, SWIR also allows for clear vision through glass