

Input

Anemometer position from GNSS,
IMU, barometer, magnetometer
 $x_{\text{anemo}}, y_{\text{anemo}}, z_{\text{anemo}}$
(TRS)

Relative wind speed from
sonic anemometer
 $u_{\text{anemo}}, v_{\text{anemo}}, w_{\text{anemo}}$
(BFRS)

UAV groundspeed from EKF2
 $u_{\text{UAV}}, v_{\text{UAV}}, w_{\text{UAV}}$
(TRS)

Induced flow from roll and
pitch gyroscope and the
distance COM \leftrightarrow anemometer
 $u_{\text{induced}}, v_{\text{induced}}$
(BFRS)

UAV attitude from EKF2
 ψ, ϕ, θ
(BFRS)

Output

Measurement location
N, E, D
(TRS)

**Time and space resolved
wind speed**
(TRS)

Wind speed
W-E, S-N, U-D
(TRS)

