

FAST.Farm Driver

Calls individual modules,
derives module inputs from
outputs, & drives time-domain
solution forward

Super Controller

Solves wind plant super
controller dynamics

OpenFAST

(One instance per turbine;
subcycled; many modules)
Solves aero-hydro-servo-
elastic dynamics for an
individual wind turbine

Wake Dynamics

(One instance per rotor)
Calculates wake dynamics for
an individual rotor

Wake Advection, Deflection, & Meandering

Solves dynamic wake
advection, deflection, &
meandering for an individual
rotor

Near-Wake Correction

Calculates near-wake
(pressure-gradient-zone)
correction to wake deficit for
an individual rotor

Wake-Deficit Increment

Increments the quasi-steady
axisymmetric wake deficit
downwind for an individual
rotor

Ambient Wind

Processes ambient wind
across the wind plant from a
high-fidelity precursor or an
interface to **InflowWind**

Ambient Wind & Array Effects

Processes ambient wind &
wake interactions across the
wind plant

Wake Merging

Identifies zones of overlap
between all wakes across the
wind plant & merges their
wake deficits