**Black box:**

ready

start

valid

result

32

32

b

32

a

Floating Point Adder

**Floating point adder interface:**

Floating point adder module accepts two single – precision floating point numbers as input and produces the sum as the output result.

a and b are two input single – precision floating point numbers.

result is the sum of a and b as the output.

start: This signal indicates when new inputs are available.

valid: This signal indicates when the result is valid.

ready: This signal indicates when the adder is ready to accept new inputs.

**Handshake protocol:**

* Ready signal is asserted to indicate the adder is ready to accept the new inputs.
* The two inputs a and b are given to the circuit and assert the valid bit to indicate the given two inputs are valid. De-assert the ready signal.
* If a and b are valid, the circuit processes the inputs and creates the result and valid is asserted to indicate the result is valid. Assert start to accept new inputs.
* De-assert valid.