# Assembling the Blocks in ChipInventor

Below are the connections that must be made between the blocks:

## Block: startAll

- **Input**:
  - clk → System clock.
- **Output**:
  - start → Start signal.

## Block: i2c

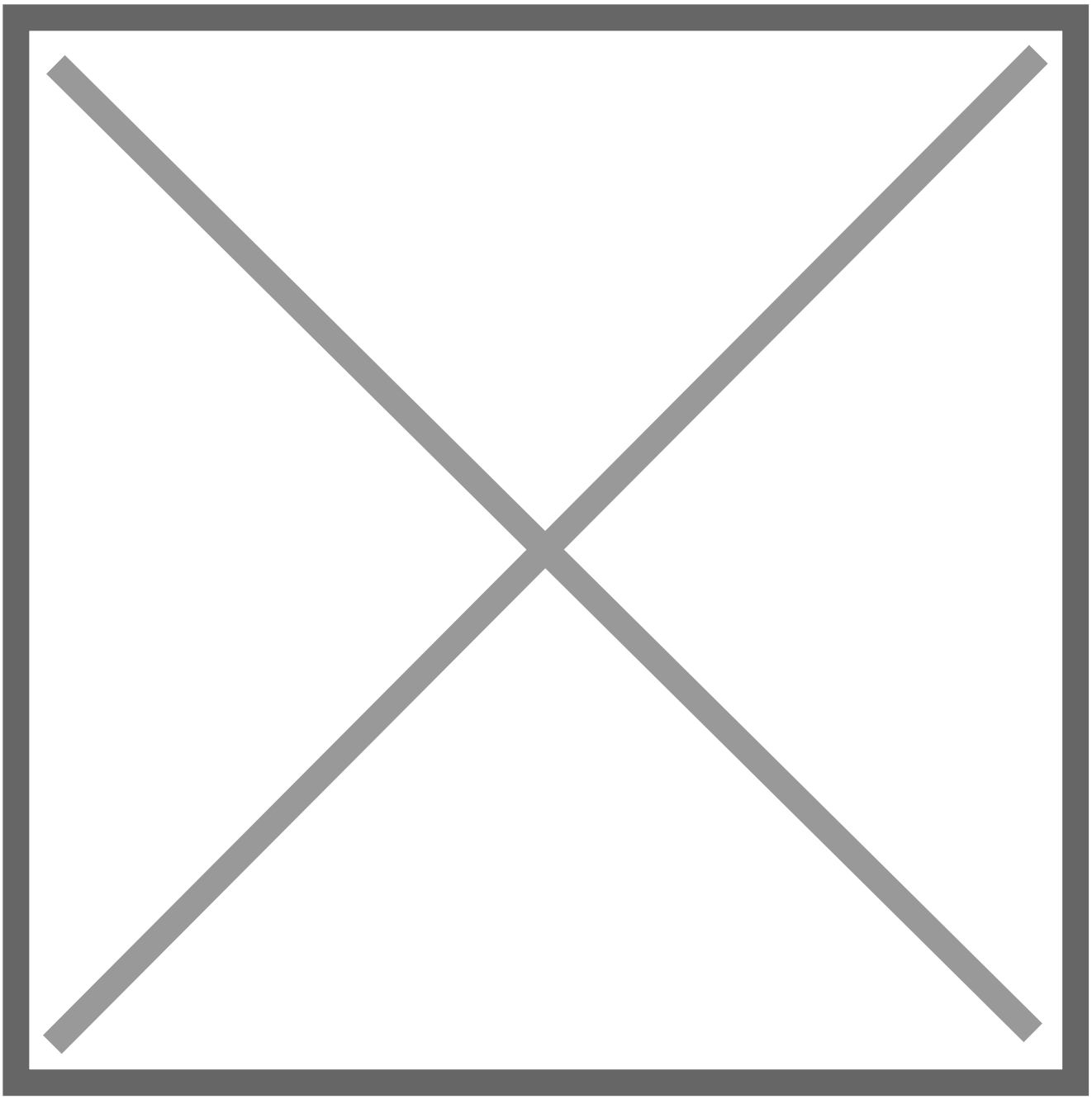
- **Inputs**:
  - clk → System clock.
  - start → Output from startAll block.
  - instruction → Operation instruction (write, read, start, or stop).
  - i2cEnable → Enable I2C operation.
  - byteToSend → Byte to send.
- **Outputs**:
  - scl → I2C clock pin.
  - complete → Indicates operation completion.
  - byteReceived → Received byte from communication.

## Block: adc

- **Inputs**:
  - clk → System clock.
  - start → Output from startAll.
  - complete → Output from i2c.
  - byteReceived → Output from i2c.
- **Outputs:**
  - instruction → Input to i2c.
  - i2cEnable → Input to i2c.
  - byteToSend → Input to i2c.
  - dataReady → Indicates that data has been captured.
  - outputData → Data read from the ADC.
  - adcEnable, channel → Inputs to adcController.

## Block: adcController

- **Inputs:**
  - clk → System clock.
  - start → Output from startAll.
  - complete → Output from i2c.
  - dataReady → Output from adc.
  - outputData → Output from adc.
- **Outputs:**
  - adcEnable, channel → Inputs to adc.
  - outputBufferCh0 and outputBufferCh1 → Stored data.
  - voltageCh0 and voltageCh1 → Converted voltage values.



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