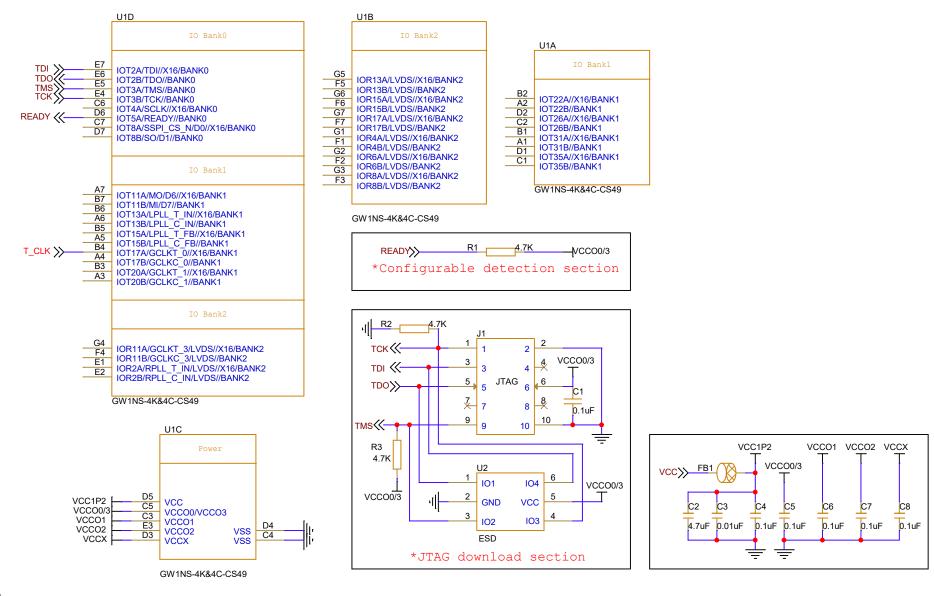
### GW1NS-LV4CS49 & GW1NS-LV4CCS49



### Notes:

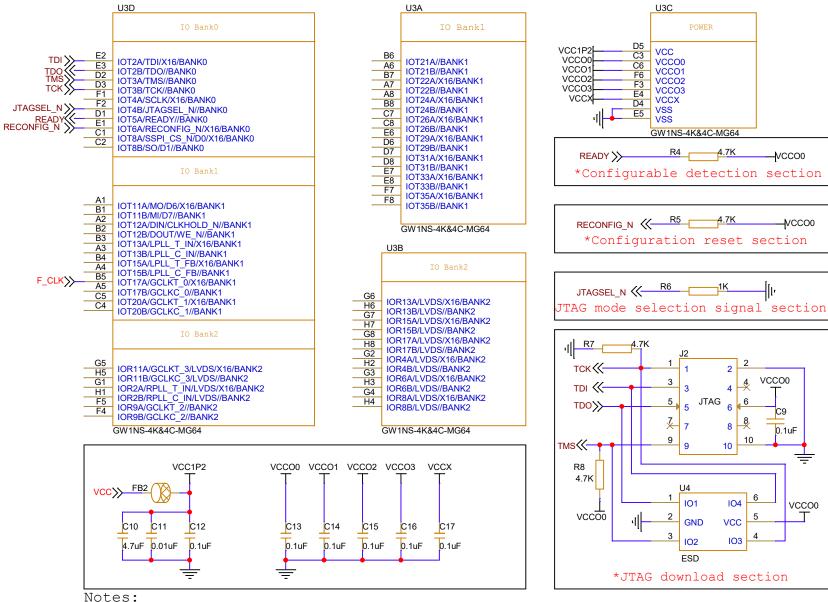
- 1.F CLK signal is an external input clock signal.
  - It is recommended that F CLK signal be provided through an active oscillator crystal.
- 2. It is recommended that  $a\overline{d}d$  an ESD protection chip to the JTAG download circuit.
- 3. The CS49 package supports GW1NS-4 & GW1NS-4C.

Title GOWIN Minimum System Diagram

Size Document Number Rev 2.2

Date: Tuesday, April 16, 2024 | Sheet 1 of 4

# GW1NS-LV4MG64 & GW1NS-LV4CMG64



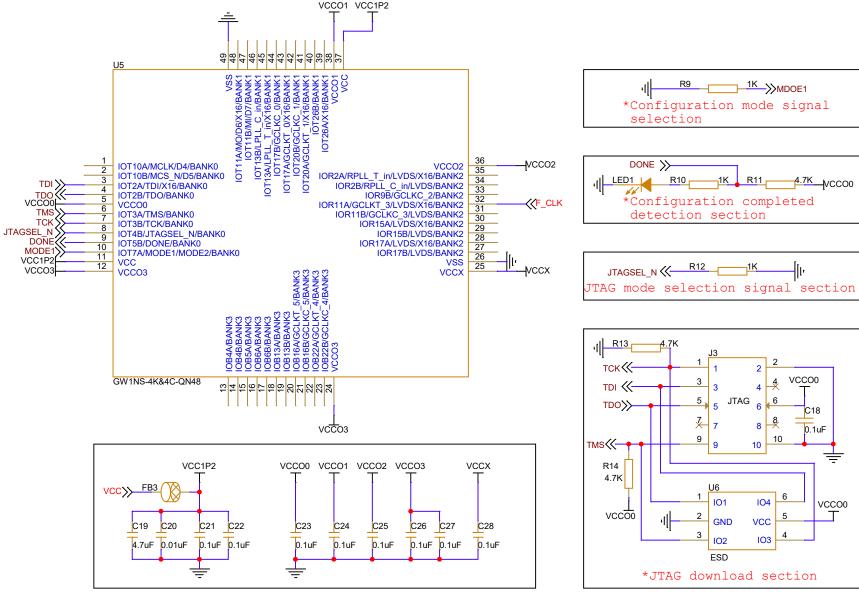
1.F CLK signal is an external input clock signal.

 $\overline{\text{It}}$  is recommended that F CLK signal be provided through an active oscillator crystal.

2. It is recommended that add an ESD protection chip to the JTAG download circuit.

3. The MG64 package supports GW1NS-4 & GW1NS-4C.

# GW1NS-LV4QN48 & GW1NS-LV4CQN48



#### Notes:

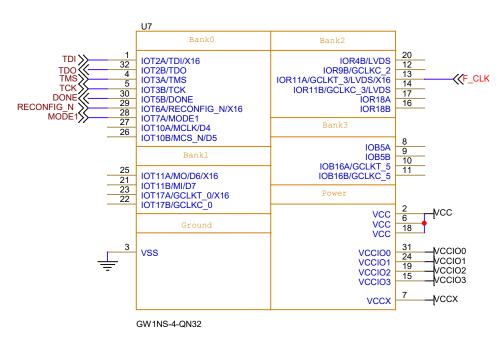
- 1.F CLK signal is an external input clock signal.
  - It is recommended that F CLK signal be provided through an active oscillator crystal.
- 2. It is recommended that add an ESD protection chip to the JTAG download circuit.
- 3. The QN48 package supports GW1NS-4 & GW1NS-4C.

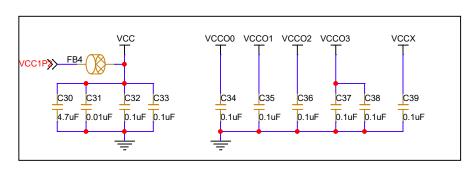
Title

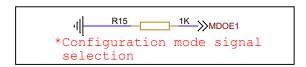
GOWIN Minimum System Diagram

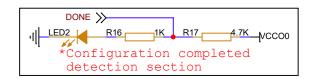
Size Document Number GW1NS-LV4QN48 & GW1NS-LV4CQN48 2.2

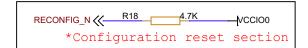
Date: Wednesday, April 10, 2024 Sheet 3 of 4

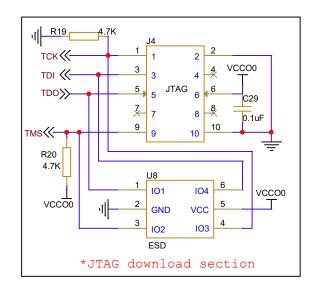












### Notes:

- 1.F CLK signal is an external input clock signal.
  - It is recommended that F CLK signal be provided through an active oscillator crystal.
- 2.It is recommended that add an ESD protection chip to the JTAG download circuit.

