

**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.
- External Flash memory is used to store downloaded programs.
- For details about SPI Flash model selection, see Chapter 10 SPI Flash Selection in UG290.
- It is recommended that add an ESD protection chip to the JTAG download circuit.

Title	
GOWIN Minimum System Diagram	
Size B	Document Number GW2ANR-LV18QN88
Rev 2.0	Date: Friday, April 07, 2023