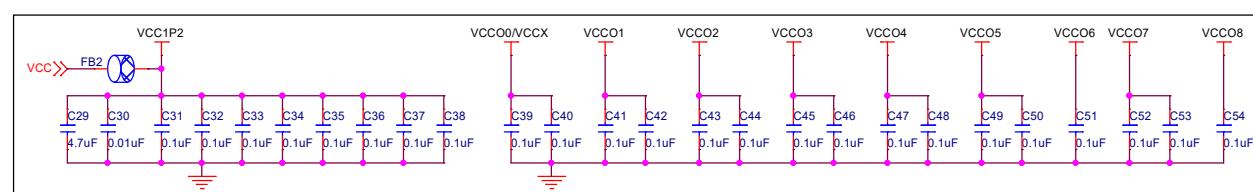
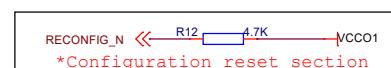
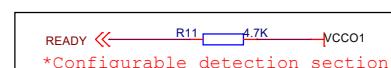
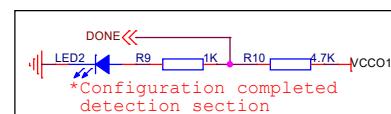
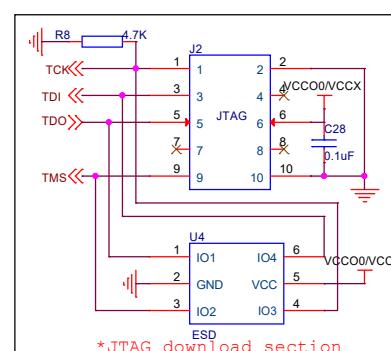
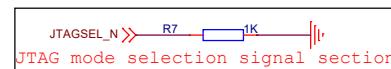
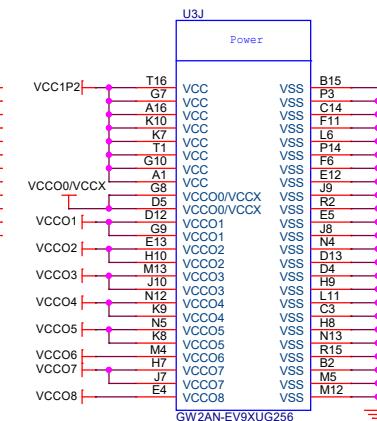
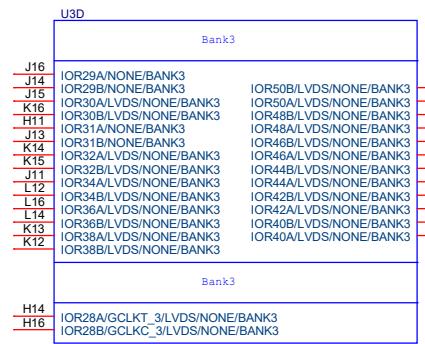
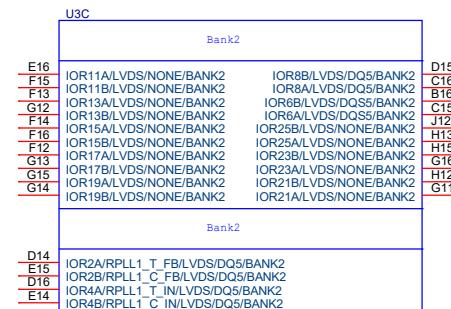
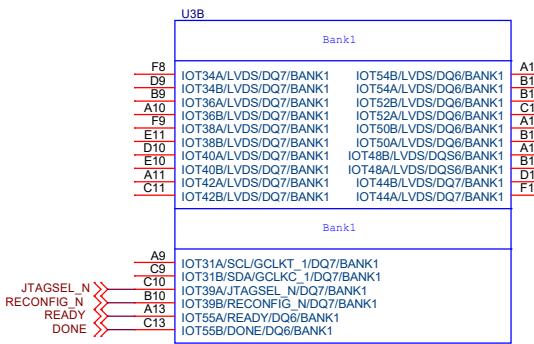
**Notes:**

- 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.

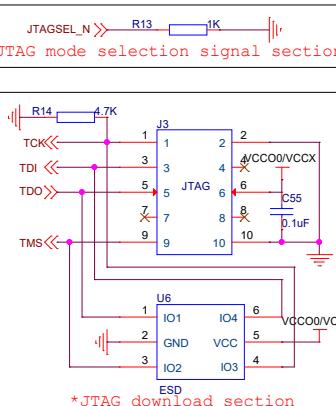
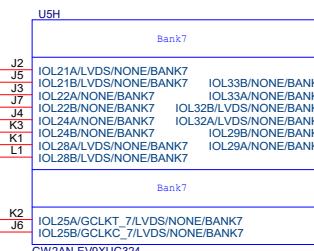
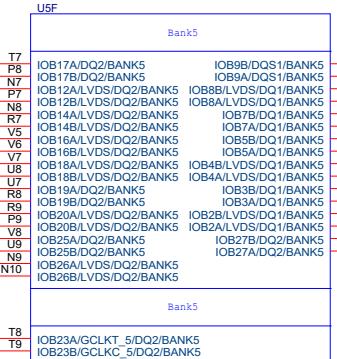
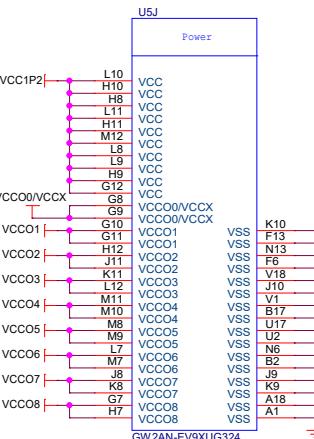
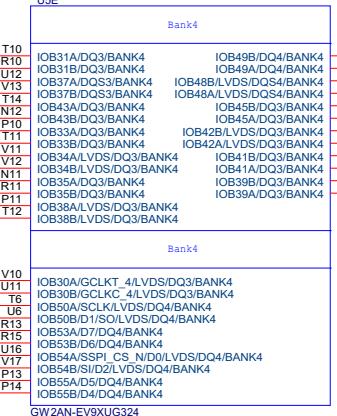
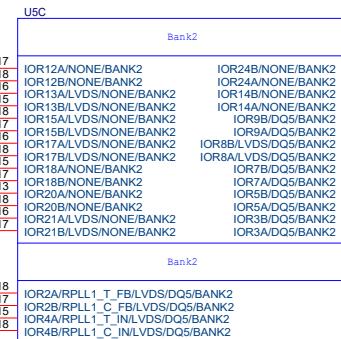
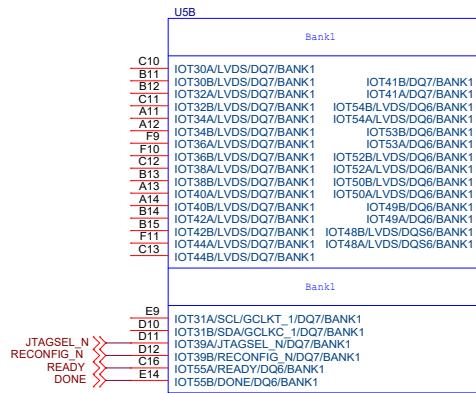
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Size A3	Document Number GW2AN-EV9XPG256
Rev 2.0	Date: Thursday, April 06, 2023



**Notes:**

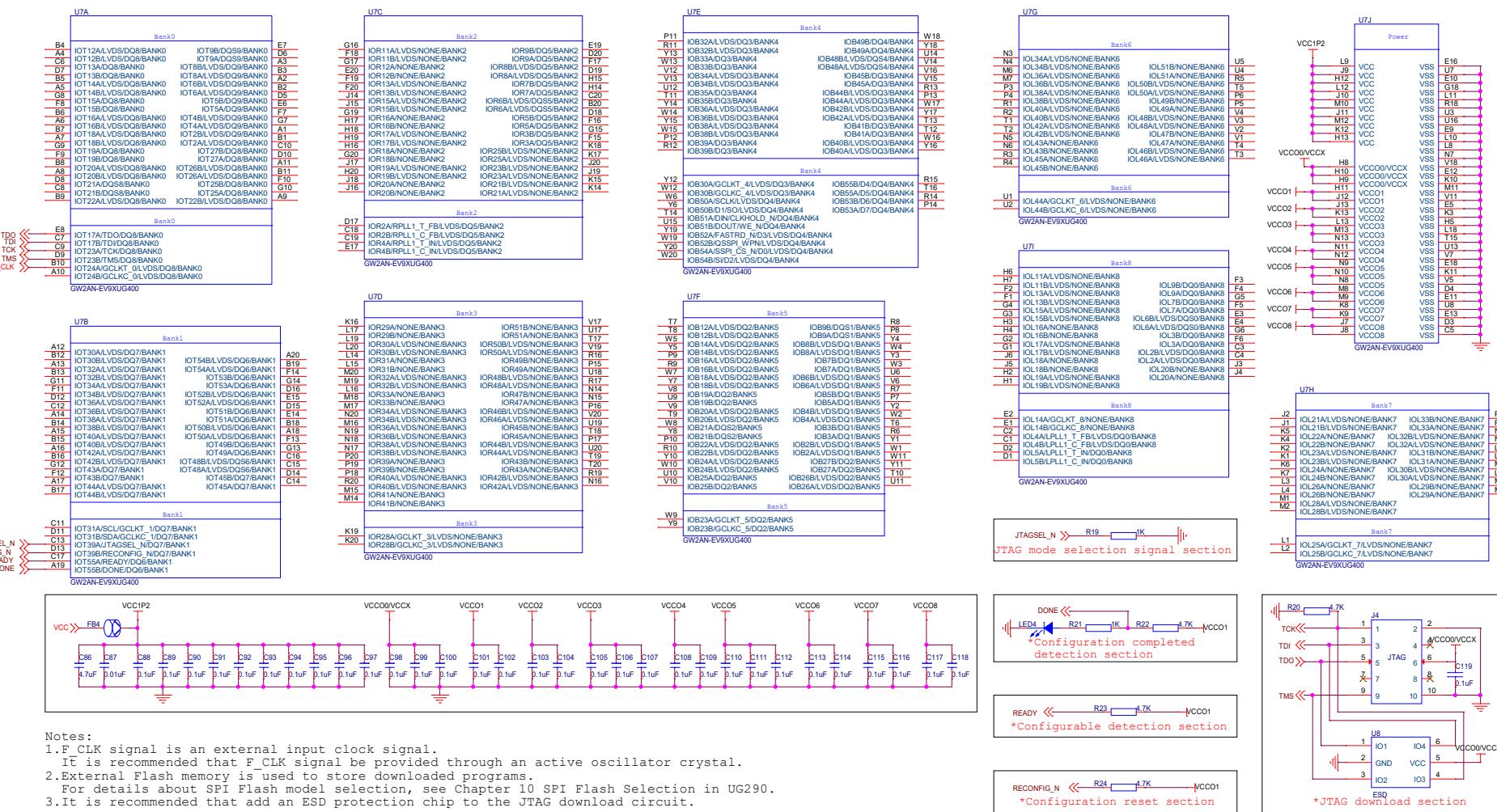
1. F\_CLK signal is an external input clock signal.  
It is recommended that F\_CLK signal be provided through an active oscillator crystal.
2. External Flash memory is used to store downloaded programs.  
For details about SPI Flash model selection, see Chapter 10 SPI Flash Selection in UG290.
3. It is recommended that add an ESD protection chip to the JTAG download circuit.

Title	
GOWIN Minimum System Diagram	
Size	Document Number
A3	GW2AN-EV9XUG256
Rev	2.0
Date:	Thursday, April 06, 2023
Sheet	2 of 15



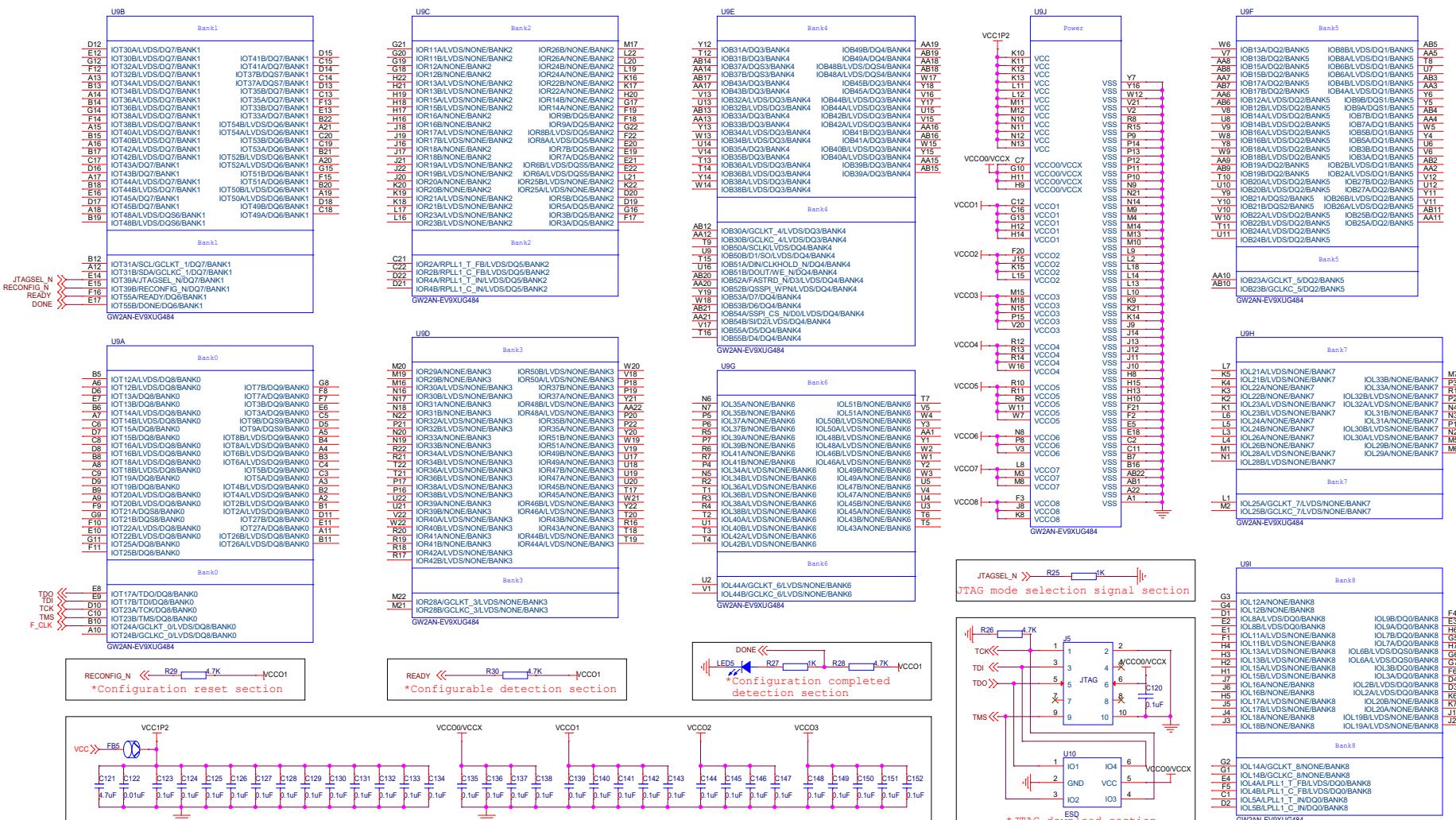
Notes:

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

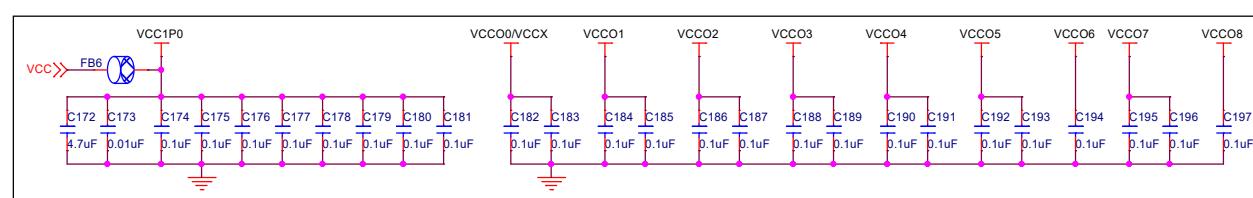
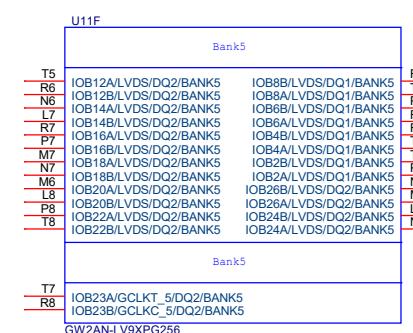
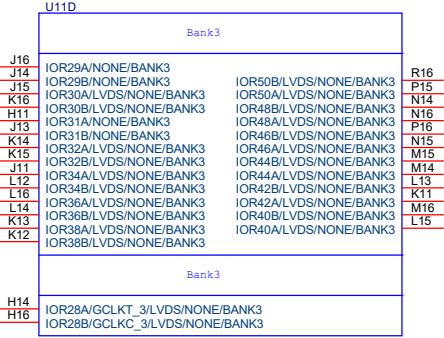
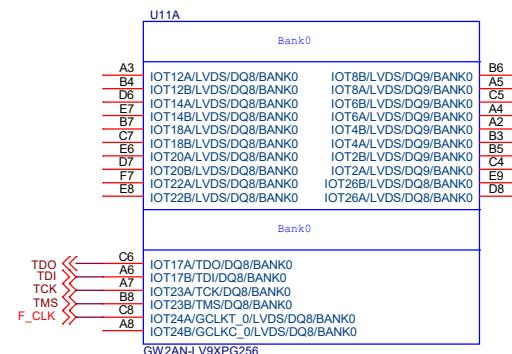
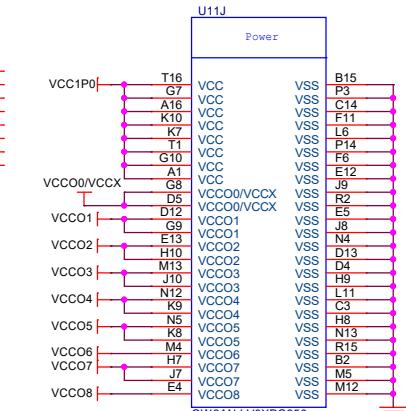
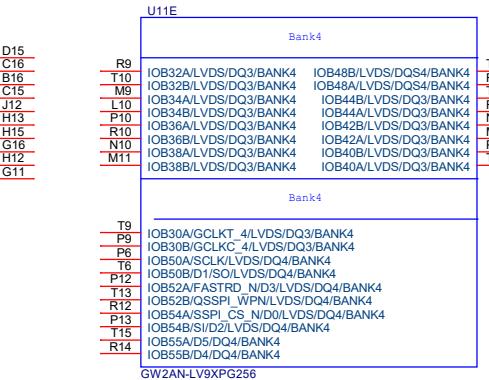
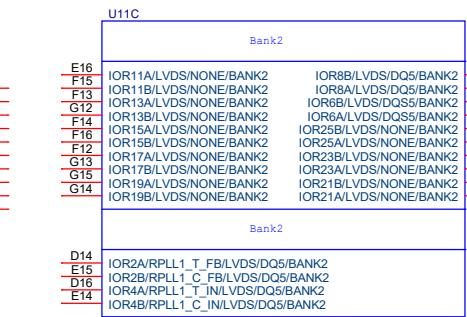
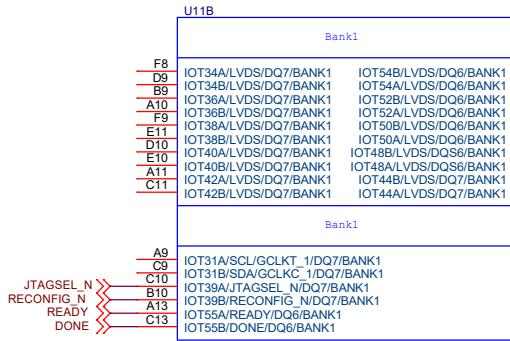


## Notes:

1. F\_CLK signal is an external input clock signal.
2. External Flash memory is used to store downloaded programs.
3. For details about SPI Flash model selection, see Chapter 10 SPI Flash Selection in UG290.
4. It is recommended that add an ESD protection chip to the JTAG download circuit.

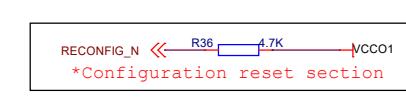
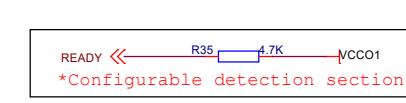
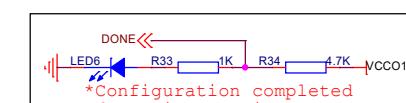
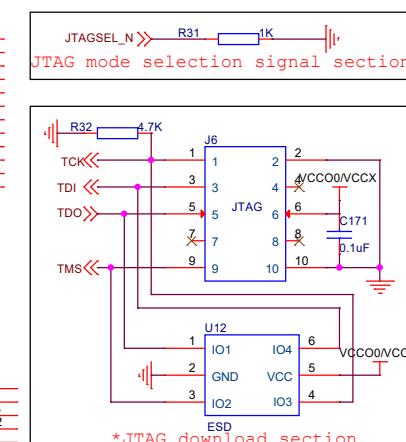
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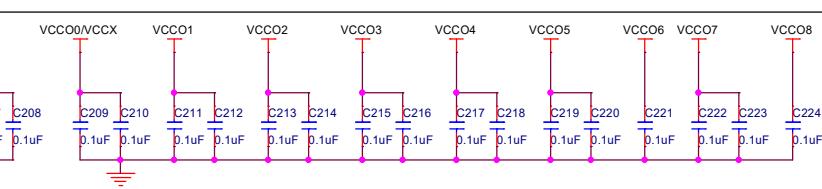
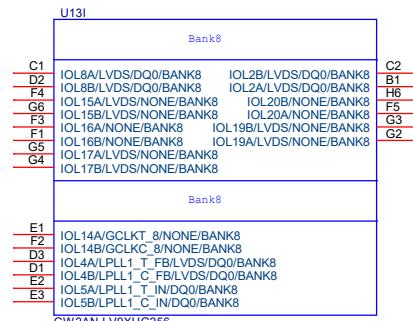
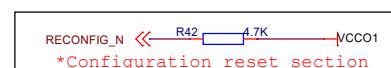
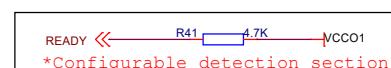
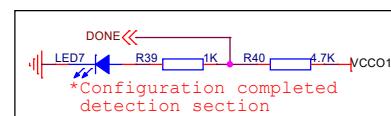
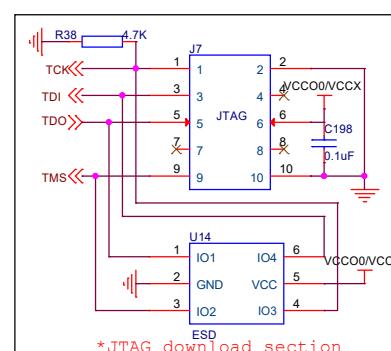
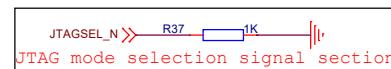
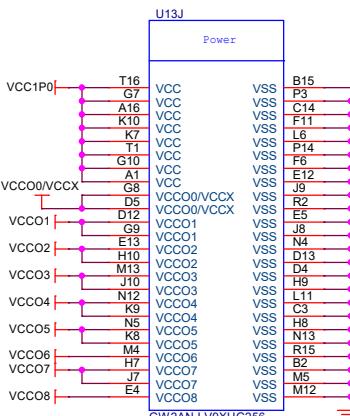
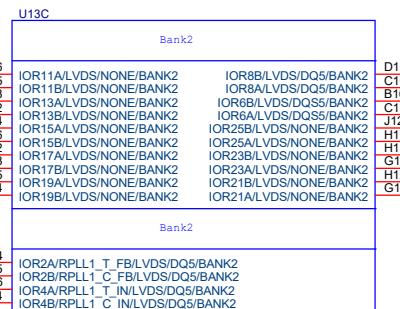
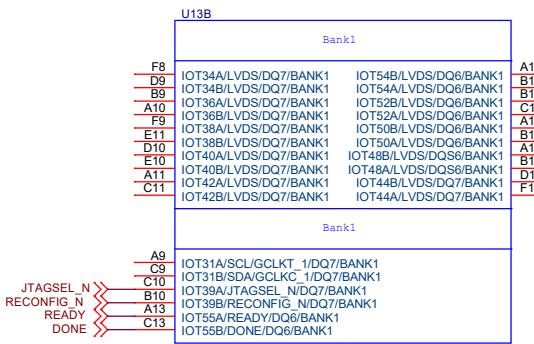
- F CLK signal is an external input clock signal.  
It is recommended that F CLK signal be provided through an active oscillator crystal.
- External Flash memory is used to store downloaded programs.  
For details about SPI Flash model selection, see Chapter 10 SPI Flash Selection in UG290.
- It is recommended that add an ESD protection chip to the JTAG download circuit.

**Notes:**

- 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.

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Date:	Thursday, April 06, 2023	6	15	

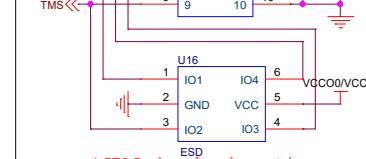
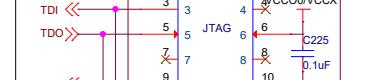
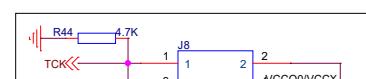
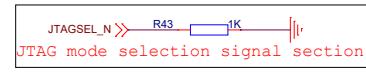
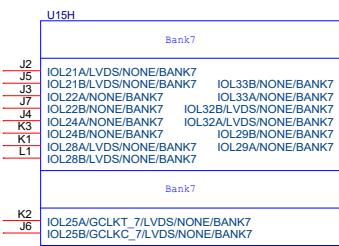
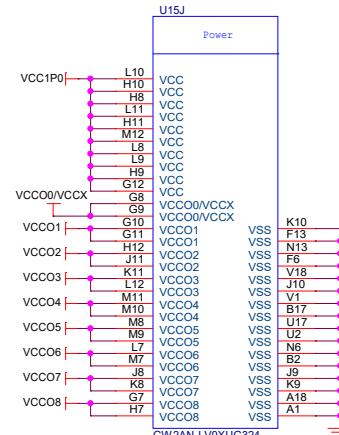
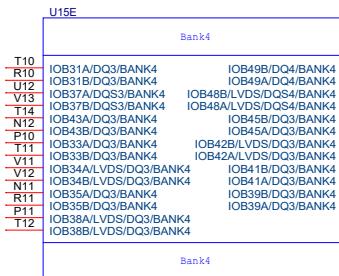
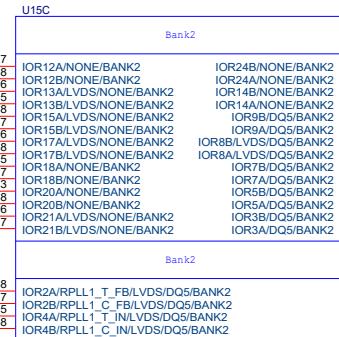
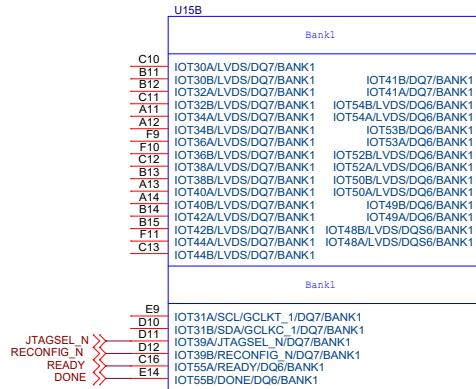


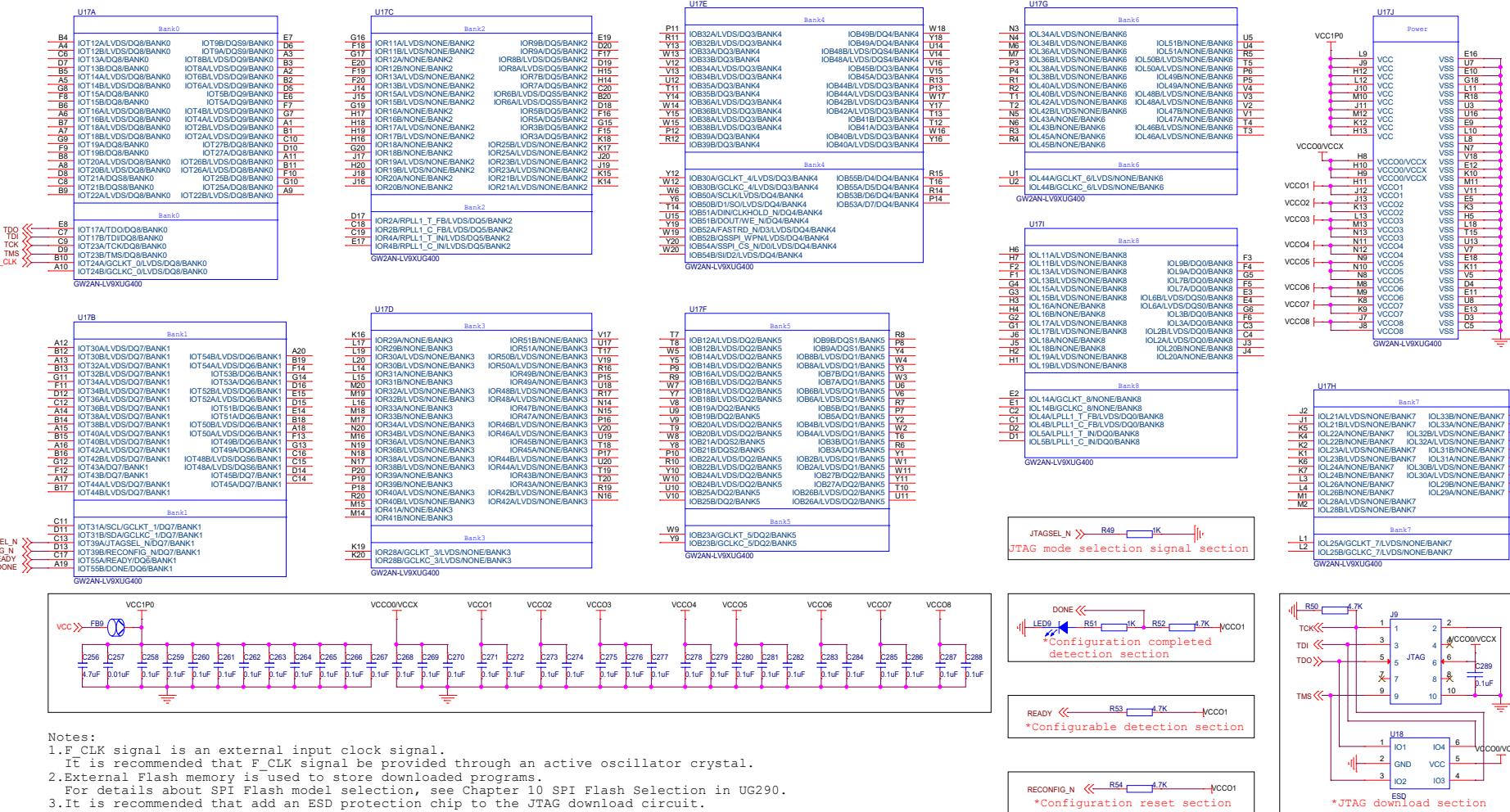
**Notes:**

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

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Document Number	
Size	Rev
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GW2AN-LV9XUG256	

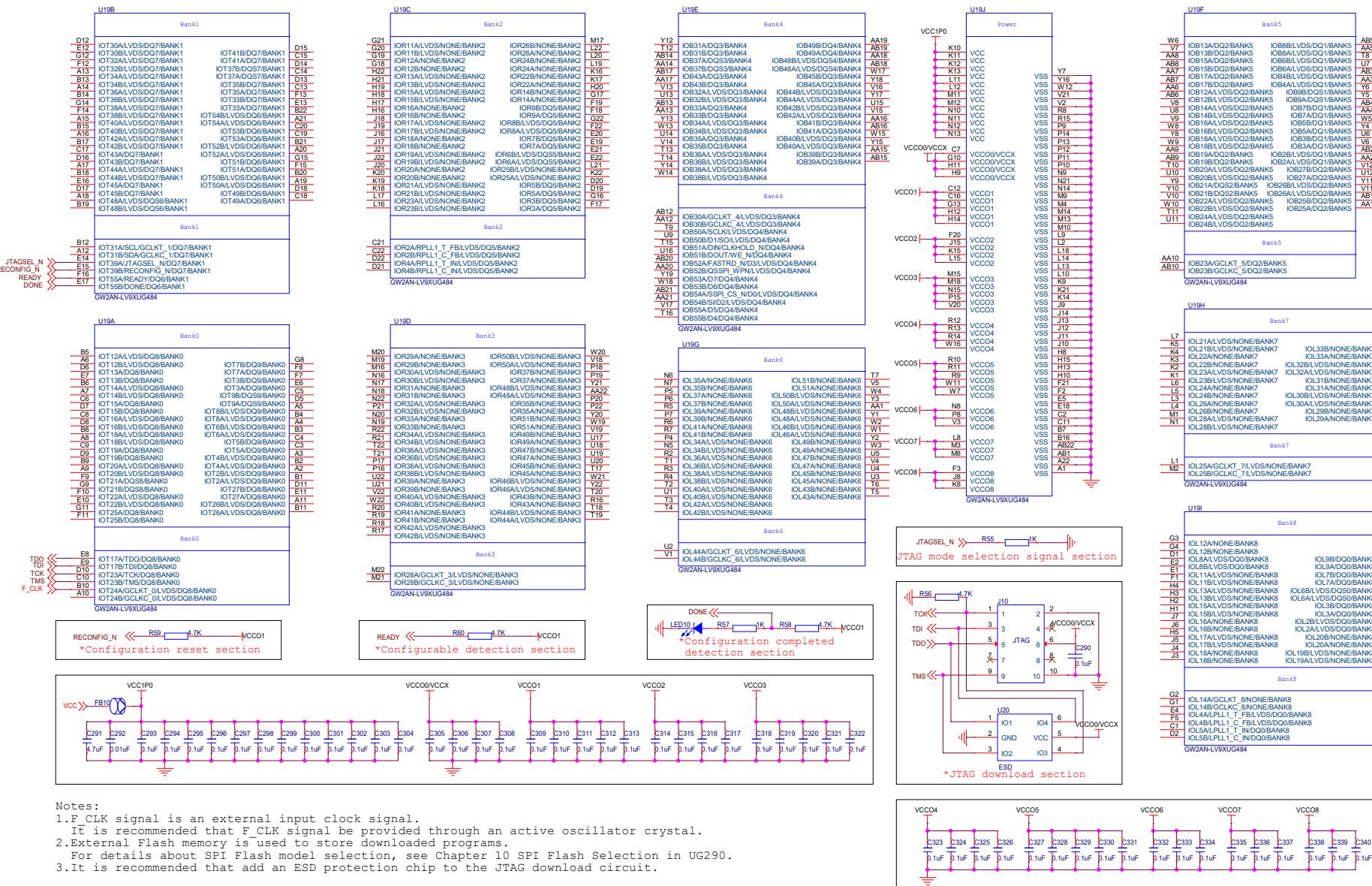
Date: Thursday, April 06, 2023 Sheet 7 of 15





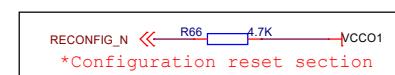
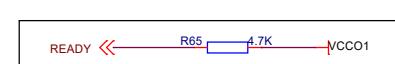
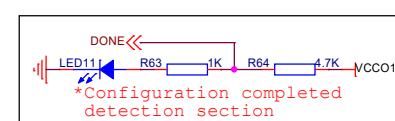
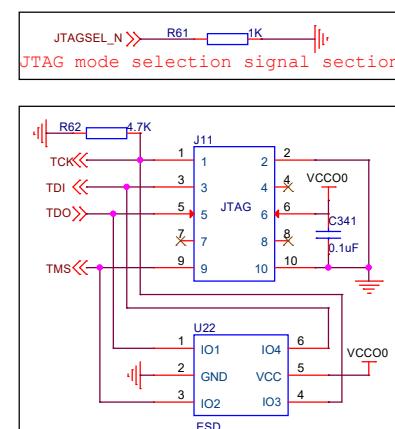
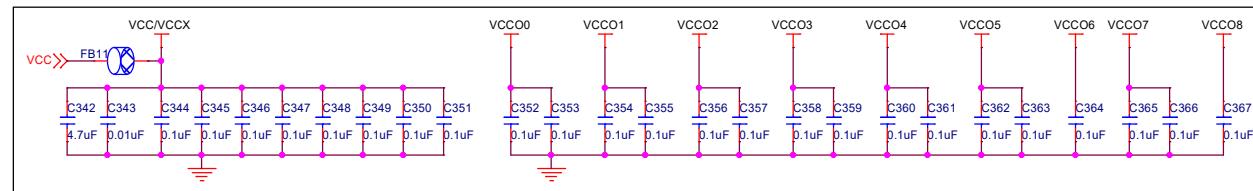
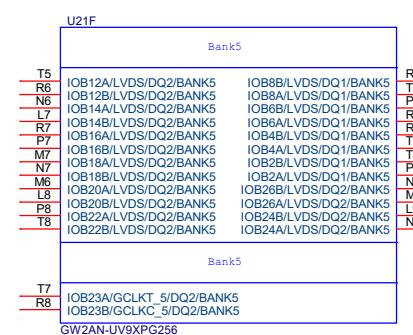
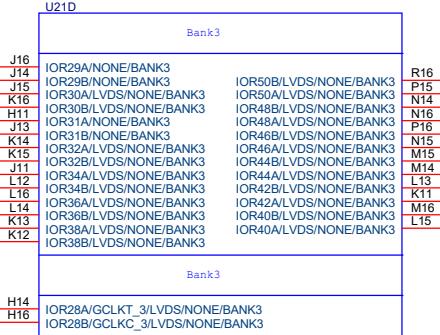
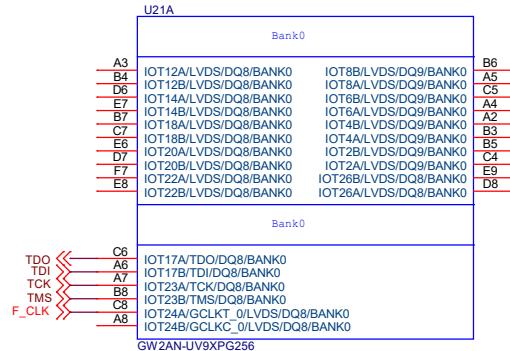
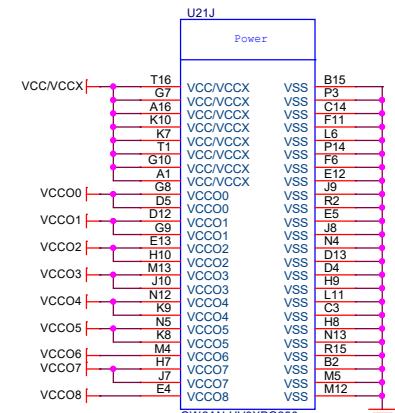
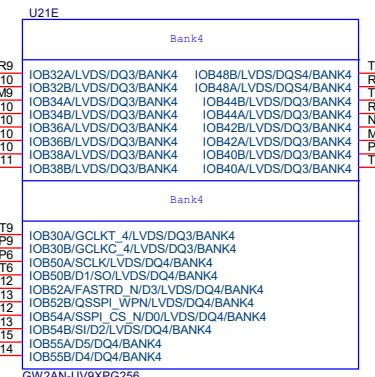
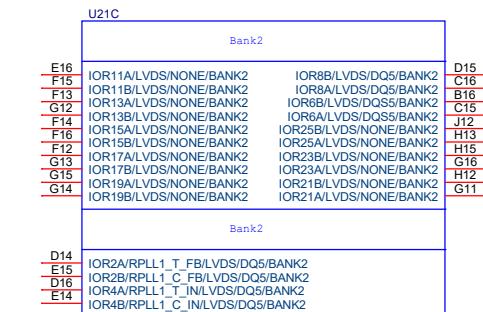
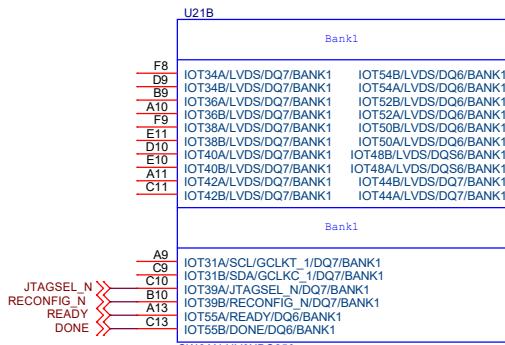
## Notes:

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



### Notes:

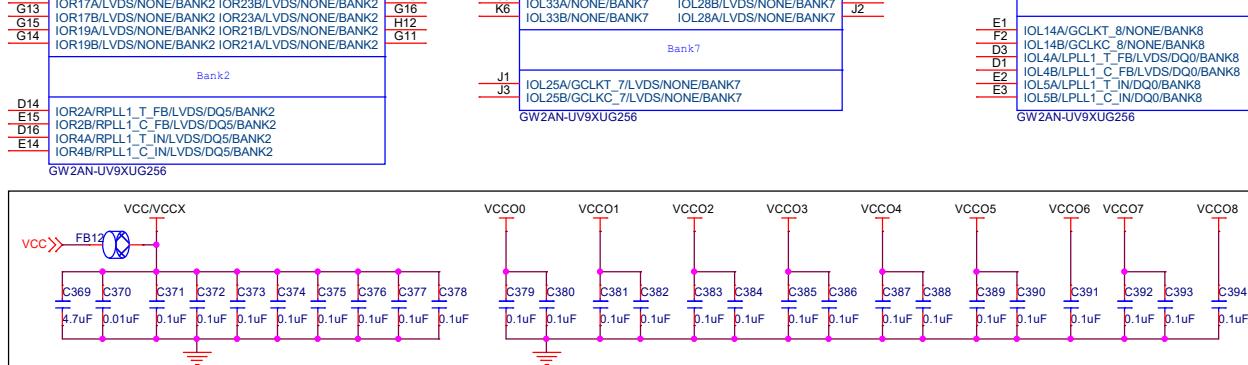
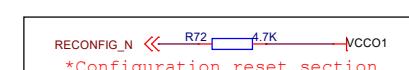
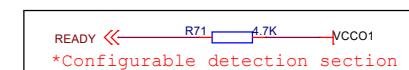
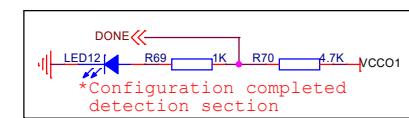
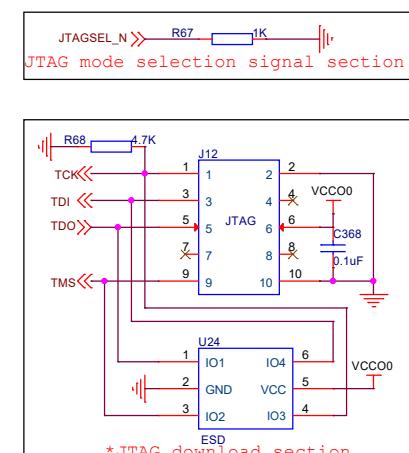
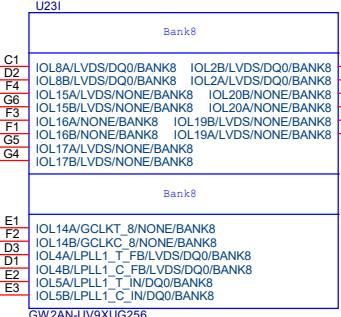
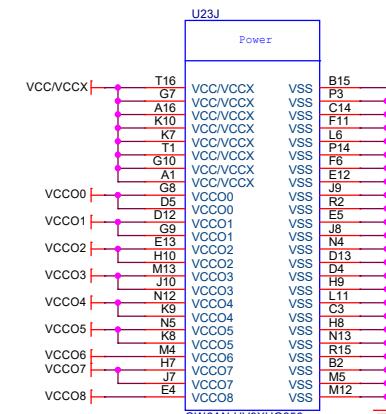
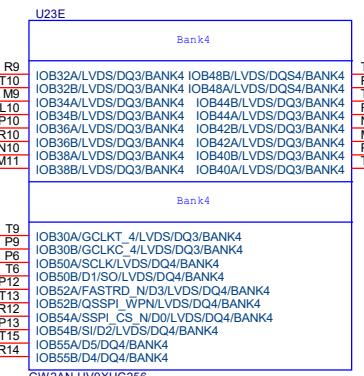
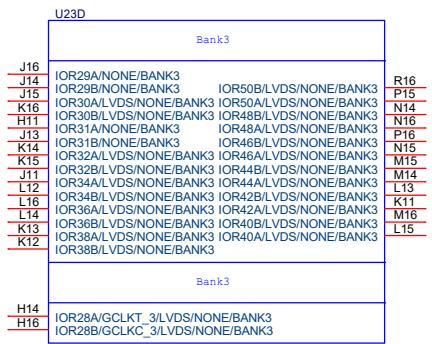
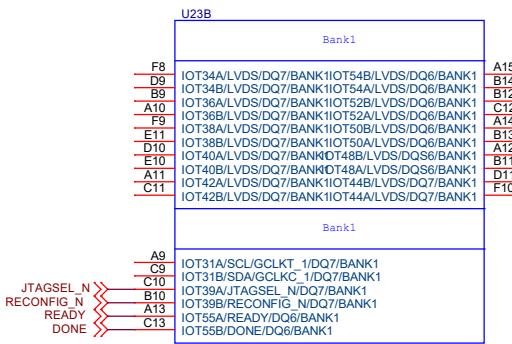
- 1.F\_CLK signal is an external input clock signal.  
It is recommended that F\_CLK signal be provided through an active oscillator crystal.
  - 2.External Flash memory is used to store downloaded programs.  
For details about SPI Flash model selection, see Chapter 10 SPI Flash Selection in UG290.
  - 3.It is recommended that add an ESD protection chip to the JTAG download circuit.



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Document Number	
Size	Rev
A3	2.0
GW2AN-UV9XPG256	
Date: Thursday, April 06, 2023	

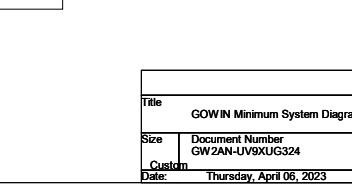
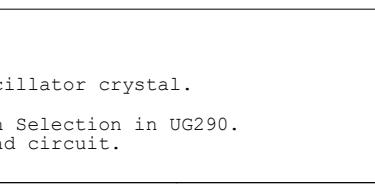
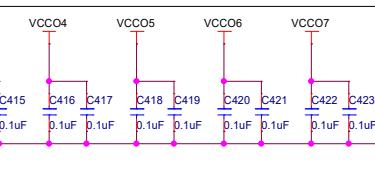
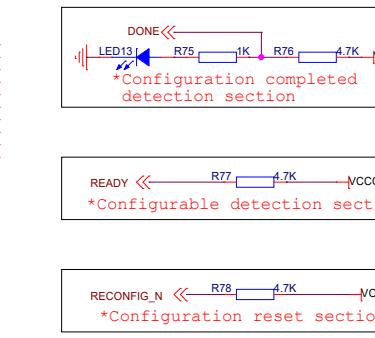
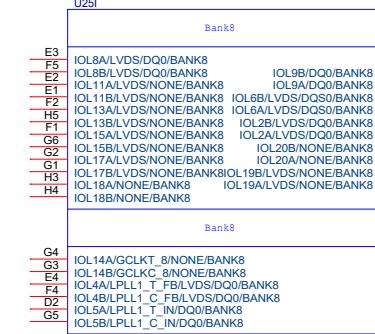
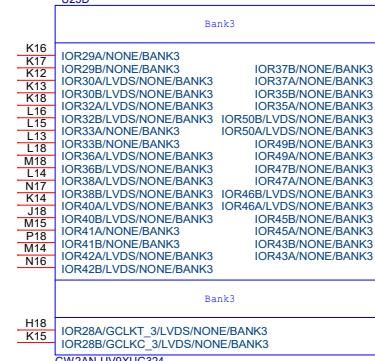
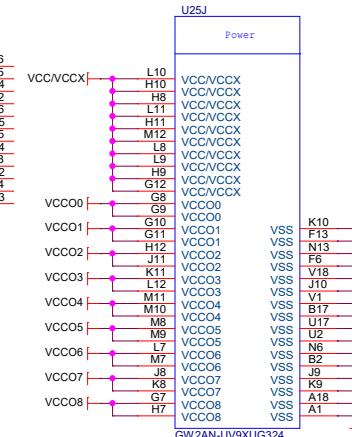
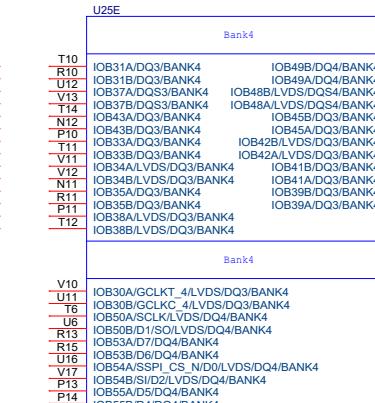
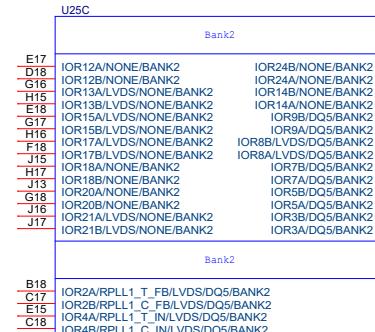
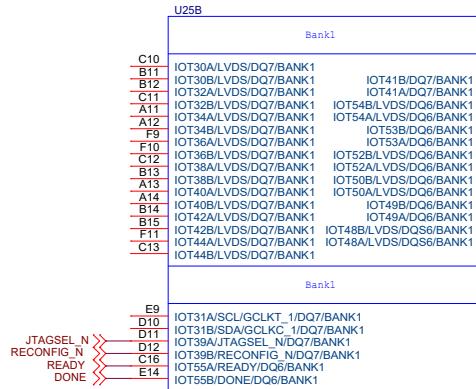
## Notes:

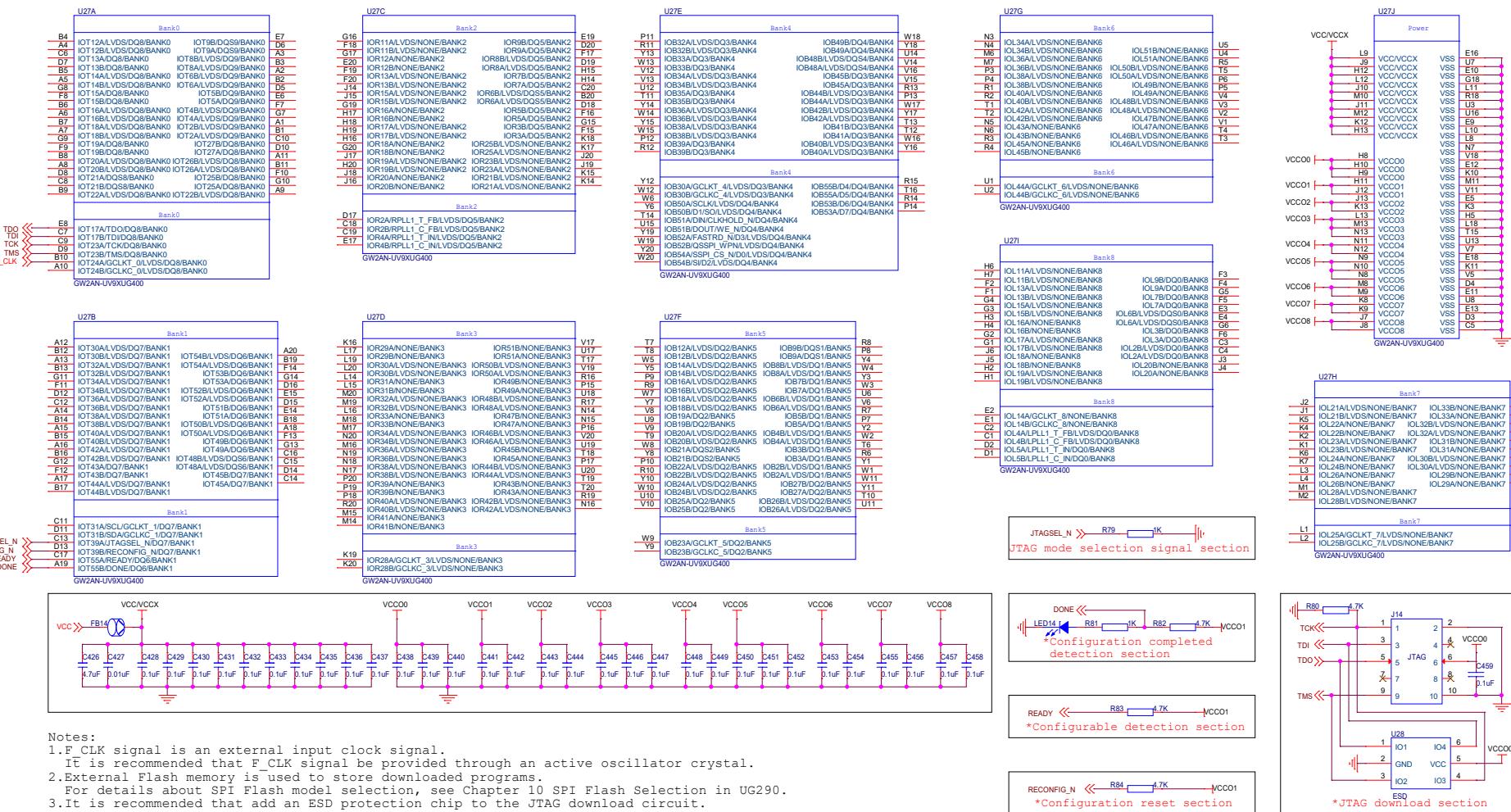
1. F CLK signal is an external input clock signal.  
It is recommended that F CLK signal be provided through an active oscillator crystal.
2. External Flash memory is used to store downloaded programs.  
For details about SPI Flash model selection, see Chapter 10 SPI Flash Selection in UG290.
3. It is recommended that add an ESD protection chip to the JTAG download circuit.



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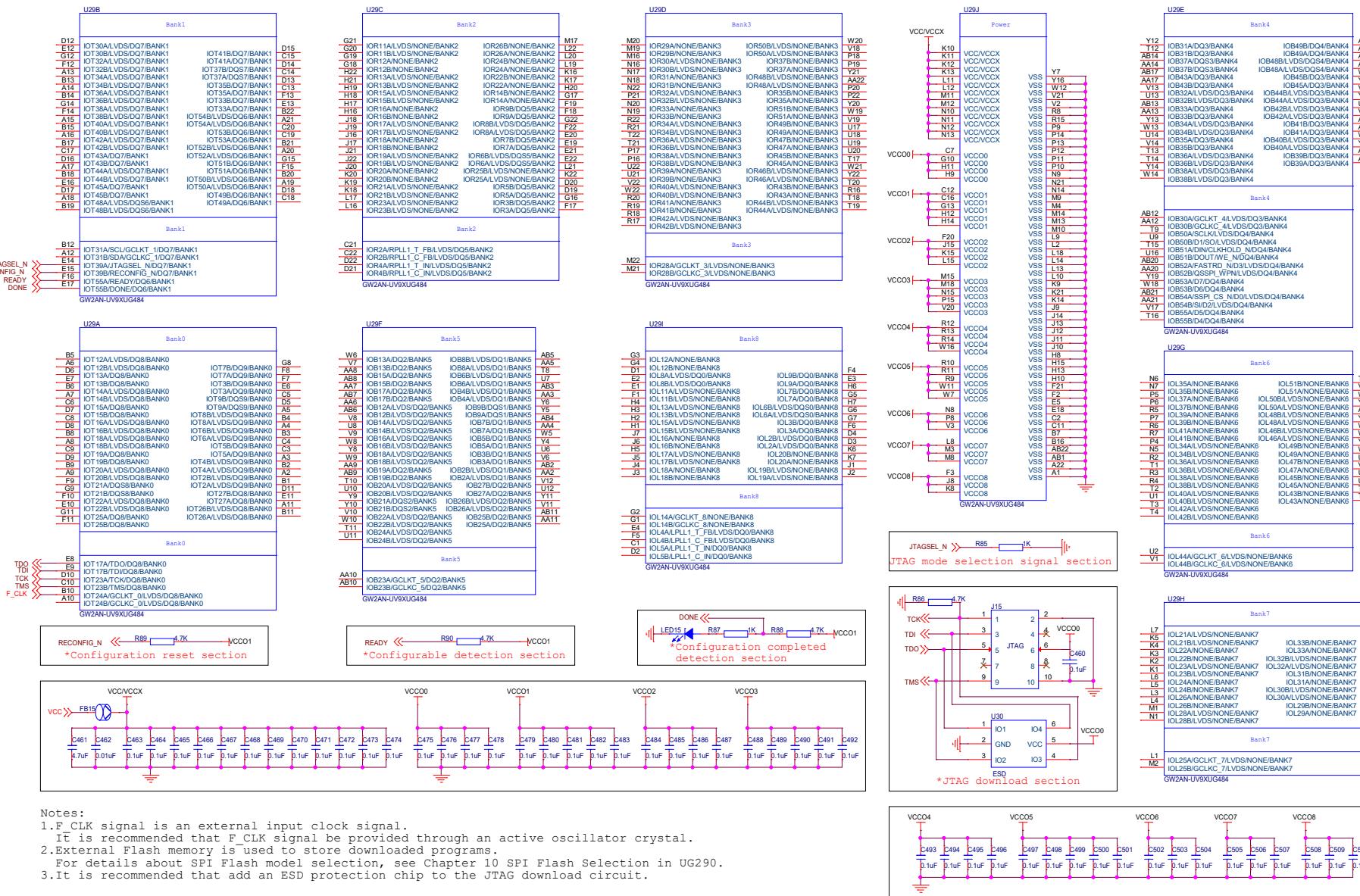
Title	
GOWIN Minimum System Diagram	
Size	Rev
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Document Number	GW2AN-UV9XUG256
Date:	Thursday, April 06, 2023
Sheet	12 of 15





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