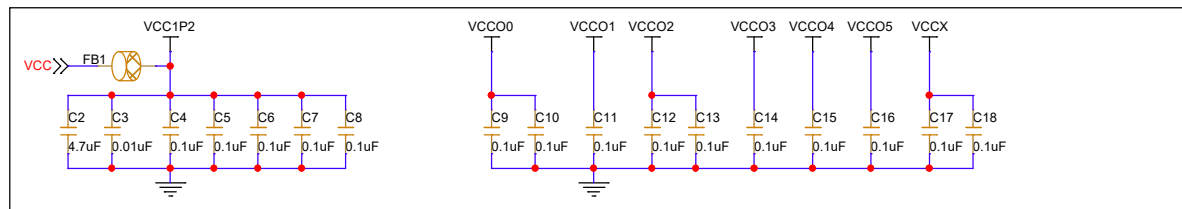
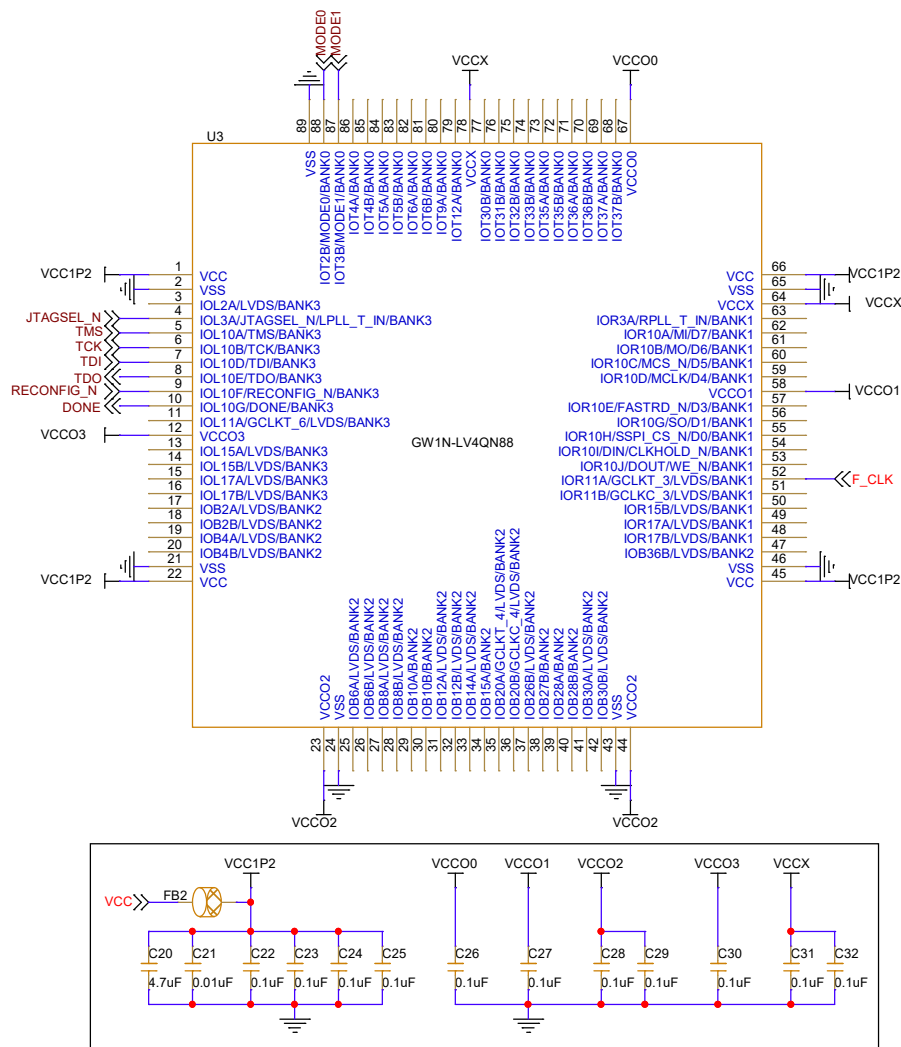


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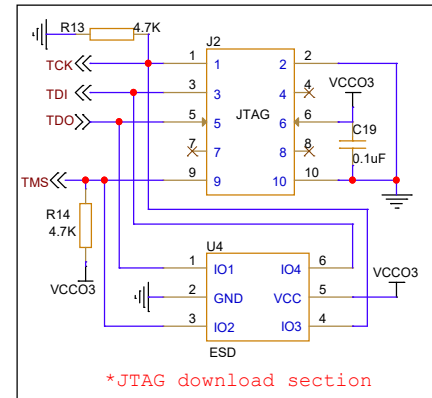
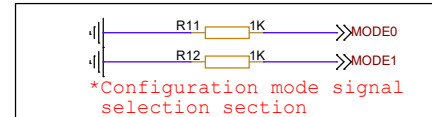
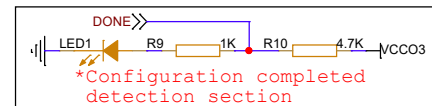
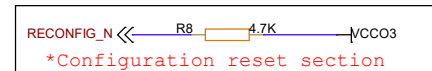
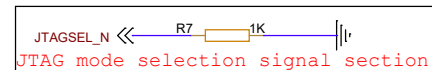
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GOWIN Minimum System Diagram				
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GW1N-LV4QN88

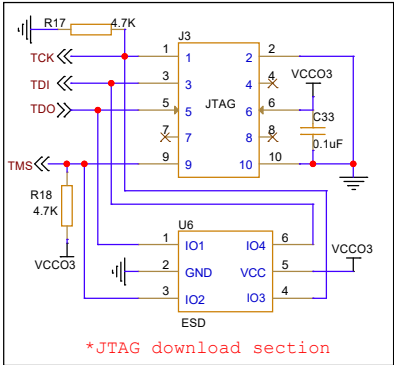
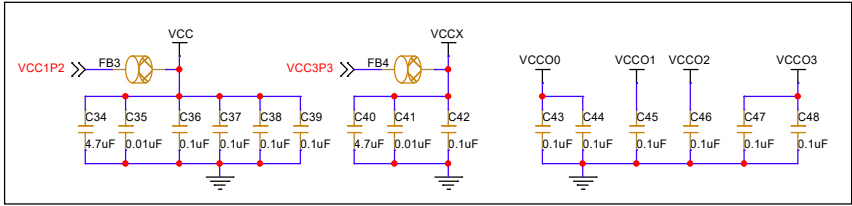
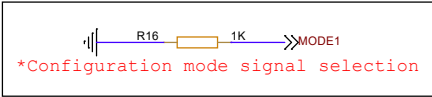
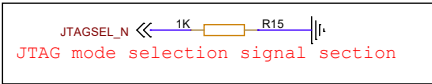
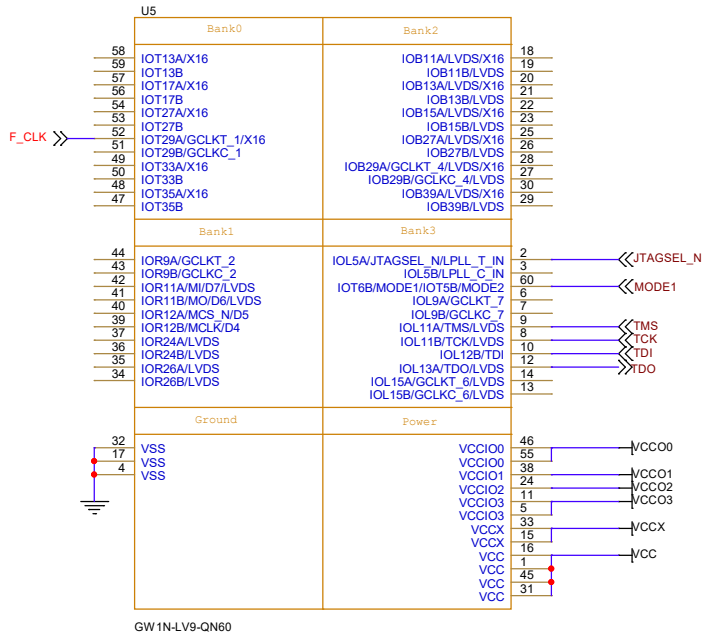


Notes:

- 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.

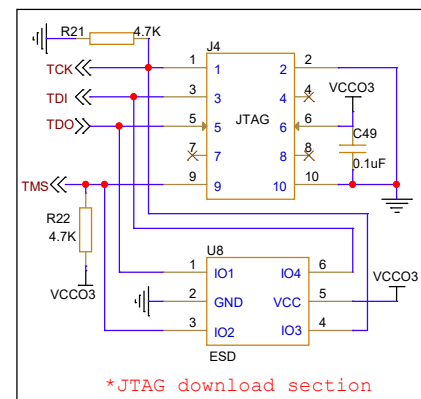


Title		
Gowin FPGA-AOTOMOTIVE Minimum System Diagram		
Size	Document Number	Rev
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Notes:

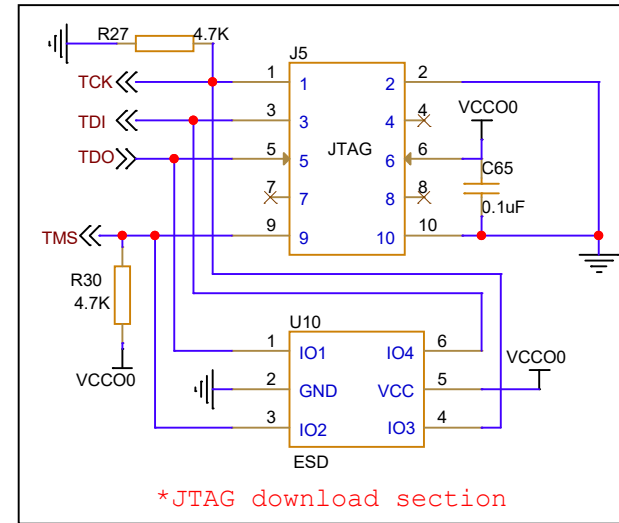
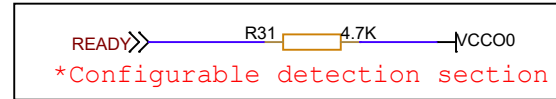
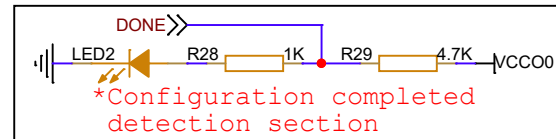
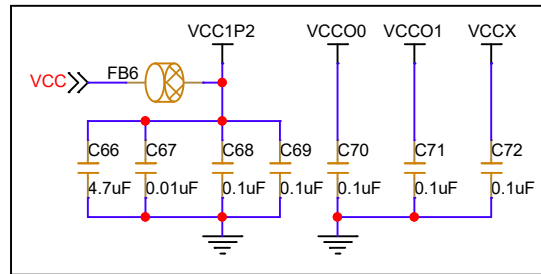
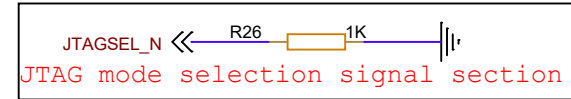
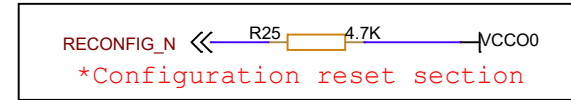
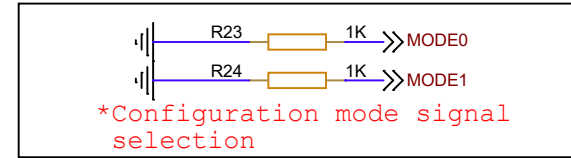
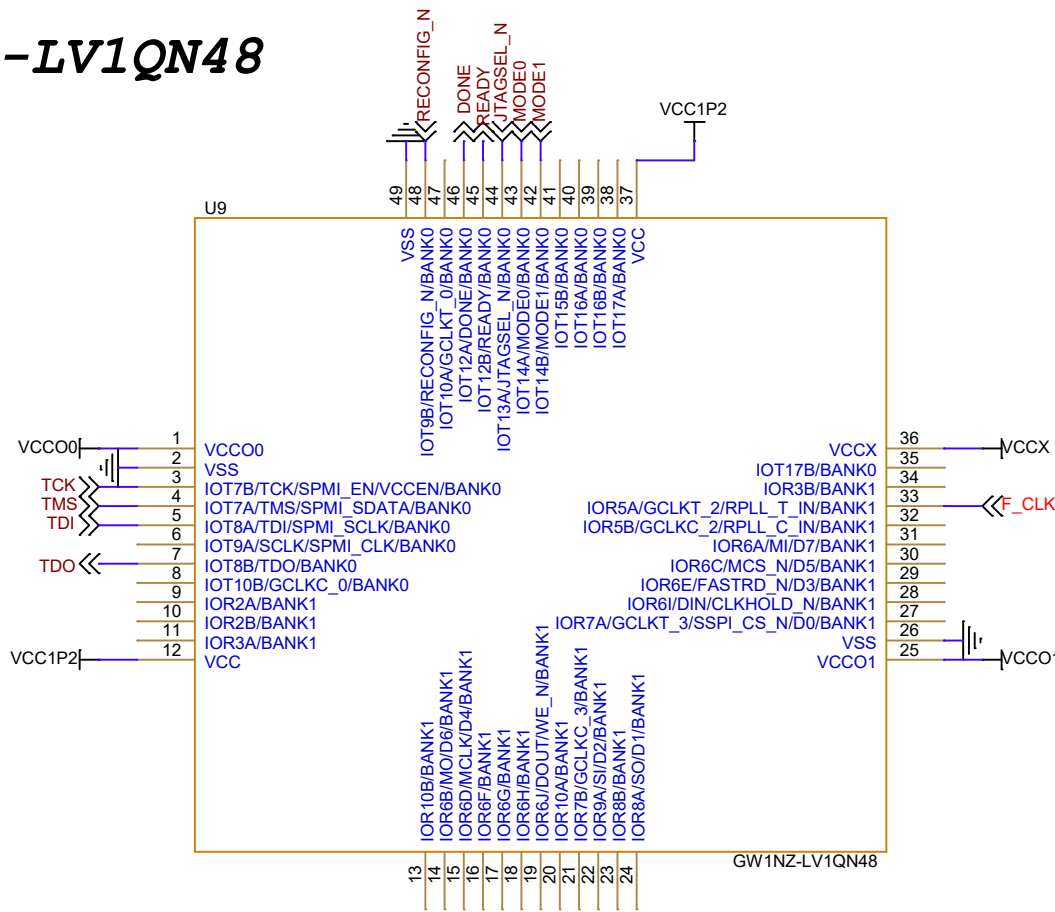
- 1.F CLK signal is an external input clock signal.
It is recommended that F_CLK signal be provided through an active oscillator crystal.
- 2.External Flash memory is used to store downloaded programs.
For details about SPI Flash model selection, see Chapter 10 SPI Flash Selection in UG290.
- 3.It is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



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GW1NZ-LV1QN48



Notes:

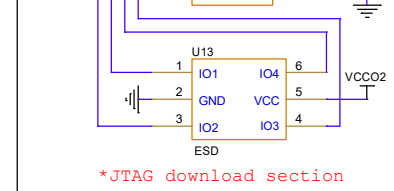
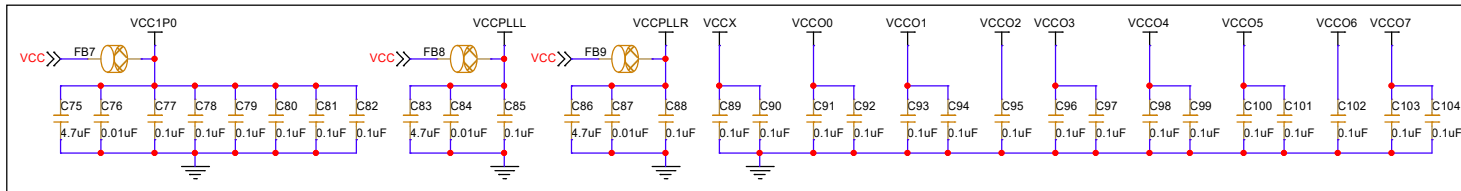
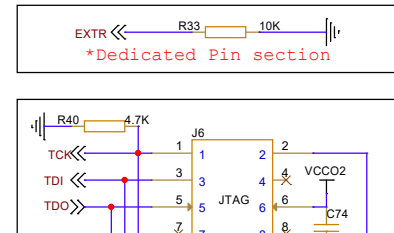
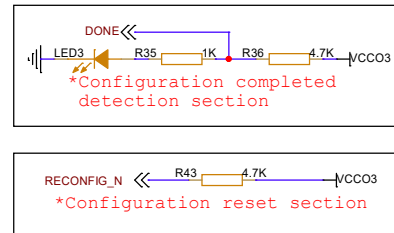
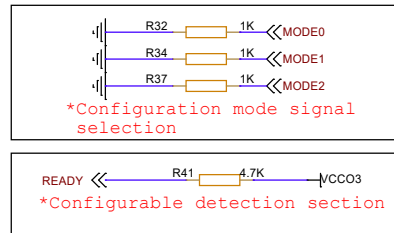
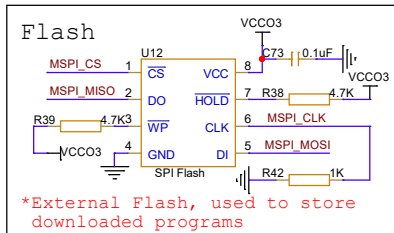
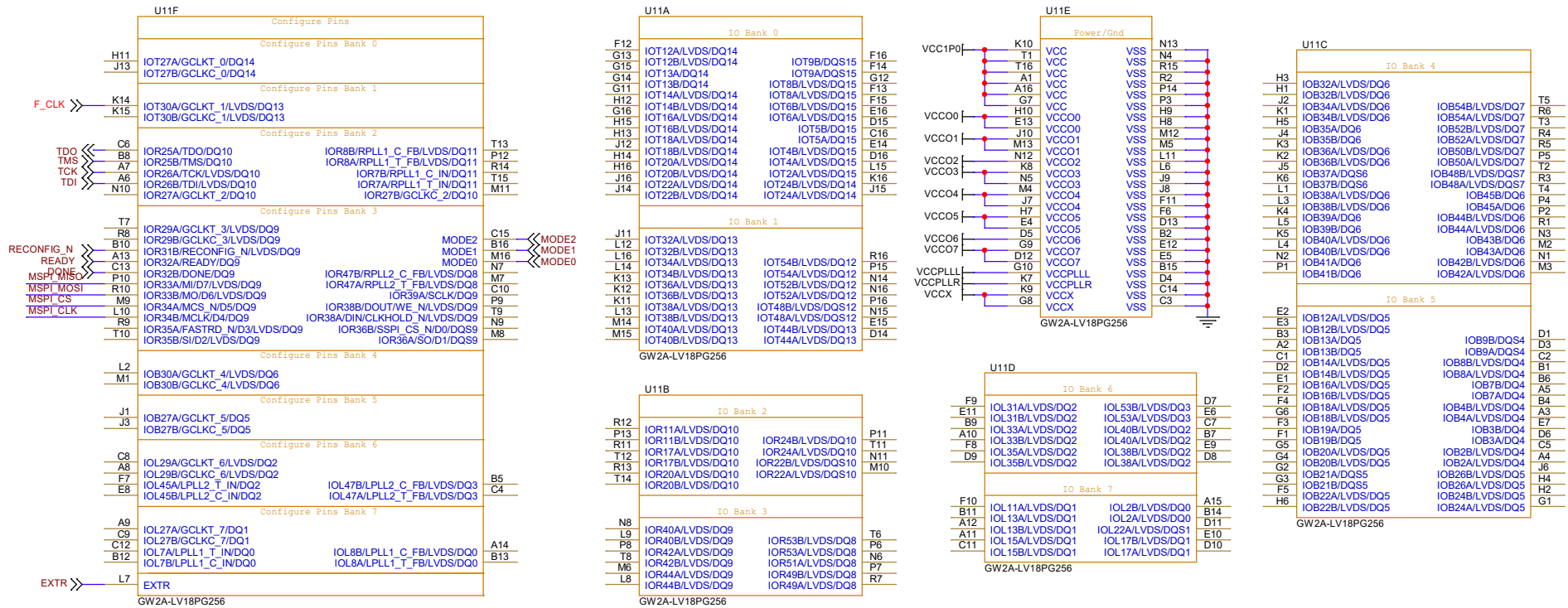
1.F_CLK signal is an external input clock signal.

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.

Title		
Gowin FPGA-AOTOMOTIVE Minimum System Diagram		
Size	Document Number	Rev
A4	GW1NZ-LV1QN48	3.2
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GW2A-LV18PG256

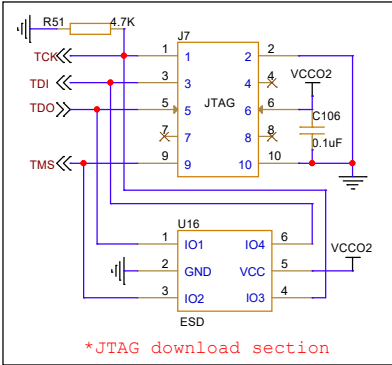
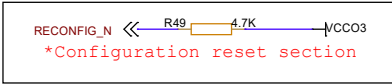
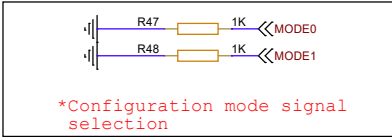
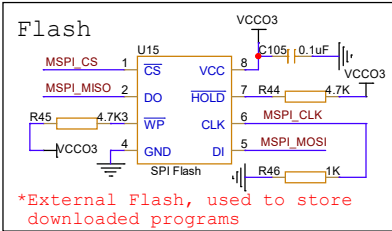
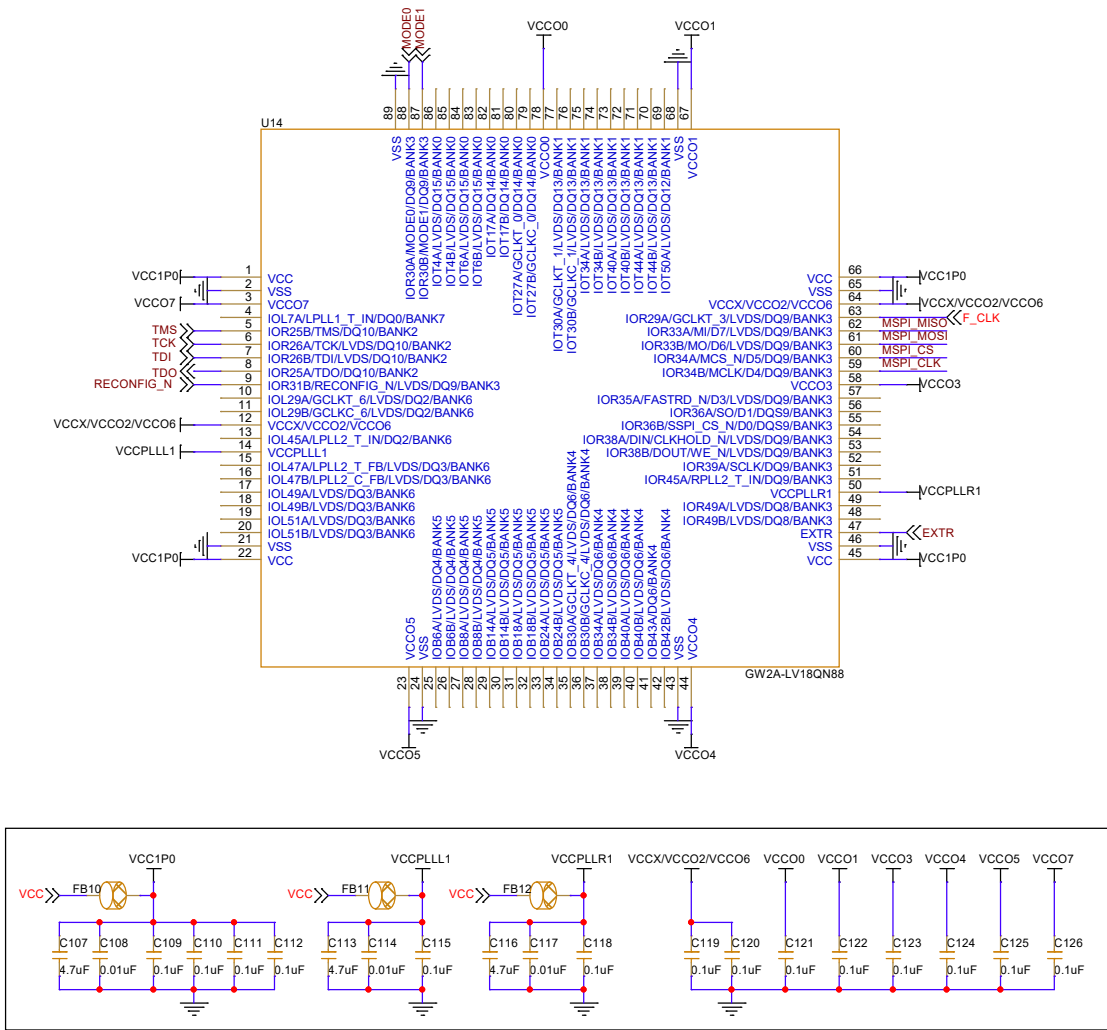


Notes:

- 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.

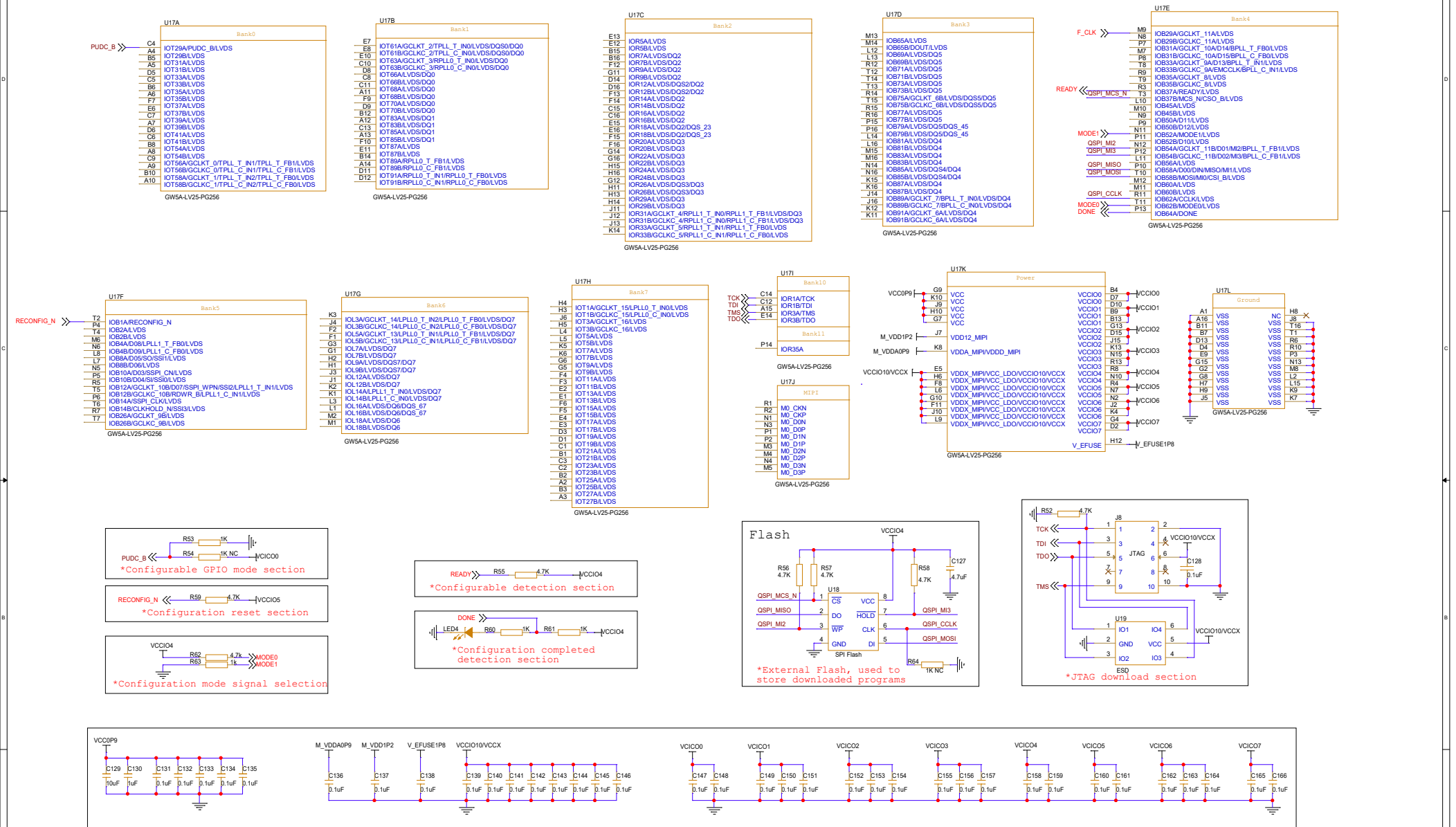
Title			Gowin FPGA-AOTOMOTIVE Minimum System Diagram
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A3	GW2A-LV18PG256	3.2	
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GW2A-LV18QN88



- 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.

GW5A-LV25PG256

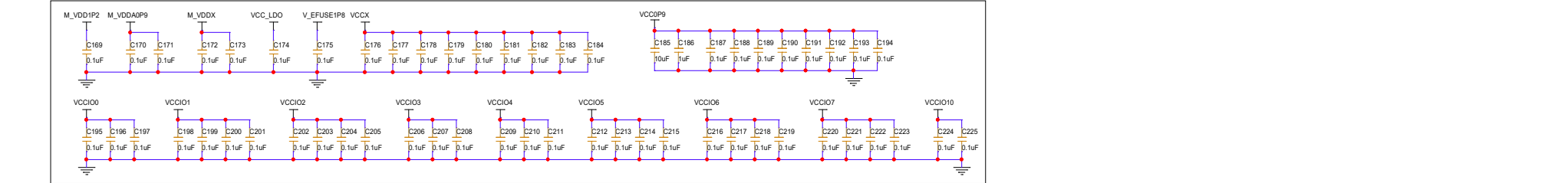
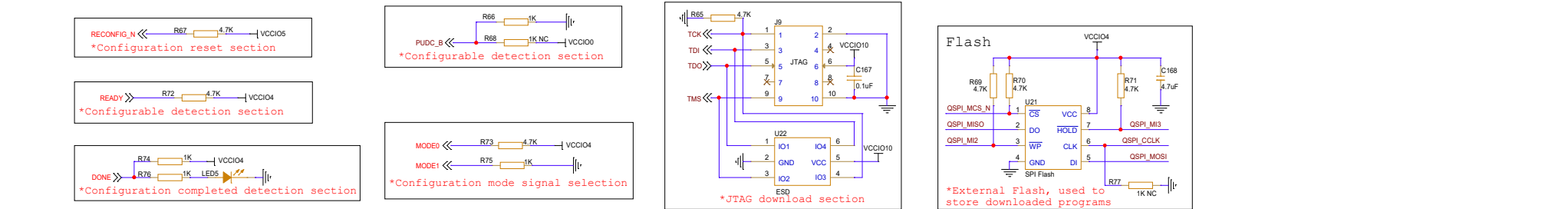


Notes:

- 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 4.5 SPI Flash Selection" in UG714, Arora V 25K FPGA Products Programming and Configuration Guide.
- 3.It is recommended that add an ESD protection chip to the JTAG download circuit.
- 4.VCC core voltage requires a large current, so it is recommended to supply power separately.
- 5.The MODE pin is the GowinCONFIG configuration mode selection signal. For details about how to select the Mode signal, see "Chapter 3.1 Configuration Modes" in UG714, Arora V 25K FPGA Products Programming and Configuration Guide.

Title			
GOWIN Minimum System Diagram			
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GW5A-LV25UG324F

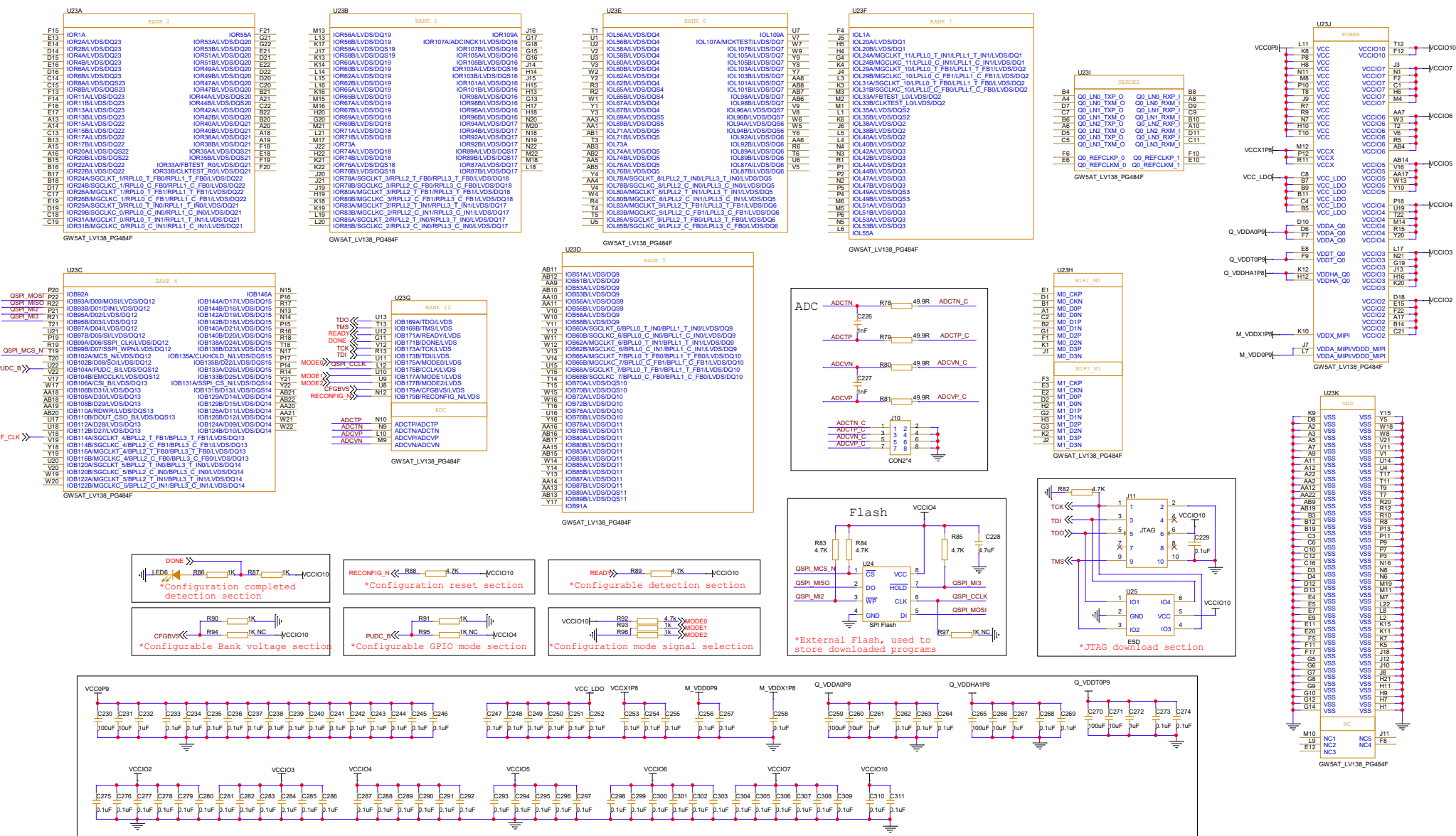


Notes:

- 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 4.5 SPI Flash Selection" in UG714, Arora V 25K FPGA Products Programming and Configuration Guide .
- 3.It is recommended that add an ESD protection chip to the JTAG download circuit.
- 4.VCC core voltage requires a large current, so it is recommended to supply power separately.
- 5.The MODE pin is the GowinCONFIG configuration mode selection signal.
- For details about how to select the Mode signal, see "Chapter 3.1 Configuration Modes" in UG714, Arora V 25K FPGA Products Programming and Configuration Guide.

Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
C	GW5A-LV25UG324F	3.2
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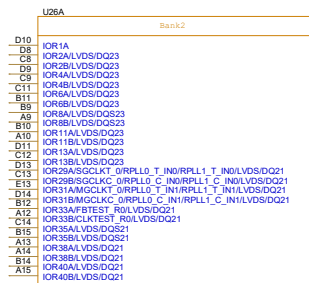
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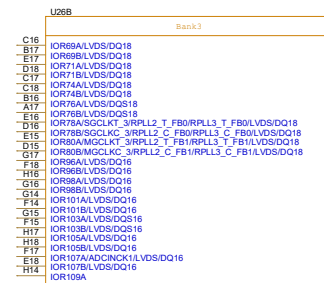
Notes:

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 4.5 SPI Flash Selection" in UG704, Arora V FPGA Products Programming and Configuration Guide
3. It is recommended that add an ESD protection chip to the JTAG download circuit.
4. VCC core voltage requires a large current, so it is recommended to supply power separately.
5. The MODE pin is the GowinCONFIG configuration mode selection signal.
- For details about how to select the Mode signal, see "Chapter 3.1 Configuration Modes" in UG704 Arora V FPGA Products Programming and Configuration Guide.

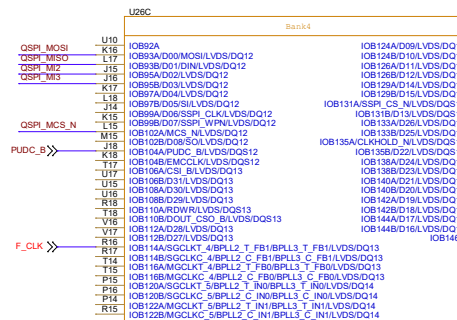
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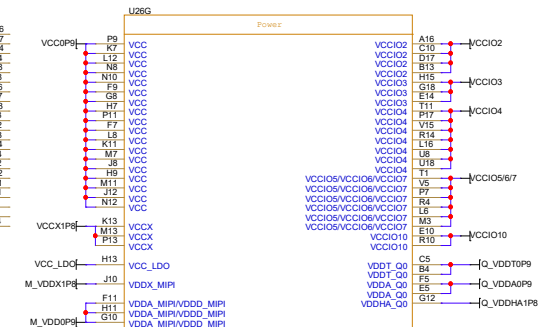
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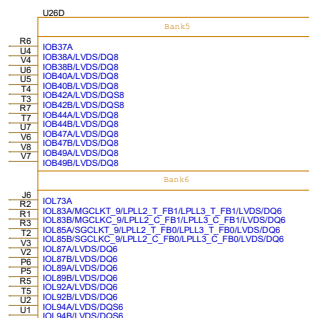
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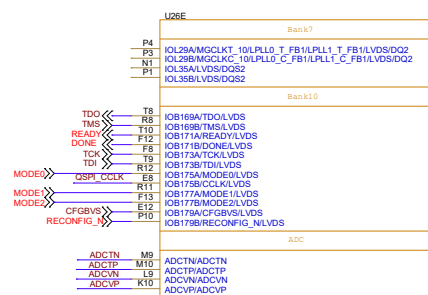
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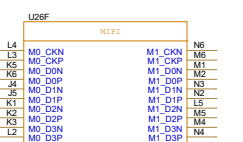
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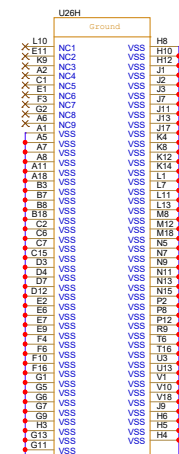
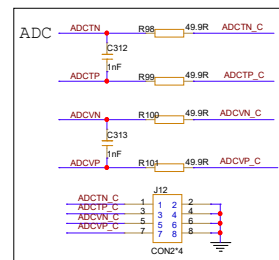
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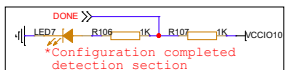
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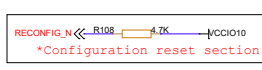


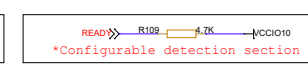
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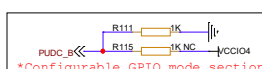


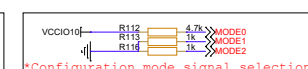
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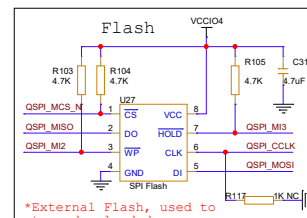




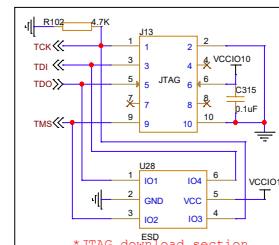


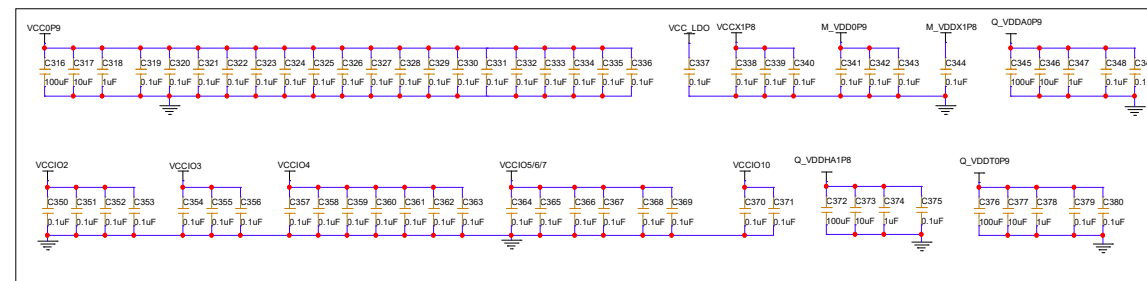


conjugation: male signal released.



store downloaded programs





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 4.5 SPI Flash Selection" in UG704, Arara V FPGA Products Programming and Configuration Guide .
3. It is recommended that add an ESD protection chip to the JTAG download circuit.
4. VCC core voltage requires a large current, so it is recommended to supply power separately.
5. The MODE pin is the GowinCONFIG configuration mode selection signal.
- For details about how to select the Mode signal, see "Chapter 3.1 Configuration Modes" in UG704, Arara V FPGA Products Programming and Configuration Guide .

