

FPGA\_Main.vi  
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Connector Pane

FPGA\_Main.vi



FPGA Main is the FPGA code for the CWRU Cutter Hex cRIO. Runs when the Real-Time loop starts.

Front Panel

MainEncoders/ PIDPWM9870 Serial Module

FPGA I/O PWM 1

Mod3/DIO0

FPGA I/O PWM 2

Mod3/DIO2

FPGA I/O PWM 3

Mod3/DIO4

PWM 1

PWM 2

PWM 3

PWM\_In\_1

PosLen

0

Period

0

PWM\_In\_2

PosLen

0

Period

0

PWM\_In\_3

PosLen

0

Period

0

Blade PWM

0

Trim PWM

0

FPGA I/O Blade PWM Out

Mod3/DIO6

FPGA I/O Trim PWM Out

Mod3/DIO8

Tab Control



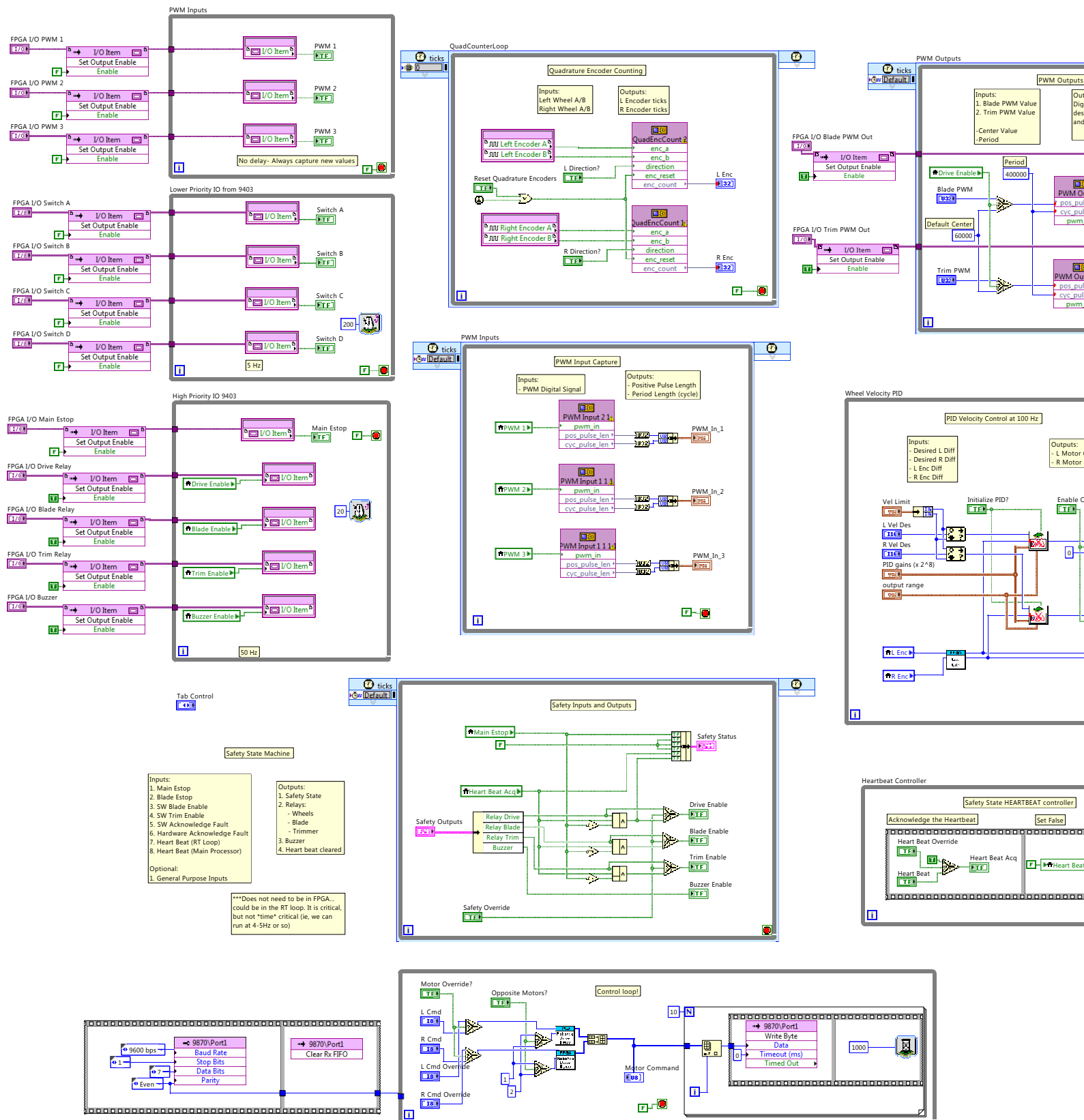
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## Block Diagram

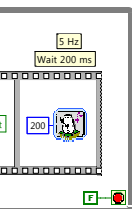
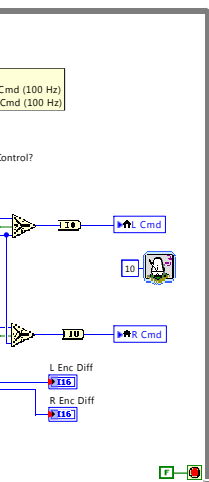
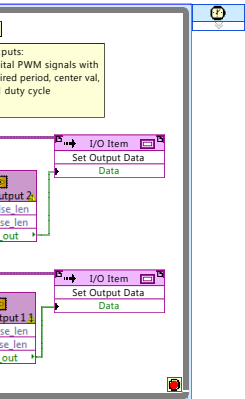


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## Express VI Configuration Information

**Loop Timer3**

Loop Timer

Waits the value you specify in **<B>Count</B>** between loop iterations. You can call this function in a loop to control the loop execution rate. If an execution instance is missed, such as when the logic in the loop takes longer to execute than the specified interval, the Loop Timer Express VI returns immediately and establishes a new reference time stamp for subsequent calls.

**Loop Timer4**

Loop Timer

Waits the value you specify in **<B>Count</B>** between loop iterations. You can call this function in a loop to control the loop execution rate. If an execution instance is missed, such as when the logic in the loop takes longer to execute than the specified interval, the Loop Timer Express VI returns immediately and establishes a new reference time stamp for subsequent calls.

**Loop Timer**

Loop Timer

Waits the value you specify in **<B>Count</B>** between loop iterations. You can call this function in a loop to control the loop execution rate. If an execution instance is missed, such as when the logic in the loop takes longer to execute than the specified interval, the Loop Timer Express VI returns immediately and establishes a new reference time stamp for subsequent calls.

**Loop Timer2**

Loop Timer

Waits the value you specify in **<B>Count</B>** between loop iterations. You can call this function in a loop to control the loop execution rate. If an execution instance is missed, such as when the logic in the loop takes longer to execute than the specified interval, the Loop Timer Express VI returns immediately and establishes a new reference time stamp for subsequent calls.

**Wait**

Wait

Delays for a certain time interval before the output data dependence becomes valid.