# 1 Code File list

## 1.1 C

**C** Digiswitch

> **Digiswitch** Digiswitch source - Digiswitch.c

> **Digiswitch** Digiswitch header - Digiswitch.h

**C** PID

> **PID** PID source - PID.c

> **PID** PID header - PID.h

**C** Keypad

> **Keypad** Keypad source - Keypad.c

> **Keypad** Keypad header - Keypad.h

**C** UI

> **UI** UI source - UI.c

> **UI** UI header - UI.h

**C** Blinking

> **Blinking** Blinking source - Blinking.c

> **Blinking** Blinking header - Blinking.h

## 1.2 VHDL

**VHDL** Communication - Communication.sch

> **Communication** RecMode - RecMode.vhdl

> **Communication** SPISlave - SPI.vhdl

> **Communication** Toggler - Toggler.vhdl

> **Communication** TraMode - TraMode.vhdl

**VHDL** Control - Control.sch

> **Control** ModPWM - ModPWM.vhdl

**Control**  Mux8x2 - Mux8x2.vhdl

**Control**  PanCalibration - PanCal.vhdl

**Control**  TiltCalibration - TiltCal.vhdl

**VHDL**  Encoders - Encoders.sch

**Encoders**  EncoderFilter - EncoderFilter.vhdl

**Encoders**  Dir_V3 - Dir_V3.vhdl

**Encoders**  SCount - SCount.vhdl

**Encoders**  ErrorMemory - ErrorMemory.vhdl

**VHDL**  InfoDis - InfoDis.sch

**InfoDis**  BinaryTBcd - BinaryTBcd.sch

**BinaryTBcd**  AutoLoadSignal - AutoLoadSignal.vhdl

**BinaryTBcd**  BcdDigit - BcdDigit.vhdl

**BinaryTBcd**  BinaryToBcd - BinaryToBcd.vhdl

**InfoDis**  Multiplexed_Display - Multiplexed_Display.sch

**Multiplexed_Display**  clkDiv1kHz - clkDiv1kHz.vhdl

**Multiplexed_Display**  Count_2_bit - Count_2_bit.vhdl

**Multiplexed_Display**  Encoder_2x4 - Encoder_2x4.vhdl

**Multiplexed_Display**  Mux_4x1_bit - Mux_4x1_bit.vhdl

**Multiplexed_Display**  Mux_4x8_bit - Mux_4x8_bit.vhdl

**Multiplexed_Display**  SegmentDecoder - SegmentDecoder.vhdl

**InfoDis**  BlinkDp - Blink.vhdl

**InfoDis**  clkDiv1Hz - clkDiv10Hz.vhdl

**InfoDis**  clkDiv2Hz - clkDivNHz.vhdl

**InfoDis**  Count1Bit - Count1Bit.vhdl

**InfoDis**  Mux4x2 - Mux_4x2.vhdl

**InfoDis**  Mux1x2 - Mux1x2.vhdl

**InfoDis** Mux8x2 - Mux8x2.vhdl

**InfoDis** Mux16x2 - Mux16x2.vhdl

**InfoDis** PWMToLED - PWMToLED.vhdl

**InfoDis** SCount16Bit - SCount16Bit.vhdl

**InfoDis** SignedToUsigned - SigendToUSigen.vhdl

## 1.3  MATLAB

**MATLAB** LQR

**LQR** Main LQR Project - LQRprojekt.m

**LQR** Nbar calculation script - rscale.m

**LQR** Simulink file for LQR - LQRsim.slx

**MATLAB**

**MATLAB**

**MATLAB**