

a-Si TFT LCD Single Chip Driver with 240RGBx320 Resolution and 262K color

Application Notes

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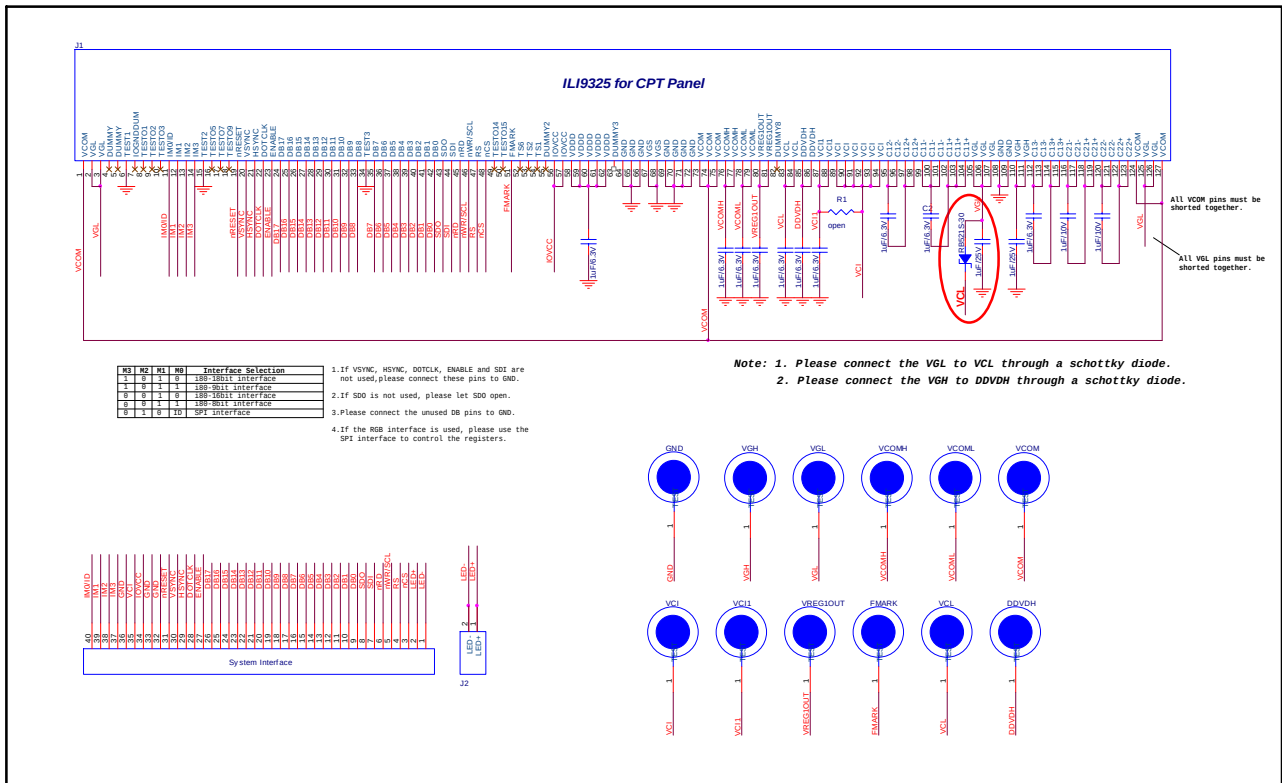
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1. CPT Panel

2.4" Panel



1.1. CPT 2.4" Initial Code

void ILI9325_CPT24_Initial(void)

```
{
  // VCI=2.8V
  //***** Reset LCD Driver *****//
  LCD_nRESET = 1;
  delays(1); // Delay 1ms
  LCD_nRESET = 0;
  delays(10); // Delay 10ms           // This delay time is necessary
  LCD_nRESET = 1;
  delays(50); // Delay 50 ms
  //***** Start Initial Sequence *****//
  LCD_CtrlWrite_ILI9325(0x0001, 0x0100); // set SS and SM bit
  LCD_CtrlWrite_ILI9325(0x0002, 0x0700); // set 1 line inversion
  LCD_CtrlWrite_ILI9325(0x0003, 0x1030); // set GRAM write direction and BGR=1.
  LCD_CtrlWrite_ILI9325(0x0004, 0x0000); // Resize register
  LCD_CtrlWrite_ILI9325(0x0008, 0x0207); // set the back porch and front porch
  LCD_CtrlWrite_ILI9325(0x0009, 0x0000); // set non-display area refresh cycle ISC[3:0]
  LCD_CtrlWrite_ILI9325(0x000A, 0x0000); // FMARK function
  LCD_CtrlWrite_ILI9325(0x000C, 0x0000); // RGB interface setting
  LCD_CtrlWrite_ILI9325(0x000D, 0x0000); // Frame marker Position
  LCD_CtrlWrite_ILI9325(0x000F, 0x0000); // RGB interface polarity
  //*****Power On sequence *****//
  LCD_CtrlWrite_ILI9325(0x0010, 0x0000); // SAP, BT[3:0], AP, DSTB, SLP, STB
  LCD_CtrlWrite_ILI9325(0x0011, 0x0007); // DC1[2:0], DC0[2:0], VC[2:0]
  LCD_CtrlWrite_ILI9325(0x0012, 0x0000); // VREG1OUT voltage
  LCD_CtrlWrite_ILI9325(0x0013, 0x0000); // VDV[4:0] for VCOM amplitude
  delays(200); // Dis-charge capacitor power voltage
  LCD_CtrlWrite_ILI9325(0x0010, 0x1290); // SAP, BT[3:0], AP, DSTB, SLP, STB
  LCD_CtrlWrite_ILI9325(0x0011, 0x0227); // DC1[2:0], DC0[2:0], VC[2:0]
  delays(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0012, 0x001B); // Internal reference voltage= Vci;
  delays(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0013, 0x1700); // Set VDV[4:0] for VCOM amplitude
  LCD_CtrlWrite_ILI9325(0x0029, 0x001E); // Set VCM[5:0] for VCOMH
  LCD_CtrlWrite_ILI9325(0x002B, 0x000D); // Set Frame Rate
  delays(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0020, 0x0000); // GRAM horizontal Address
  LCD_CtrlWrite_ILI9325(0x0021, 0x0000); // GRAM Vertical Address
  // ----- Adjust the Gamma Curve -----//
  LCD_CtrlWrite_ILI9325(0x0030, 0x0004);
  LCD_CtrlWrite_ILI9325(0x0031, 0x0007);
  LCD_CtrlWrite_ILI9325(0x0032, 0x0006);
  LCD_CtrlWrite_ILI9325(0x0035, 0x0206);
  LCD_CtrlWrite_ILI9325(0x0036, 0x0408);
  LCD_CtrlWrite_ILI9325(0x0037, 0x0507);
  LCD_CtrlWrite_ILI9325(0x0038, 0x0200);
  LCD_CtrlWrite_ILI9325(0x0039, 0x0707);
  LCD_CtrlWrite_ILI9325(0x003C, 0x0504);
  LCD_CtrlWrite_ILI9325(0x003D, 0x0F02);
  //----- Set GRAM area -----//
  LCD_CtrlWrite_ILI9325(0x0050, 0x0000); // Horizontal GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0051, 0x00EF); // Horizontal GRAM End Address
  LCD_CtrlWrite_ILI9325(0x0052, 0x0000); // Vertical GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0053, 0x013F); // Vertical GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0060, 0xA700); // Gate Scan Line
  LCD_CtrlWrite_ILI9325(0x0061, 0x0001); // NDL,VLE, REV
  LCD_CtrlWrite_ILI9325(0x006A, 0x0000); // set scrolling line
  //----- Partial Display Control -----//
```

```

LCD_CtrlWrite_ILI9325(0x0080, 0x0000);
LCD_CtrlWrite_ILI9325(0x0081, 0x0000);
LCD_CtrlWrite_ILI9325(0x0082, 0x0000);
LCD_CtrlWrite_ILI9325(0x0083, 0x0000);
LCD_CtrlWrite_ILI9325(0x0084, 0x0000);
LCD_CtrlWrite_ILI9325(0x0085, 0x0000);
//----- Panel Control -----//
LCD_CtrlWrite_ILI9325(0x0090, 0x0010);
LCD_CtrlWrite_ILI9325(0x0092, 0x0600);
LCD_CtrlWrite_ILI9325(0x0093, 0x0003);
LCD_CtrlWrite_ILI9325(0x0095, 0x0110);
LCD_CtrlWrite_ILI9325(0x0097, 0x0000);
LCD_CtrlWrite_ILI9325(0x0098, 0x0000);

LCD_CtrlWrite_ILI9325(0x0007, 0x0133);    // 262K color and display ON
}

```

void LCD_ExitSleep_ILI9325(void)

```

{
//*****Power On sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0000);    // SAP, BT[3:0], AP, DSTB, SLP
LCD_CtrlWrite_ILI9325(0x0011, 0x0000);    // DC1[2:0], DC0[2:0], VC[2:0]
LCD_CtrlWrite_ILI9325(0x0012, 0x0000);    // VREG1OUT voltage
LCD_CtrlWrite_ILI9325(0x0013, 0x0000);    // VDV[4:0] for VCOM amplitude
delayms(200);                             // Dis-charge capacitor power voltage
LCD_CtrlWrite_ILI9325(0x0010, 0x1290);    // SAP, BT[3:0], AP, DSTB, SLP, STB
LCD_CtrlWrite_ILI9325(0x0011, 0x0227);    // DC1[2:0], DC0[2:0], VC[2:0]
delayms(50);                              // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0012, 0x001B);    // Internal reference voltage =Vci;
delayms(50);                              // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x1700);    // VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x001E);    // VCM[5:0] for VCOMH
delayms(50);                              // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0007, 0x0133);    // 262K color and display ON
}

```

void LCD_EnterSleep_ILI9325(void)

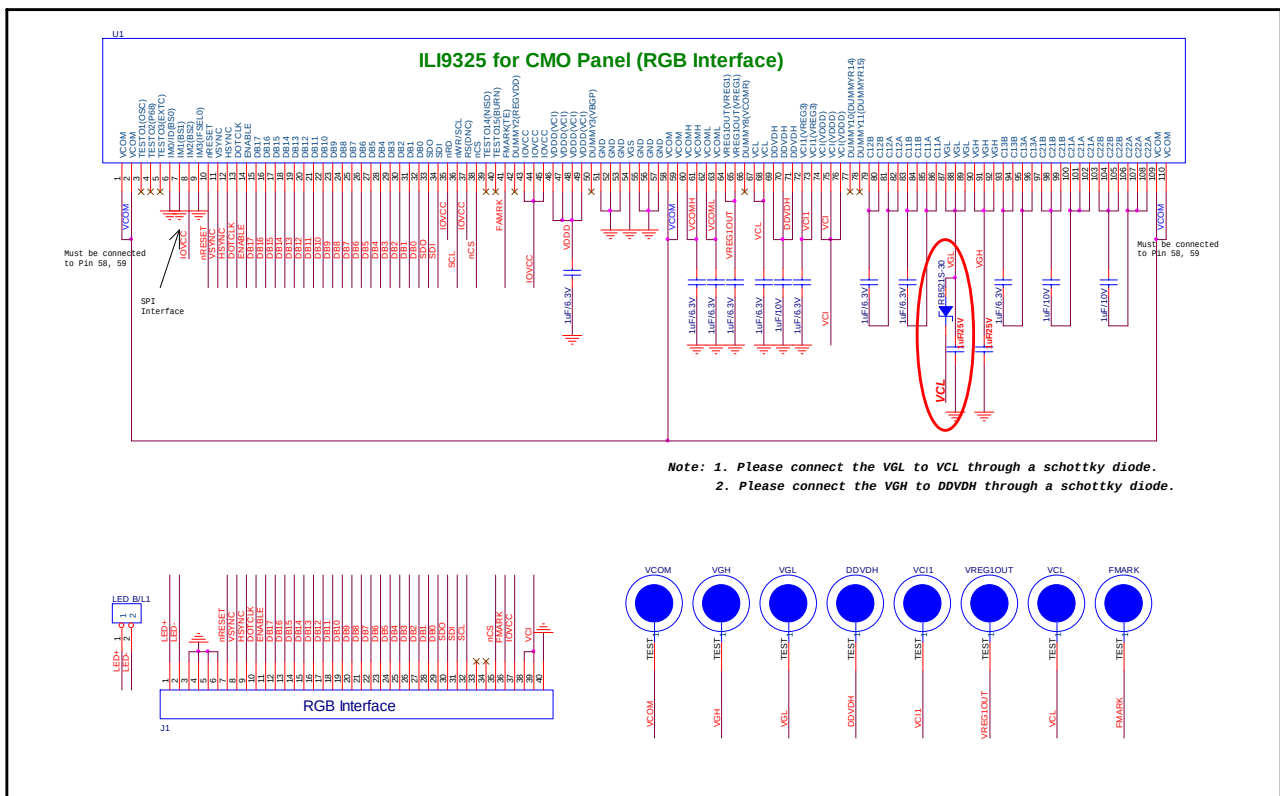
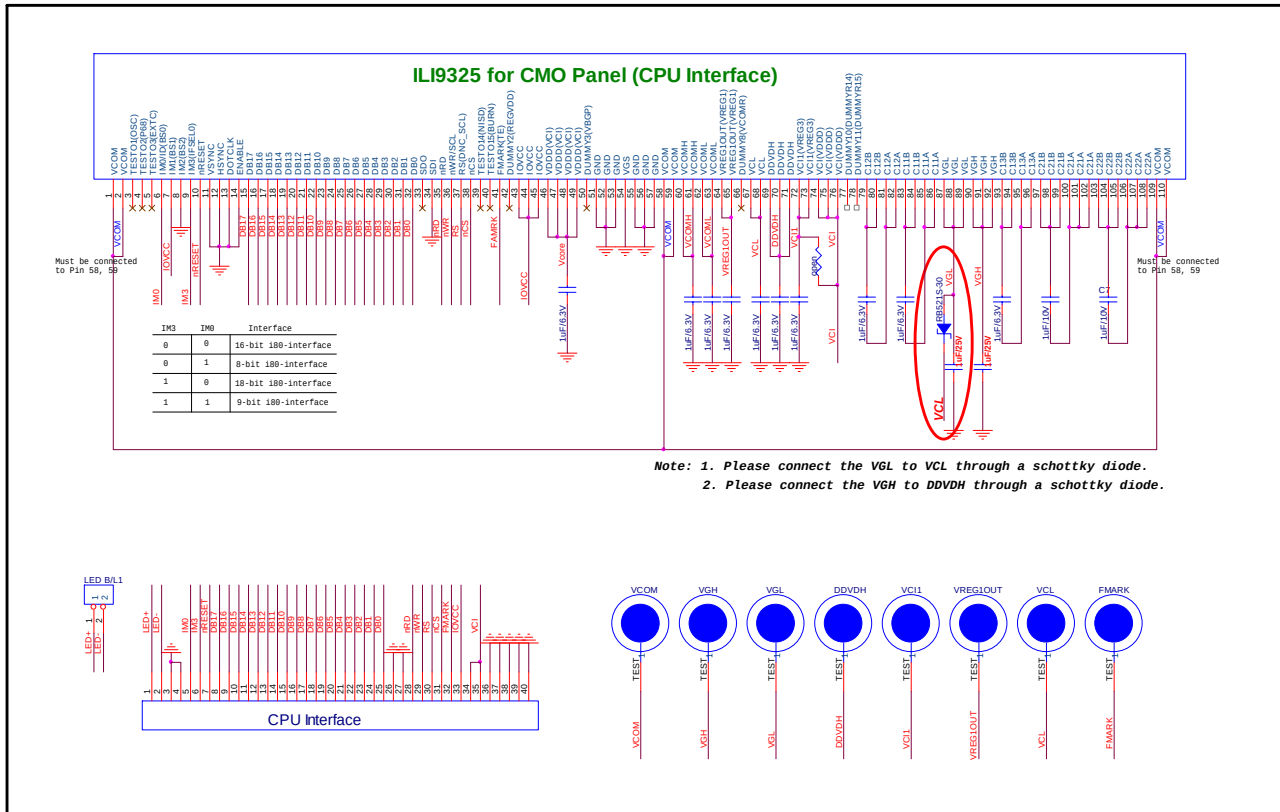
```

{
LCD_CtrlWrite_ILI9325(0x0007, 0x0131);    // Set D1=0, D0=1
delayms(10);
LCD_CtrlWrite_ILI9325(0x0007, 0x0130);    // Set D1=0, D0=0
delayms(10);
LCD_CtrlWrite_ILI9325(0x0007, 0x0000);    // display OFF
//***** Power OFF sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0000);    // SAP, BT[3:0], APE, AP, DSTB, SLP
LCD_CtrlWrite_ILI9325(0x0011, 0x0000);    // DC1[2:0], DC0[2:0], VC[2:0]
LCD_CtrlWrite_ILI9325(0x0012, 0x0000);    // VREG1OUT voltage
LCD_CtrlWrite_ILI9325(0x0013, 0x0000);    // VDV[4:0] for VCOM amplitude
delayms(200);                             // Dis-charge capacitor power voltage
LCD_CtrlWrite_ILI9325(0x0010, 0x0002);    // SAP, BT[3:0], APE, AP, DSTB, SLP
}

```

2.CMO Panel

2.4", 2.8" and 3.2" Panel



2.1 CMO 3.2" Initial Code

2.2 CMO 2.8" Initial Code

void ILI9325_CMO28_Initial(void)

```
{
  // VCI=2.8V
  //***** Reset LCD Driver *****//
  LCD_nRESET = 1;
  delays(1); // Delay 1ms
  LCD_nRESET = 0;
  delays(10); // Delay 10ms          // This delay time is necessary
  LCD_nRESET = 1;
  delays(50); // Delay 50 ms

  //***** Start Initial Sequence *****//
  LCD_CtrlWrite_ILI9325(0x0001, 0x0100); // set SS and SM bit
  LCD_CtrlWrite_ILI9325(0x0002, 0x0700); // set 1 line inversion
  LCD_CtrlWrite_ILI9325(0x0003, 0x1030); // set GRAM write direction and BGR=1.
  LCD_CtrlWrite_ILI9325(0x0004, 0x0000); // Resize register
  LCD_CtrlWrite_ILI9325(0x0008, 0x0207); // set the back porch and front porch
  LCD_CtrlWrite_ILI9325(0x0009, 0x0000); // set non-display area refresh cycle ISC[3:0]
  LCD_CtrlWrite_ILI9325(0x000A, 0x0000); // FMARK function
  LCD_CtrlWrite_ILI9325(0x000C, 0x0000); // RGB interface setting
  LCD_CtrlWrite_ILI9325(0x000D, 0x0000); // Frame marker Position
  LCD_CtrlWrite_ILI9325(0x000F, 0x0000); // RGB interface polarity

  //*****Power On sequence *****//
  LCD_CtrlWrite_ILI9325(0x0010, 0x0000); // SAP, BT[3:0], AP, DSTB, SLP, STB
  LCD_CtrlWrite_ILI9325(0x0011, 0x0007); // DC1[2:0], DC0[2:0], VC[2:0]
  LCD_CtrlWrite_ILI9325(0x0012, 0x0000); // VREG1OUT voltage
  LCD_CtrlWrite_ILI9325(0x0013, 0x0000); // VDV[4:0] for VCOM amplitude
  delays(200); // Dis-charge capacitor power voltage
  LCD_CtrlWrite_ILI9325(0x0010, 0x1490); // SAP, BT[3:0], AP, DSTB, SLP, STB
  LCD_CtrlWrite_ILI9325(0x0011, 0x0227); // DC1[2:0], DC0[2:0], VC[2:0]
  delays(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0012, 0x001D); // Internal reference voltage= Vci;
  delays(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0013, 0x0800); // Set VDV[4:0] for VCOM amplitude
  LCD_CtrlWrite_ILI9325(0x0029, 0x0014); // Set VCM[5:0] for VCOMH
  LCD_CtrlWrite_ILI9325(0x002B, 0x000D); // Set Frame Rate
  delays(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0020, 0x0000); // GRAM horizontal Address
  LCD_CtrlWrite_ILI9325(0x0021, 0x0000); // GRAM Vertical Address

  // ----- Adjust the Gamma Curve -----//
  LCD_CtrlWrite_ILI9325(0x0030, 0x0007);
  LCD_CtrlWrite_ILI9325(0x0031, 0x0707);
  LCD_CtrlWrite_ILI9325(0x0032, 0x0006);
  LCD_CtrlWrite_ILI9325(0x0035, 0x0704);
  LCD_CtrlWrite_ILI9325(0x0036, 0x1F04);
  LCD_CtrlWrite_ILI9325(0x0037, 0x0004);
  LCD_CtrlWrite_ILI9325(0x0038, 0x0000);
  LCD_CtrlWrite_ILI9325(0x0039, 0x0706);
  LCD_CtrlWrite_ILI9325(0x003C, 0x0701);
  LCD_CtrlWrite_ILI9325(0x003D, 0x000F);

  //----- Set GRAM area -----//
  LCD_CtrlWrite_ILI9325(0x0050, 0x0000); // Horizontal GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0051, 0x00EF); // Horizontal GRAM End Address
  LCD_CtrlWrite_ILI9325(0x0052, 0x0000); // Vertical GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0053, 0x013F); // Vertical GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0060, 0xA700); // Gate Scan Line
  LCD_CtrlWrite_ILI9325(0x0061, 0x0001); // NDL,VLE, REV
}
```



```

    LCD_CtrlWrite_ILI9325(0x006A, 0x0000);    // set scrolling line
//----- Partial Display Control -----//
    LCD_CtrlWrite_ILI9325(0x0080, 0x0000);
    LCD_CtrlWrite_ILI9325(0x0081, 0x0000);
    LCD_CtrlWrite_ILI9325(0x0082, 0x0000);
    LCD_CtrlWrite_ILI9325(0x0083, 0x0000);
    LCD_CtrlWrite_ILI9325(0x0084, 0x0000);
    LCD_CtrlWrite_ILI9325(0x0085, 0x0000);
//----- Panel Control -----//
    LCD_CtrlWrite_ILI9325(0x0090, 0x0010);
    LCD_CtrlWrite_ILI9325(0x0092, 0x0600);
    LCD_CtrlWrite_ILI9325(0x0093, 0x0003);
    LCD_CtrlWrite_ILI9325(0x0095, 0x0110);
    LCD_CtrlWrite_ILI9325(0x0097, 0x0000);
    LCD_CtrlWrite_ILI9325(0x0098, 0x0000);

    LCD_CtrlWrite_ILI9325(0x0007, 0x0133);    // 262K color and display ON
}

void LCD_ExitSleep_ILI9325(void)
{
//*****Power On sequence *****//
    LCD_CtrlWrite_ILI9325(0x0010, 0x0000);    // SAP, BT[3:0], AP, DSTB, SLP
    LCD_CtrlWrite_ILI9325(0x0011, 0x0000);    // DC1[2:0], DC0[2:0], VC[2:0]
    LCD_CtrlWrite_ILI9325(0x0012, 0x0000);    // VREG1OUT voltage
    LCD_CtrlWrite_ILI9325(0x0013, 0x0000);    // VDV[4:0] for VCOM amplitude
    delayms(200);                             // Dis-charge capacitor power voltage
    LCD_CtrlWrite_ILI9325(0x0010, 0x1490);    // SAP, BT[3:0], AP, DSTB, SLP, STB
    LCD_CtrlWrite_ILI9325(0x0011, 0x0227);    // Set DC1[2:0], DC0[2:0], VC[2:0]
    delayms(50);                             // Delay 50ms
    LCD_CtrlWrite_ILI9325(0x0012, 0x001D);    // External reference voltage =Vci;
    delayms(50);                             // Delay 50ms
    LCD_CtrlWrite_ILI9325(0x0013, 0x0800);    // R13h=0x1D00 when R12=009D VDV[4:0] for VCOM amplitude
    LCD_CtrlWrite_ILI9325(0x0029, 0x0014);    // R29h=0x0013 when R12=009D VCM[5:0] for VCOMH
    delayms(50);                             // Delay 50ms
    LCD_CtrlWrite_ILI9325(0x0007, 0x0133);    // 262K color and display ON
}

void LCD_EnterSleep_ILI9325(void)
{
    LCD_CtrlWrite_ILI9325(0x0007, 0x0131);    // Set D1=0, D0=1
    delayms(10);
    LCD_CtrlWrite_ILI9325(0x0007, 0x0130);    // Set D1=0, D0=0
    delayms(10);
    LCD_CtrlWrite_ILI9325(0x0007, 0x0000);    // display OFF
//***** Power OFF sequence *****//
    LCD_CtrlWrite_ILI9325(0x0010, 0x0000);    // SAP, BT[3:0], APE, AP, DSTB, SLP
    LCD_CtrlWrite_ILI9325(0x0011, 0x0000);    // DC1[2:0], DC0[2:0], VC[2:0]
    LCD_CtrlWrite_ILI9325(0x0012, 0x0000);    // VREG1OUT voltage
    LCD_CtrlWrite_ILI9325(0x0013, 0x0000);    // VDV[4:0] for VCOM amplitude
    delayms(200);                             // Dis-charge capacitor power voltage
    LCD_CtrlWrite_ILI9325(0x0010, 0x0002);    // SAP, BT[3:0], APE, AP, DSTB, SLP
}

```

2.3 CMO 2.4" Initial Code

```
void ILI9325_CMO24_Initial(void)
```

```
{
  // VCI=2.8V
  //***** Reset LCD Driver *****//
  LCD_nRESET = 1;
  delays(1); // Delay 1ms
  LCD_nRESET = 0;
  delays(10); // Delay 10ms           // This delay time is necessary
  LCD_nRESET = 1;
  delays(50); // Delay 50 ms
  //***** Start Initial Sequence *****//
  LCD_CtrlWrite_ILI9325(0x0001, 0x0100); // set SS and SM bit
  LCD_CtrlWrite_ILI9325(0x0002, 0x0700); // set 1 line inversion
  LCD_CtrlWrite_ILI9325(0x0003, 0x1030); // set GRAM write direction and BGR=1.
  LCD_CtrlWrite_ILI9325(0x0004, 0x0000); // Resize register
  LCD_CtrlWrite_ILI9325(0x0008, 0x0207); // set the back porch and front porch
  LCD_CtrlWrite_ILI9325(0x0009, 0x0000); // set non-display area refresh cycle ISC[3:0]
  LCD_CtrlWrite_ILI9325(0x000A, 0x0000); // FMARK function
  LCD_CtrlWrite_ILI9325(0x000C, 0x0000); // RGB interface setting
  LCD_CtrlWrite_ILI9325(0x000D, 0x0000); // Frame marker Position
  LCD_CtrlWrite_ILI9325(0x000F, 0x0000); // RGB interface polarity
  //*****Power On sequence *****//
  LCD_CtrlWrite_ILI9325(0x0010, 0x0000); // SAP, BT[3:0], AP, DSTB, SLP, STB
  LCD_CtrlWrite_ILI9325(0x0011, 0x0007); // DC1[2:0], DC0[2:0], VC[2:0]
  LCD_CtrlWrite_ILI9325(0x0012, 0x0000); // VREG1OUT voltage
  LCD_CtrlWrite_ILI9325(0x0013, 0x0000); // VDV[4:0] for VCOM amplitude
  delays(200); // Dis-charge capacitor power voltage
  LCD_CtrlWrite_ILI9325(0x0010, 0x1490); // SAP, BT[3:0], AP, DSTB, SLP, STB
  LCD_CtrlWrite_ILI9325(0x0011, 0x0227); // Set DC1[2:0], DC0[2:0], VC[2:0]
  delays(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0012, 0x001D); // External reference voltage= Vci;
  delays(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0013, 0x1A00); // Set VDV[4:0] for VCOM amplitude
  LCD_CtrlWrite_ILI9325(0x0029, 0x000B); // SetVCM[5:0] for VCOMH
  LCD_CtrlWrite_ILI9325(0x002B, 0x000D); // Set Frame Rate
  delays(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0020, 0x0000); // GRAM horizontal Address
  LCD_CtrlWrite_ILI9325(0x0021, 0x0000); // GRAM Vertical Address
  // ----- Adjust the Gamma Curve -----//
  LCD_CtrlWrite_ILI9325(0x0030, 0x0007);
  LCD_CtrlWrite_ILI9325(0x0031, 0x0206);
  LCD_CtrlWrite_ILI9325(0x0032, 0x0506);
  LCD_CtrlWrite_ILI9325(0x0035, 0x0704);
  LCD_CtrlWrite_ILI9325(0x0036, 0x1203);
  LCD_CtrlWrite_ILI9325(0x0037, 0x0007);
  LCD_CtrlWrite_ILI9325(0x0038, 0x0000);
  LCD_CtrlWrite_ILI9325(0x0039, 0x0706);
  LCD_CtrlWrite_ILI9325(0x003C, 0x0701);
  LCD_CtrlWrite_ILI9325(0x003D, 0x000F);
  //----- Set GRAM area -----//
  LCD_CtrlWrite_ILI9325(0x0050, 0x0000); // Horizontal GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0051, 0x00EF); // Horizontal GRAM End Address
  LCD_CtrlWrite_ILI9325(0x0052, 0x0000); // Vertical GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0053, 0x013F); // Vertical GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0060, 0xA700); // Gate Scan Line
  LCD_CtrlWrite_ILI9325(0x0061, 0x0001); // NDL,VLE, REV
  LCD_CtrlWrite_ILI9325(0x006A, 0x0000); // set scrolling line
  //----- Partial Display Control -----//
}
```

```

LCD_CtrlWrite_ILI9325(0x0080, 0x0000);
LCD_CtrlWrite_ILI9325(0x0081, 0x0000);
LCD_CtrlWrite_ILI9325(0x0082, 0x0000);
LCD_CtrlWrite_ILI9325(0x0083, 0x0000);
LCD_CtrlWrite_ILI9325(0x0084, 0x0000);
LCD_CtrlWrite_ILI9325(0x0085, 0x0000);
//----- Panel Control -----//
LCD_CtrlWrite_ILI9325(0x0090, 0x0010);
LCD_CtrlWrite_ILI9325(0x0092, 0x0600);
LCD_CtrlWrite_ILI9325(0x0093, 0x0003);
LCD_CtrlWrite_ILI9325(0x0095, 0x0110);
LCD_CtrlWrite_ILI9325(0x0097, 0x0000);
LCD_CtrlWrite_ILI9325(0x0098, 0x0000);

LCD_CtrlWrite_ILI9325(0x0007, 0x0133);    // 262K color and display ON
}

```

void LCD_EnterSleep_ILI9325(void)

```

{
  LCD_CtrlWrite_ILI9325(0x0007, 0x0131);    // Set D1=0, D0=1
  delays(10);
  LCD_CtrlWrite_ILI9325(0x0007, 0x0130);    // Set D1=0, D0=0
  delays(10);
  LCD_CtrlWrite_ILI9325(0x0007, 0x0000);    // display OFF
  //***** Power OFF sequence *****//
  LCD_CtrlWrite_ILI9325(0x0010, 0x0000);    // SAP, BT[3:0], APE, AP, DSTB, SLP
  LCD_CtrlWrite_ILI9325(0x0011, 0x0000);    // DC1[2:0], DC0[2:0], VC[2:0]
  LCD_CtrlWrite_ILI9325(0x0012, 0x0000);    // VREG1OUT voltage
  LCD_CtrlWrite_ILI9325(0x0013, 0x0000);    // VDV[4:0] for VCOM amplitude
  delays(200);                              // Dis-charge capacitor power voltage
  LCD_CtrlWrite_ILI9325(0x0010, 0x0002);    // SAP, BT[3:0], APE, AP, DSTB, SLP
}

```

void LCD_ExitSleep_ILI9325(void)

```

{
  //*****Power On sequence *****//
  LCD_CtrlWrite_ILI9325(0x0010, 0x0000);    // SAP, BT[3:0], AP, DSTB, SLP
  LCD_CtrlWrite_ILI9325(0x0011, 0x0000);    // DC1[2:0], DC0[2:0], VC[2:0]
  LCD_CtrlWrite_ILI9325(0x0012, 0x0000);    // VREG1OUT voltage
  LCD_CtrlWrite_ILI9325(0x0013, 0x0000);    // VDV[4:0] for VCOM amplitude
  delays(200);                              // Dis-charge capacitor power voltage
  LCD_CtrlWrite_ILI9325(0x0010, 0x1490);    // SAP, BT[3:0], AP, DSTB, SLP, STB
  LCD_CtrlWrite_ILI9325(0x0011, 0x0227);    // Set DC1[2:0], DC0[2:0], VC[2:0]
  delays(50);                              // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0012, 0x001D);    // External reference voltage =Vci;
  delays(50);                              // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0013, 0x1A00);    // Set VDV[4:0] for VCOM amplitude
  LCD_CtrlWrite_ILI9325(0x0029, 0x000B);    // Set VCM[5:0] for VCOMH
  delays(50);                              // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0007, 0x0133);    // 262K color and display ON
}

```


3.1 AUO 2.8" Initial Code

```
void ILI9325_AUO28_Initial(void)
```

```
{
// VCI=2.8V
//***** Reset LCD Driver *****//
  LCD_nRESET = 1;
  delays(1); // Delay 1ms
  LCD_nRESET = 0;
  delays(10); // Delay 10ms          // This delay time is necessary
  LCD_nRESET = 1;
  delays(50); // Delay 50 ms
//***** Start Initial Sequence *****//
  LCD_CtrlWrite_ILI9325(0x0001, 0x0100); // set SS and SM bit
  LCD_CtrlWrite_ILI9325(0x0002, 0x0700); // set 1 line inversion
  LCD_CtrlWrite_ILI9325(0x0003, 0x1030); // set GRAM write direction and BGR=1.
  LCD_CtrlWrite_ILI9325(0x0004, 0x0000); // Resize register
  LCD_CtrlWrite_ILI9325(0x0008, 0x0207); // set the back porch and front porch
  LCD_CtrlWrite_ILI9325(0x0009, 0x0000); // set non-display area refresh cycle ISC[3:0]
  LCD_CtrlWrite_ILI9325(0x000A, 0x0000); // FMARK function
  LCD_CtrlWrite_ILI9325(0x000C, 0x0000); // RGB interface setting
  LCD_CtrlWrite_ILI9325(0x000D, 0x0000); // Frame marker Position
  LCD_CtrlWrite_ILI9325(0x000F, 0x0000); // RGB interface polarity
//*****Power On sequence *****//
  LCD_CtrlWrite_ILI9325(0x0010, 0x0000); // SAP, BT[3:0], AP, DSTB, SLP, STB
  LCD_CtrlWrite_ILI9325(0x0011, 0x0007); // DC1[2:0], DC0[2:0], VC[2:0]
  LCD_CtrlWrite_ILI9325(0x0012, 0x0000); // VREG1OUT voltage
  LCD_CtrlWrite_ILI9325(0x0013, 0x0000); // VDV[4:0] for VCOM amplitude
  delays(200); // Dis-charge capacitor power voltage
  LCD_CtrlWrite_ILI9325(0x0010, 0x1490); // SAP, BT[3:0], AP, DSTB, SLP, STB
  LCD_CtrlWrite_ILI9325(0x0011, 0x0227); // Set DC1[2:0], DC0[2:0], VC[2:0]
  delays(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0012, 0x001A); // External reference voltage= Vci;
  delays(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0013, 0x1400); // VDV[4:0] for VCOM amplitude
  LCD_CtrlWrite_ILI9325(0x0029, 0x0019); // VCM[5:0] for VCOMH
  LCD_CtrlWrite_ILI9325(0x002B, 0x000B); // Set Frame Rate
  delays(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0020, 0x0000); // GRAM horizontal Address
  LCD_CtrlWrite_ILI9325(0x0021, 0x0000); // GRAM Vertical Address
// ----- Adjust the Gamma Curve -----//
  LCD_CtrlWrite_ILI9325(0x0030, 0x0000);
  LCD_CtrlWrite_ILI9325(0x0031, 0x0607);
  LCD_CtrlWrite_ILI9325(0x0032, 0x0305);
  LCD_CtrlWrite_ILI9325(0x0035, 0x0000);
  LCD_CtrlWrite_ILI9325(0x0036, 0x1604);
  LCD_CtrlWrite_ILI9325(0x0037, 0x0204);
  LCD_CtrlWrite_ILI9325(0x0038, 0x0001);
  LCD_CtrlWrite_ILI9325(0x0039, 0x0707);
  LCD_CtrlWrite_ILI9325(0x003C, 0x0000);
  LCD_CtrlWrite_ILI9325(0x003D, 0x000F);
//----- Set GRAM area -----//
  LCD_CtrlWrite_ILI9325(0x0050, 0x0000); // Horizontal GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0051, 0x00EF); // Horizontal GRAM End Address
  LCD_CtrlWrite_ILI9325(0x0052, 0x0000); // Vertical GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0053, 0x013F); // Vertical GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0060, 0xA700); // Gate Scan Line
  LCD_CtrlWrite_ILI9325(0x0061, 0x0001); // NDL,VLE, REV
  LCD_CtrlWrite_ILI9325(0x006A, 0x0000); // set scrolling line
//----- Partial Display Control -----//
```

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```

LCD_CtrlWrite_ILI9325(0x0080, 0x0000);
LCD_CtrlWrite_ILI9325(0x0081, 0x0000);
LCD_CtrlWrite_ILI9325(0x0082, 0x0000);
LCD_CtrlWrite_ILI9325(0x0083, 0x0000);
LCD_CtrlWrite_ILI9325(0x0084, 0x0000);
LCD_CtrlWrite_ILI9325(0x0085, 0x0000);
//----- Panel Control -----//
LCD_CtrlWrite_ILI9325(0x0090, 0x0010);
LCD_CtrlWrite_ILI9325(0x0092, 0x0600);
LCD_CtrlWrite_ILI9325(0x0093, 0x0003);
LCD_CtrlWrite_ILI9325(0x0095, 0x0110);
LCD_CtrlWrite_ILI9325(0x0097, 0x0000);
LCD_CtrlWrite_ILI9325(0x0098, 0x0000);

LCD_CtrlWrite_ILI9325(0x0007, 0x0133);    // 262K color and display ON
}

```

void LCD_EnterSleep_ILI9325(void)

```

{
LCD_CtrlWrite_ILI9325(0x0007, 0x0131);    // Set D1=0, D0=1
delayms(10);
LCD_CtrlWrite_ILI9325(0x0007, 0x0130);    // Set D1=0, D0=0
delayms(10);
LCD_CtrlWrite_ILI9325(0x0007, 0x0000);    // display OFF
//***** Power OFF sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0000);    // SAP, BT[3:0], APE, AP, DSTB, SLP
LCD_CtrlWrite_ILI9325(0x0011, 0x0000);    // DC1[2:0], DC0[2:0], VC[2:0]
LCD_CtrlWrite_ILI9325(0x0012, 0x0000);    // VREG1OUT voltage
LCD_CtrlWrite_ILI9325(0x0013, 0x0000);    // VDV[4:0] for VCOM amplitude
delayms(200);                             // Dis-charge capacitor power voltage
LCD_CtrlWrite_ILI9325(0x0010, 0x0002);    // SAP, BT[3:0], APE, AP, DSTB, SLP
}

```

void LCD_ExitSleep_ILI9325(void)

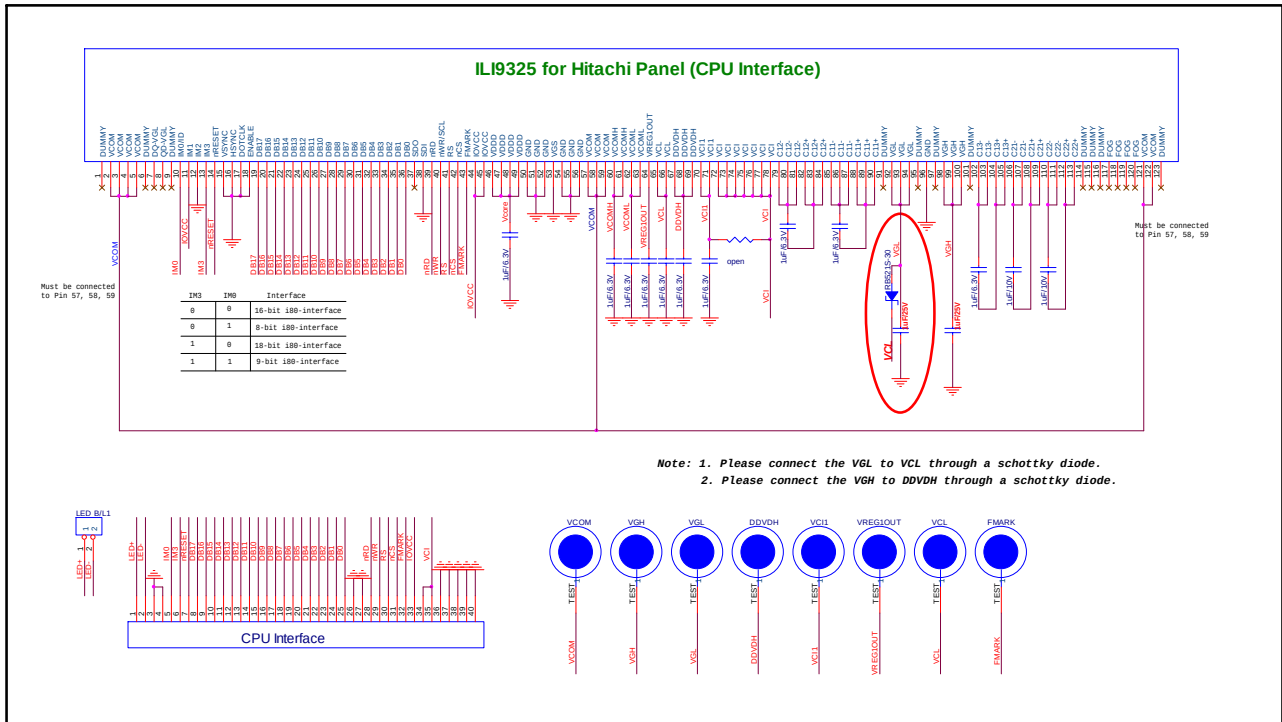
```

{
//*****Power On sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0000);    // SAP, BT[3:0], AP, DSTB, SLP
LCD_CtrlWrite_ILI9325(0x0011, 0x0000);    // DC1[2:0], DC0[2:0], VC[2:0]
LCD_CtrlWrite_ILI9325(0x0012, 0x0000);    // VREG1OUT voltage
LCD_CtrlWrite_ILI9325(0x0013, 0x0000);    // VDV[4:0] for VCOM amplitude
delayms(200);                             // Dis-charge capacitor power voltage
LCD_CtrlWrite_ILI9325(0x0010, 0x1490);    // SAP, BT[3:0], AP, DSTB, SLP, STB
LCD_CtrlWrite_ILI9325(0x0011, 0x0227);    // DC1[2:0], DC0[2:0], VC[2:0]
delayms(50);                             // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0012, 0x001A);    // External reference voltage =Vci;
delayms(50);                             // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x1400);    // VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x0019);    // VCM[5:0] for VCOMH
delayms(50);                             // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0007, 0x0133);    // 262K color and display ON
}

```

Hitachi Panel

2.4" Panel



4.1 HITACHI 2.4" Initial Code

```
void ILI9325_HITACHI24_Init(void)
```

```
{
  // VCI=2.8V
  //***** Reset LCD Driver *****//
  LCD_nRESET = 1;
  delayms(1); // Delay 1ms
  LCD_nRESET = 0;
  delayms(10); // Delay 10ms          // This delay time is necessary
  LCD_nRESET = 1;
  delayms(50); // Delay 50 ms
  //***** Start Initial Sequence *****//
  LCD_CtrlWrite_ILI9325(0x0001, 0x0100); // set SS and SM bit
  LCD_CtrlWrite_ILI9325(0x0002, 0x0700); // set 1 line inversion
  LCD_CtrlWrite_ILI9325(0x0003, 0x1030); // set GRAM write direction and BGR=1.
  LCD_CtrlWrite_ILI9325(0x0004, 0x0000); // Resize register
  LCD_CtrlWrite_ILI9325(0x0008, 0x0207); // set the back porch and front porch
  LCD_CtrlWrite_ILI9325(0x0009, 0x0000); // set non-display area refresh cycle ISC[3:0]
  LCD_CtrlWrite_ILI9325(0x000A, 0x0000); // FMARK function
  LCD_CtrlWrite_ILI9325(0x000C, 0x0000); // RGB interface setting
  LCD_CtrlWrite_ILI9325(0x000D, 0x0000); // Frame marker Position
  LCD_CtrlWrite_ILI9325(0x000F, 0x0000); // RGB interface polarity
  //*****Power On sequence *****//
  LCD_CtrlWrite_ILI9325(0x0010, 0x0000); // SAP, BT[3:0], AP, DSTB, SLP, STB
  LCD_CtrlWrite_ILI9325(0x0011, 0x0007); // DC1[2:0], DC0[2:0], VC[2:0]
  LCD_CtrlWrite_ILI9325(0x0012, 0x0000); // VREG1OUT voltage
  LCD_CtrlWrite_ILI9325(0x0013, 0x0000); // VDV[4:0] for VCOM amplitude
  delayms(200); // Dis-charge capacitor power voltage
  LCD_CtrlWrite_ILI9325(0x0010, 0x1490); // SAP, BT[3:0], AP, DSTB, SLP, STB
  LCD_CtrlWrite_ILI9325(0x0011, 0x0221); // R11h=0x0221 at VCI=3.3V, DC1[2:0], DC0[2:0], VC[2:0]
  delayms(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0012, 0x0018); // External reference voltage= Vci;
  delayms(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0013, 0x1100); // R13=1D00 when R12=009D;VDV[4:0] for VCOM amplitude
  LCD_CtrlWrite_ILI9325(0x0029, 0x0011); // R29=0013 when R12=009D;VCM[5:0] for VCOMH
  LCD_CtrlWrite_ILI9325(0x002B, 0x000B); // Set Frame Rate
  delayms(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0020, 0x0000); // GRAM horizontal Address
  LCD_CtrlWrite_ILI9325(0x0021, 0x0000); // GRAM Vertical Address
  // ----- Adjust the Gamma Curve -----//
  LCD_CtrlWrite_ILI9325(0x0030, 0x0000);
  LCD_CtrlWrite_ILI9325(0x0031, 0x0004);
  LCD_CtrlWrite_ILI9325(0x0032, 0x0200);
  LCD_CtrlWrite_ILI9325(0x0035, 0x0107);
  LCD_CtrlWrite_ILI9325(0x0036, 0x1606);
  LCD_CtrlWrite_ILI9325(0x0037, 0x0705);
  LCD_CtrlWrite_ILI9325(0x0038, 0x0307);
  LCD_CtrlWrite_ILI9325(0x0039, 0x0707);
  LCD_CtrlWrite_ILI9325(0x003C, 0x0701);
  LCD_CtrlWrite_ILI9325(0x003D, 0x040F);
  //----- Set GRAM area -----//
  LCD_CtrlWrite_ILI9325(0x0050, 0x0000); // Horizontal GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0051, 0x00EF); // Horizontal GRAM End Address
  LCD_CtrlWrite_ILI9325(0x0052, 0x0000); // Vertical GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0053, 0x013F); // Vertical GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0060, 0xA700); // Gate Scan Line
  LCD_CtrlWrite_ILI9325(0x0061, 0x0001); // NDL,VLE, REV
  LCD_CtrlWrite_ILI9325(0x006A, 0x0000); // set scrolling line
  //----- Partial Display Control -----//
```



```

LCD_CtrlWrite_ILI9325(0x0080, 0x0000);
LCD_CtrlWrite_ILI9325(0x0081, 0x0000);
LCD_CtrlWrite_ILI9325(0x0082, 0x0000);
LCD_CtrlWrite_ILI9325(0x0083, 0x0000);
LCD_CtrlWrite_ILI9325(0x0084, 0x0000);
LCD_CtrlWrite_ILI9325(0x0085, 0x0000);
//----- Panel Control -----//
LCD_CtrlWrite_ILI9325(0x0090, 0x0010);
LCD_CtrlWrite_ILI9325(0x0092, 0x0600);
LCD_CtrlWrite_ILI9325(0x0093, 0x0003);
LCD_CtrlWrite_ILI9325(0x0095, 0x0110);
LCD_CtrlWrite_ILI9325(0x0097, 0x0000);
LCD_CtrlWrite_ILI9325(0x0098, 0x0000);

LCD_CtrlWrite_ILI9325(0x0007, 0x0133);    // 262K color and display ON
}

```

void LCD_ExitSleep_ILI9325(void)

```

{
//*****Power On sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0000);    // SAP, BT[3:0], AP, DSTB, SLP
LCD_CtrlWrite_ILI9325(0x0011, 0x0000);    // DC1[2:0], DC0[2:0], VC[2:0]
LCD_CtrlWrite_ILI9325(0x0012, 0x0000);    // VREG1OUT voltage
LCD_CtrlWrite_ILI9325(0x0013, 0x0000);    // VDV[4:0] for VCOM amplitude
    delays(200);                          // Dis-charge capacitor power voltage
LCD_CtrlWrite_ILI9325(0x0010, 0x1490);    // SAP, BT[3:0], AP, DSTB, SLP, STB
LCD_CtrlWrite_ILI9325(0x0011, 0x0221);    // R11h=0x0221 at VCI=3.3V DC1[2:0], DC0[2:0], VC[2:0]
    delays(50);                          // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0012, 0x0018);    // External reference voltage =Vci;
    delays(50);                          // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x1100);    // R13h=0x1D00 when R12=009D VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x0011);    // R29h=0x0013 when R12=009D VCM[5:0] for VCOMH
    delays(50);                          // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0007, 0x0133);    // 262K color and display ON
}

```

void LCD_EnterSleep_ILI9325(void)

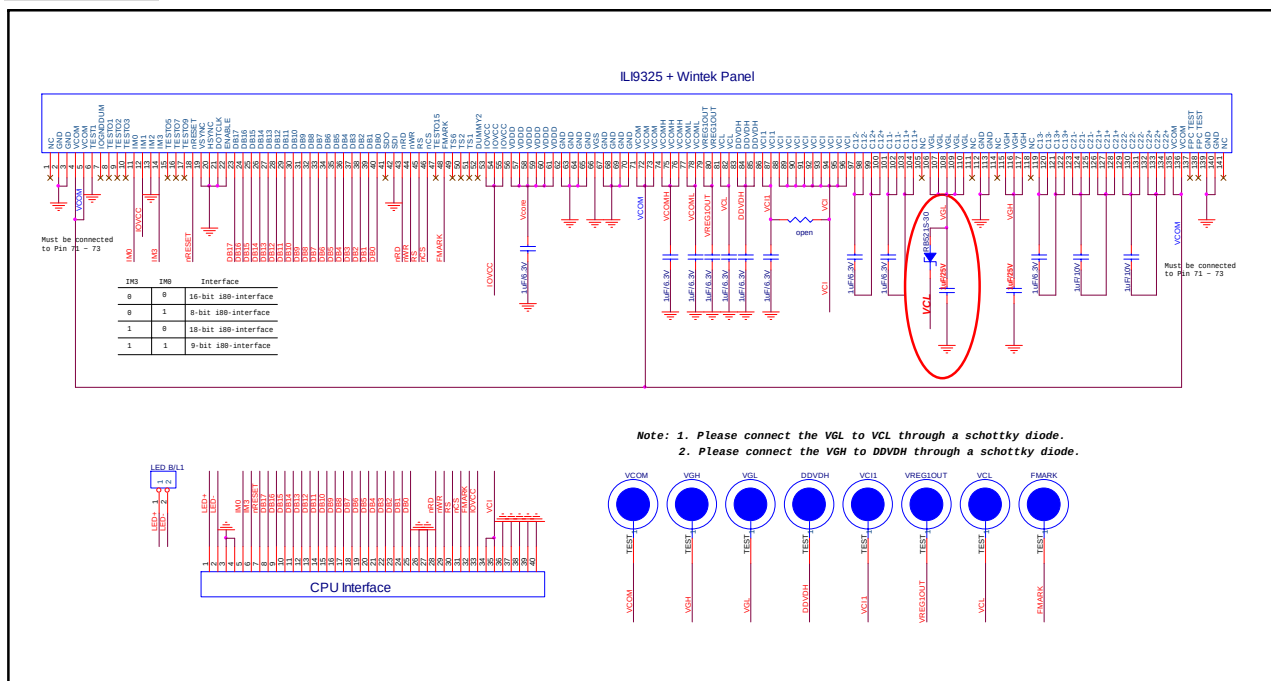
```

{
LCD_CtrlWrite_ILI9325(0x0007, 0x0131);    // Set D1=0, D0=1
    delays(10);
LCD_CtrlWrite_ILI9325(0x0007, 0x0130);    // Set D1=0, D0=0
    delays(10);
LCD_CtrlWrite_ILI9325(0x0007, 0x0000);    // display OFF
//***** Power OFF sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0000);    // SAP, BT[3:0], APE, AP, DSTB, SLP
LCD_CtrlWrite_ILI9325(0x0011, 0x0000);    // DC1[2:0], DC0[2:0], VC[2:0]
LCD_CtrlWrite_ILI9325(0x0012, 0x0000);    // VREG1OUT voltage
LCD_CtrlWrite_ILI9325(0x0013, 0x0000);    // VDV[4:0] for VCOM amplitude
    delays(200);                          // Dis-charge capacitor power voltage
LCD_CtrlWrite_ILI9325(0x0010, 0x0002);    // SAP, BT[3:0], APE, AP, DSTB, SLP
}

```

5. Wintek Panel

2.4" Panel



5.1 Wintek 2.4" Initial Code

```
void ILI9325_WTK24_Initial(void)
```

```
{
  // VCI=2.8V
  //***** Reset LCD Driver *****//
  LCD_nRESET = 1;
  delays(1); // Delay 1ms
  LCD_nRESET = 0;
  delays(10); // Delay 10ms          // This delay time is necessary
  LCD_nRESET = 1;
  delays(50); // Delay 50 ms
  //***** Start Initial Sequence *****//
  LCD_CtrlWrite_ILI9325(0x0001, 0x0100); // set SS and SM bit
  LCD_CtrlWrite_ILI9325(0x0002, 0x0700); // set 1 line inversion
  LCD_CtrlWrite_ILI9325(0x0003, 0x1030); // set GRAM write direction and BGR=1.
  LCD_CtrlWrite_ILI9325(0x0004, 0x0000); // Resize register
  LCD_CtrlWrite_ILI9325(0x0008, 0x0207); // set the back porch and front porch
  LCD_CtrlWrite_ILI9325(0x0009, 0x0000); // set non-display area refresh cycle ISC[3:0]
  LCD_CtrlWrite_ILI9325(0x000A, 0x0000); // FMARK function
  LCD_CtrlWrite_ILI9325(0x000C, 0x0000); // RGB interface setting
  LCD_CtrlWrite_ILI9325(0x000D, 0x0000); // Frame marker Position
  LCD_CtrlWrite_ILI9325(0x000F, 0x0000); // RGB interface polarity
  //*****Power On sequence *****//
  LCD_CtrlWrite_ILI9325(0x0010, 0x0000); // SAP, BT[3:0], AP, DSTB, SLP, STB
  LCD_CtrlWrite_ILI9325(0x0011, 0x0007); // DC1[2:0], DC0[2:0], VC[2:0]
  LCD_CtrlWrite_ILI9325(0x0012, 0x0000); // VREG1OUT voltage
  LCD_CtrlWrite_ILI9325(0x0013, 0x0000); // VDV[4:0] for VCOM amplitude
  delays(200); // Dis-charge capacitor power voltage
  LCD_CtrlWrite_ILI9325(0x0010, 0x1490); // SAP, BT[3:0], AP, DSTB, SLP, STB
  LCD_CtrlWrite_ILI9325(0x0011, 0x0227); // Set DC1[2:0], DC0[2:0], VC[2:0]
  delays(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0012, 0x001A); // External reference voltage= Vci;
  delays(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0013, 0x0F00); // Set VDV[4:0] for VCOM amplitude
  LCD_CtrlWrite_ILI9325(0x0029, 0x0019); // Set VCM[5:0] for VCOMH
  LCD_CtrlWrite_ILI9325(0x002B, 0x000D); // Set Frame Rate
  delays(50); // Delay 50ms
  LCD_CtrlWrite_ILI9325(0x0020, 0x0000); // GRAM horizontal Address
  LCD_CtrlWrite_ILI9325(0x0021, 0x0000); // GRAM Vertical Address
  // ----- Adjust the Gamma Curve -----//
  LCD_CtrlWrite_ILI9325(0x0030, 0x0007);
  LCD_CtrlWrite_ILI9325(0x0031, 0x0407);
  LCD_CtrlWrite_ILI9325(0x0032, 0x0101);
  LCD_CtrlWrite_ILI9325(0x0035, 0x0001);
  LCD_CtrlWrite_ILI9325(0x0036, 0x010E);
  LCD_CtrlWrite_ILI9325(0x0037, 0x0207);
  LCD_CtrlWrite_ILI9325(0x0038, 0x0101);
  LCD_CtrlWrite_ILI9325(0x0039, 0x0706);
  LCD_CtrlWrite_ILI9325(0x003C, 0x0505);
  LCD_CtrlWrite_ILI9325(0x003D, 0x070B);
  //----- Set GRAM area -----//
  LCD_CtrlWrite_ILI9325(0x0050, 0x0000); // Horizontal GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0051, 0x00EF); // Horizontal GRAM End Address
  LCD_CtrlWrite_ILI9325(0x0052, 0x0000); // Vertical GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0053, 0x013F); // Vertical GRAM Start Address
  LCD_CtrlWrite_ILI9325(0x0060, 0xA700); // Gate Scan Line
  LCD_CtrlWrite_ILI9325(0x0061, 0x0001); // NDL,VLE, REV
  LCD_CtrlWrite_ILI9325(0x006A, 0x0000); // set scrolling line
  //----- Partial Display Control -----//
}
```

```

LCD_CtrlWrite_ILI9325(0x0080, 0x0000);
LCD_CtrlWrite_ILI9325(0x0081, 0x0000);
LCD_CtrlWrite_ILI9325(0x0082, 0x0000);
LCD_CtrlWrite_ILI9325(0x0083, 0x0000);
LCD_CtrlWrite_ILI9325(0x0084, 0x0000);
LCD_CtrlWrite_ILI9325(0x0085, 0x0000);
//----- Panel Control -----//
LCD_CtrlWrite_ILI9325(0x0090, 0x0010);
LCD_CtrlWrite_ILI9325(0x0092, 0x0600);
LCD_CtrlWrite_ILI9325(0x0093, 0x0003);
LCD_CtrlWrite_ILI9325(0x0095, 0x0110);
LCD_CtrlWrite_ILI9325(0x0097, 0x0000);
LCD_CtrlWrite_ILI9325(0x0098, 0x0000);

LCD_CtrlWrite_ILI9325(0x0007, 0x0133);    // 262K color and display ON
}

```

void LCD_EnterSleep_ILI9325(void)

```

{
LCD_CtrlWrite_ILI9325(0x0007, 0x0131);    // Set D1=0, D0=1
  delays(10);
LCD_CtrlWrite_ILI9325(0x0007, 0x0130);    // Set D1=0, D0=0
  delays(10);
LCD_CtrlWrite_ILI9325(0x0007, 0x0000);    // display OFF
//***** Power OFF sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0000);    // SAP, BT[3:0], APE, AP, DSTB, SLP
LCD_CtrlWrite_ILI9325(0x0011, 0x0000);    // DC1[2:0], DC0[2:0], VC[2:0]
LCD_CtrlWrite_ILI9325(0x0012, 0x0000);    // VREG1OUT voltage
LCD_CtrlWrite_ILI9325(0x0013, 0x0000);    // VDV[4:0] for VCOM amplitude
  delays(200);                            // Dis-charge capacitor power voltage
LCD_CtrlWrite_ILI9325(0x0010, 0x0002);    // SAP, BT[3:0], APE, AP, DSTB, SLP
}

```

void LCD_ExitSleep_ILI9325(void)

```

{
//*****Power On sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0000);    // SAP, BT[3:0], AP, DSTB, SLP
LCD_CtrlWrite_ILI9325(0x0011, 0x0000);    // DC1[2:0], DC0[2:0], VC[2:0]
LCD_CtrlWrite_ILI9325(0x0012, 0x0000);    // VREG1OUT voltage
LCD_CtrlWrite_ILI9325(0x0013, 0x0000);    // VDV[4:0] for VCOM amplitude
  delays(200);                            // Dis-charge capacitor power voltage
LCD_CtrlWrite_ILI9325(0x0010, 0x1490);    // SAP, BT[3:0], AP, DSTB, SLP, STB
LCD_CtrlWrite_ILI9325(0x0011, 0x0227);    // R11h=0x0221 at VCI=3.3V DC1[2:0], DC0[2:0], VC[2:0]
  delays(50);                            // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0012, 0x001A);    // External reference voltage =Vci;
  delays(50);                            // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x0F00);    // Set VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x0019);    // Set VCM[5:0] for VCOMH
  delays(50);                            // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0007, 0x0133);    // 262K color and display ON
}

```

