

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

Application Notes

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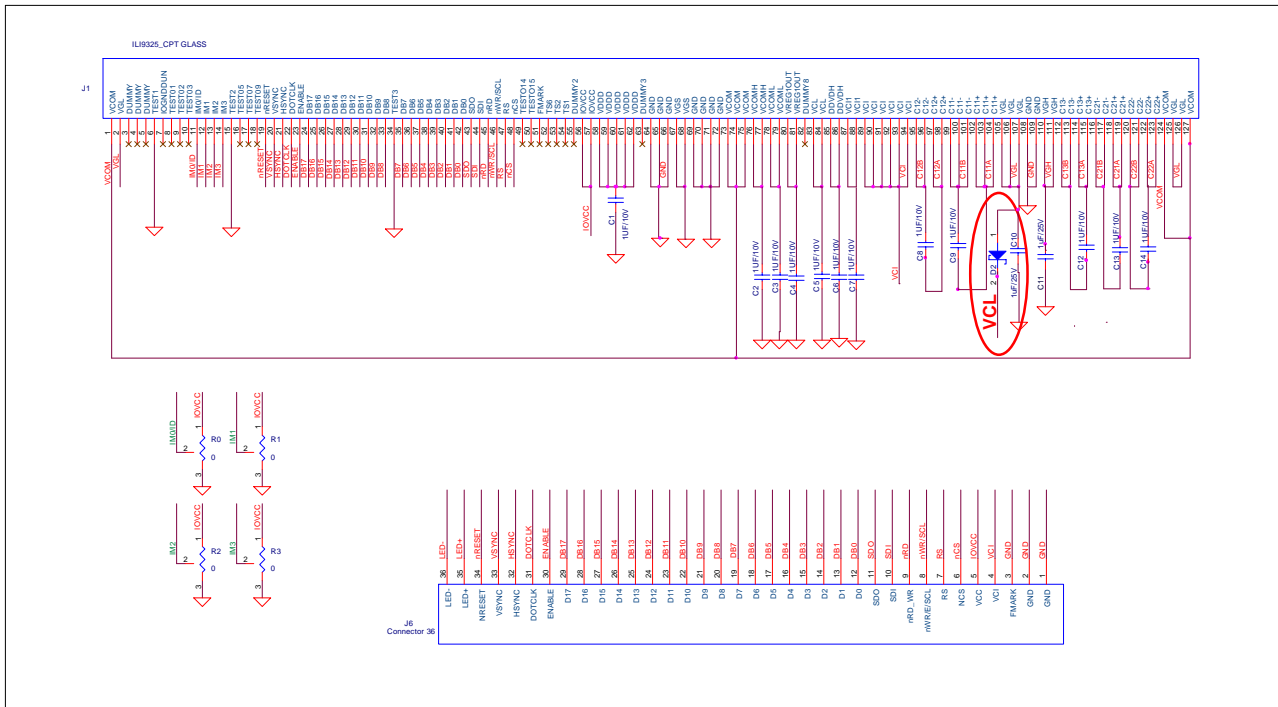
ILI TECHNOLOGY CORP.

4F, No. 2, Tech. 5th Rd., Hsinchu Science Park,
Taiwan 300, R.O.C.
Tel.886-3-5670095; Fax.886-3-5670096
<http://www.ilitek.com>

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CPT Panel

2.4" 2.8" 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(0x00E3, 0x3008); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00E7, 0x0012); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00EF, 0x1231); // Set internal timing
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, 0x001C); // Internal reference voltage= Vci;
    delays(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x1A00); // Set VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x0025); // Set VCM[5:0] for VCOMH
LCD_CtrlWrite_ILI9325(0x002B, 0x000C); // 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, 0x0506);
LCD_CtrlWrite_ILI9325(0x0032, 0x0104);
LCD_CtrlWrite_ILI9325(0x0035, 0x0207);
LCD_CtrlWrite_ILI9325(0x0036, 0x000F);
LCD_CtrlWrite_ILI9325(0x0037, 0x0306);
LCD_CtrlWrite_ILI9325(0x0038, 0x0102);
LCD_CtrlWrite_ILI9325(0x0039, 0x0707);
LCD_CtrlWrite_ILI9325(0x003C, 0x0702);
LCD_CtrlWrite_ILI9325(0x003D, 0x1604);
//----- 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(0x0007, 0x0133); // 262K color and display ON
}

```

void LCD_ExitSleep_ILI9325(void)

```

{
//*****Power On sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0080); // 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, 0x001C); //Internal reference voltage =Vci;
delayms(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x1A00); // VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x0025); // 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, 0x0080); // 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, 0x0082); // SAP, BT[3:0], APE, AP, DSTB, SLP
}

```

1.2. CPT 2.8” Initial Code

void ILI9325_CPT28_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(0x00E3, 0x3008); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00E7, 0x0012); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00EF, 0x1231); // Set internal timing
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, 0x001A); // Internal reference voltage= Vci;
    delays(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x1800); // Set VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x0028); // Set VCM[5:0] for VCOMH
LCD_CtrlWrite_ILI9325(0x002B, 0x000C); // 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, 0x0305);
LCD_CtrlWrite_ILI9325(0x0032, 0x0003);
LCD_CtrlWrite_ILI9325(0x0035, 0x0304);
LCD_CtrlWrite_ILI9325(0x0036, 0x000F);
LCD_CtrlWrite_ILI9325(0x0037, 0x0407);
LCD_CtrlWrite_ILI9325(0x0038, 0x0204);
LCD_CtrlWrite_ILI9325(0x0039, 0x0707);
LCD_CtrlWrite_ILI9325(0x003C, 0x0403);
LCD_CtrlWrite_ILI9325(0x003D, 0x1604);
//----- 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(0x0007, 0x0133); // 262K color and display ON
}

```

void LCD_ExitSleep_ILI9325(void)

```

{
//*****Power On sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0080); // 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, 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, 0x001A); //Internal reference voltage =Vci;
    delays(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x1800); // VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x0028); // VCM[5:0] for VCOMH
    delays(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0007, 0x0133); // 262K color and display ON
}

```

void LCD_EnterSleep_ILI9325(void)

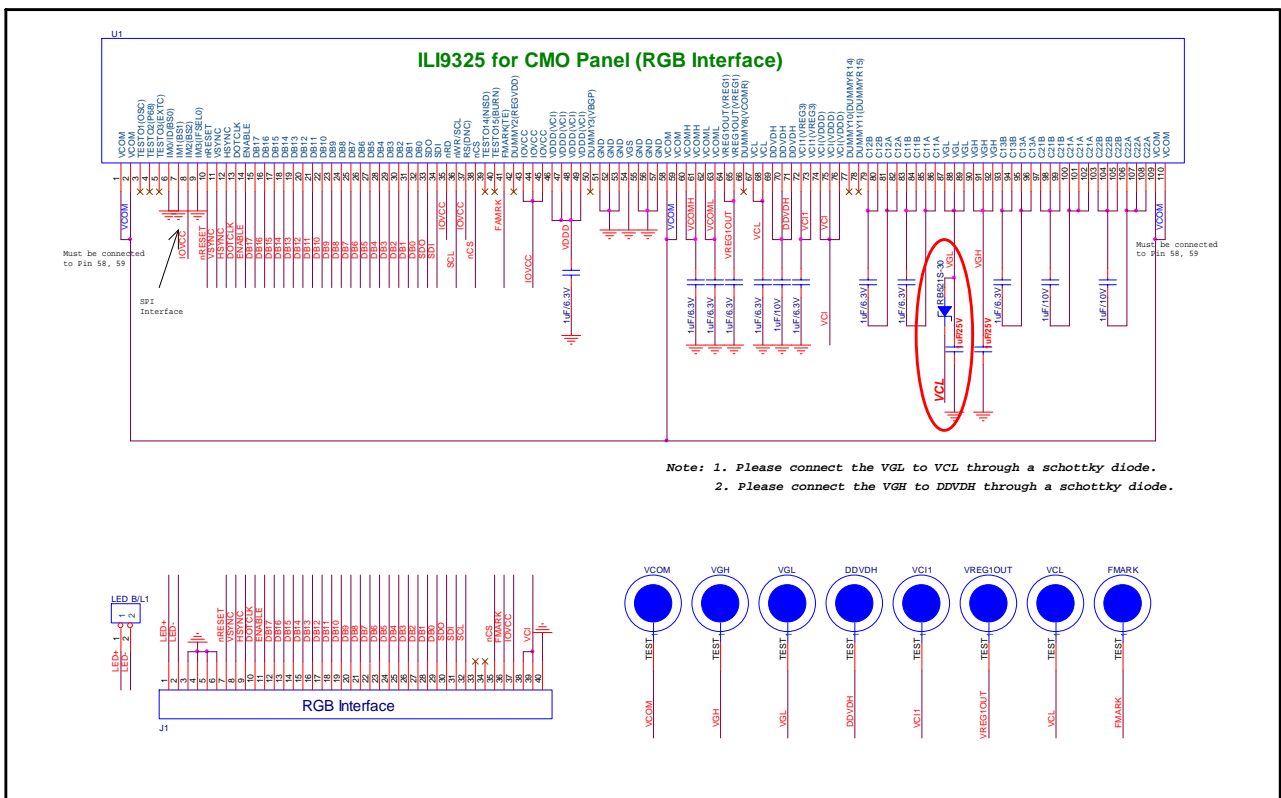
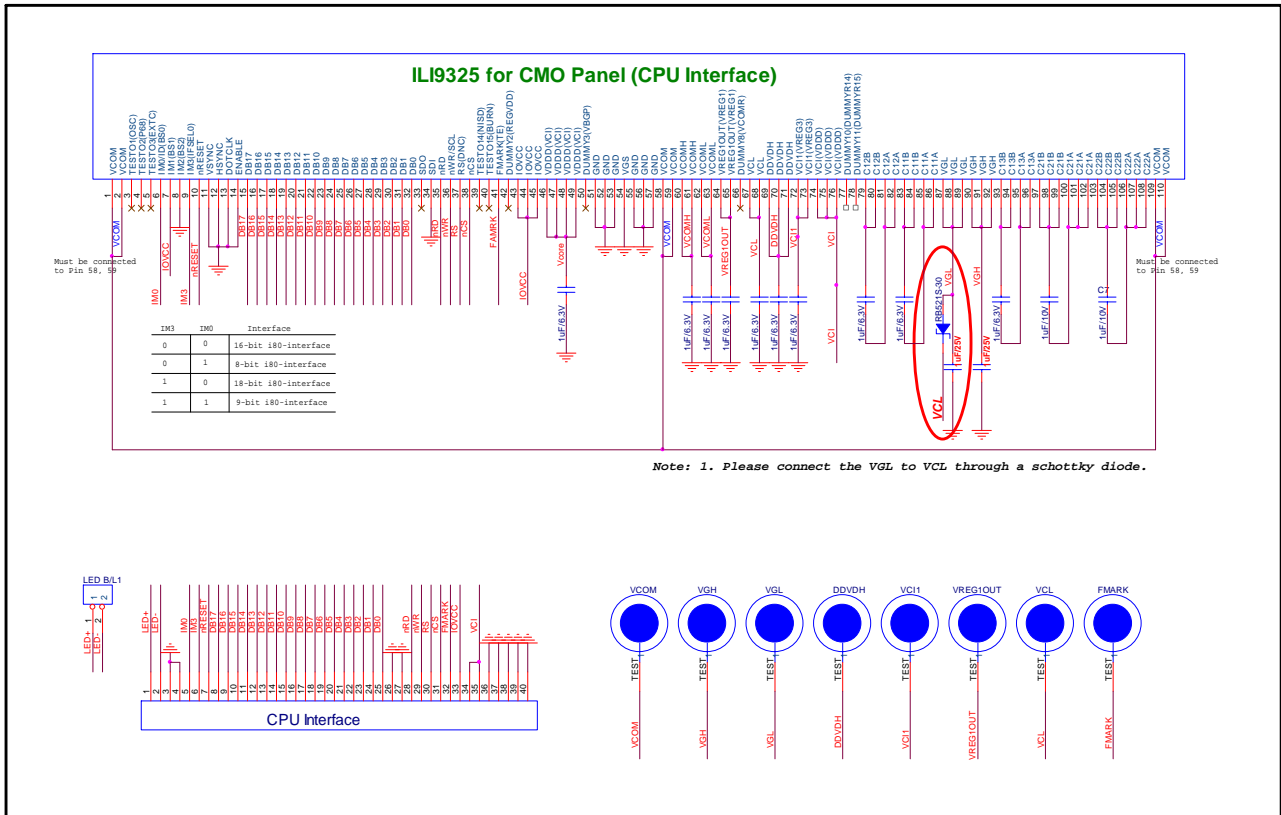
```

{
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, 0x0080); // 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, 0x0082); // SAP, BT[3:0], APE, AP, DSTB, SLP
}

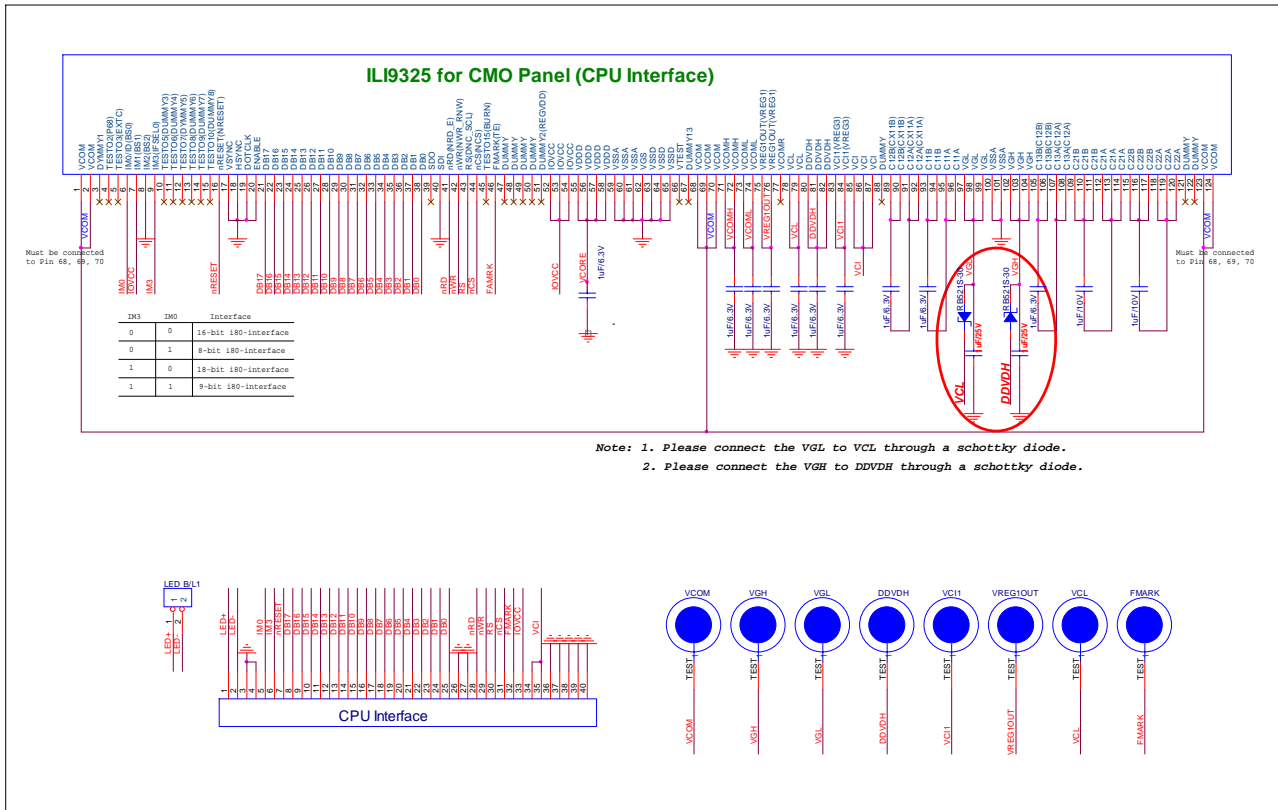
```

2.CMO Panel

2.4", 2.8" and 3.2" Panel



2.4" CMO Panel(F02414-01V PD024MC6L-1401)



2.1 CMO 3.2” Initial Code

void ILI9325_CMO3.2_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(0x00E3, 0x3008); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00E7, 0x0012); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00EF, 0x1231); // Set internal timing
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, 0x0019); // Internal reference voltage= Vci;
    delays(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x1D00); // Set VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x0028); // Set VCM[5:0] for VCOMH
LCD_CtrlWrite_ILI9325(0x002B, 0x000C); // 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, 0x0603);
LCD_CtrlWrite_ILI9325(0x0032, 0x0206);
LCD_CtrlWrite_ILI9325(0x0035, 0x0206);
LCD_CtrlWrite_ILI9325(0x0036, 0x0004);
LCD_CtrlWrite_ILI9325(0x0037, 0x0105);
LCD_CtrlWrite_ILI9325(0x0038, 0x0401);
LCD_CtrlWrite_ILI9325(0x0039, 0x0707);
LCD_CtrlWrite_ILI9325(0x003C, 0x0602);
LCD_CtrlWrite_ILI9325(0x003D, 0x0004);
//----- 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(0x0007, 0x0133); // 262K color and display ON
}

```

void LCD_ExitSleep_ILI9325(void)

```

{
//*****Power On sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0080); // 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, 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, 0x0019); //Internal reference voltage =Vci;
    delays(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x1D00); // VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x0028); // 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, 0x0080); // 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, 0x0082); // SAP, BT[3:0], APE, AP, DSTB, SLP
}

```

2.2 CMO 2.8" Initial Code

void ILI9325_CMO28_Initial(void)

```
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1;
    delaysms(1); // Delay 1ms
LCD_nRESET = 0;
    delaysms(10); // Delay 10ms           // This delay time is necessary
LCD_nRESET = 1;
    delaysms(50); // Delay 50 ms
//***** Start Initial Sequence *****//
LCD_CtrlWrite_ILI9325(0x00E3, 0x3008); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00E7, 0x0012); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00EF, 0x1231); // Set internal timing
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
    delaysms(200); // Dis-charge capacitor power voltage
LCD_CtrlWrite_ILI9325(0x0010, 0x1690); // SAP, BT[3:0], AP, DSTB, SLP, STB
LCD_CtrlWrite_ILI9325(0x0011, 0x0227); // DC1[2:0], DC0[2:0], VC[2:0]
    delaysms(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0012, 0x001B); // Internal reference voltage= Vci;
    delaysms(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x1600); // Set VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x0018); // Set VCM[5:0] for VCOMH
LCD_CtrlWrite_ILI9325(0x002B, 0x000C); // Set Frame Rate
    delaysms(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, 0x0404);
LCD_CtrlWrite_ILI9325(0x0032, 0x0304);
LCD_CtrlWrite_ILI9325(0x0035, 0x0005);
LCD_CtrlWrite_ILI9325(0x0036, 0x1604);
LCD_CtrlWrite_ILI9325(0x0037, 0x0304);
LCD_CtrlWrite_ILI9325(0x0038, 0x0303);
LCD_CtrlWrite_ILI9325(0x0039, 0x0707);
LCD_CtrlWrite_ILI9325(0x003C, 0x0500);
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(0x0007, 0x0133); // 262K color and display ON
}

```

void LCD_ExitSleep_ILI9325(void)

```

{
//*****Power On sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0080); // 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, 0x1690); // 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, 0x001B); // External reference voltage =Vci;
    delays(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x1600); // R13h=0x1D00 when R12=009D VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x0018); // 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, 0x0080); // 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, 0x0082); // 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;
    delaysms(1); // Delay 1ms
LCD_nRESET = 0;
    delaysms(10); // Delay 10ms           // This delay time is necessary
LCD_nRESET = 1;
    delaysms(50); // Delay 50 ms
//***** Start Initial Sequence *****//
LCD_CtrlWrite_ILI9325(0x00E3, 0x3008); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00E7, 0x0012); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00EF, 0x1231); // Set internal timing
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, 0x0202); // 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
    delaysms(200); // Dis-charge capacitor power voltage
LCD_CtrlWrite_ILI9325(0x0010, 0x1290); // SAP, BT[3:0], AP, DSTB, SLP, STB
LCD_CtrlWrite_ILI9325(0x0011, 0x0227); // Set DC1[2:0], DC0[2:0], VC[2:0]
    delaysms(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0012, 0x001B); // External reference voltage= Vci;
    delaysms(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x1900); // Set VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x000F); // SetVCM[5:0] for VCOMH
LCD_CtrlWrite_ILI9325(0x002B, 0x000C); // Set Frame Rate
    delaysms(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, 0x0406);
LCD_CtrlWrite_ILI9325(0x0032, 0x0004);
LCD_CtrlWrite_ILI9325(0x0035, 0x0305);
LCD_CtrlWrite_ILI9325(0x0036, 0x0004);
LCD_CtrlWrite_ILI9325(0x0037, 0x0207);
LCD_CtrlWrite_ILI9325(0x0038, 0x0103);
LCD_CtrlWrite_ILI9325(0x0039, 0x0707);
LCD_CtrlWrite_ILI9325(0x003C, 0x0503);
LCD_CtrlWrite_ILI9325(0x003D, 0x0004);
//----- 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(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, 0x0080); // 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, 0x0082); // SAP, BT[3:0], APE, AP, DSTB, SLP
}

```

void LCD_ExitSleep_ILI9325(void)

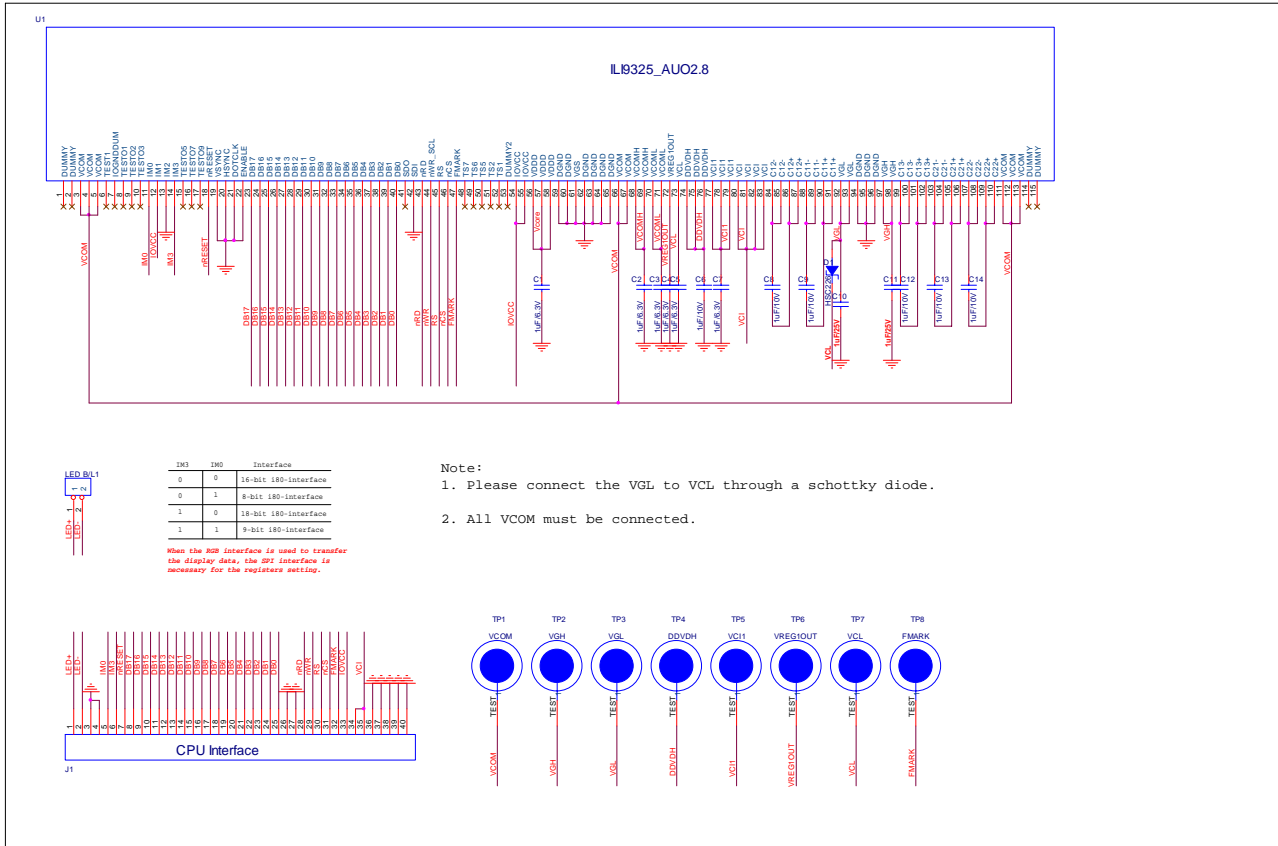
```

{
//*****Power On sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0080); // 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, 0x1290); // 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, 0x001B); // External reference voltage =Vci;
delays(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x1900); // Set VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x000F); // Set VCM[5:0] for VCOMH
delays(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0007, 0x0133); // 262K color and display ON
}

```


3. AUO Panel

2.8" Panel



- Note:**
- Please connect the VGL to VCL through a schottky diode.
 - All VCOM must be connected.

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(0x00E3, 0x3008); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00E7, 0x0012); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00EF, 0x1231); // Set internal timing
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, 0x000C); // 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 -----//
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(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, 0x0080); // 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, 0x0082); // SAP, BT[3:0], APE, AP, DSTB, SLP
}

```

void LCD_ExitSleep_ILI9325(void)

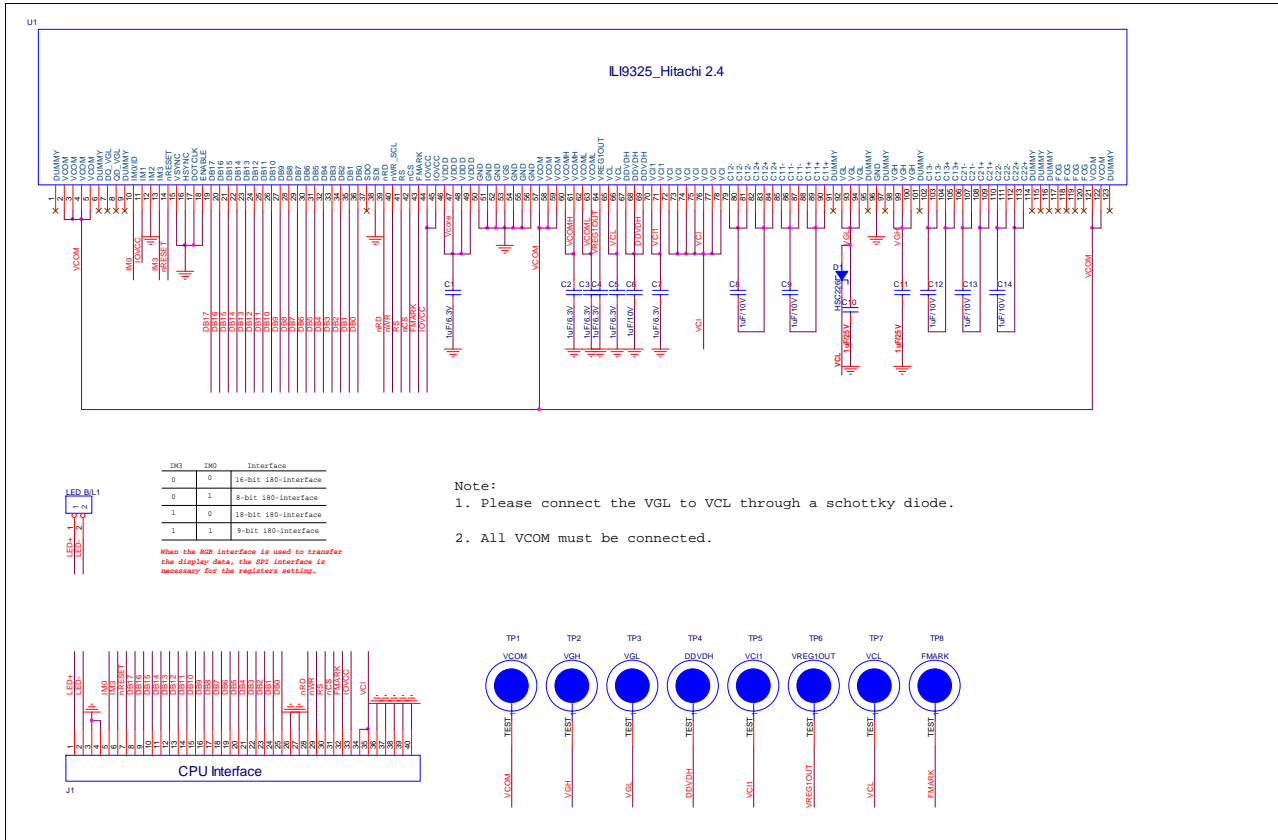
```

{
//*****Power On sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0080); // 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); // 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
delays(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_Initial(void)

```
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1;
    delaysms(1); // Delay 1ms
LCD_nRESET = 0;
    delaysms(10); // Delay 10ms           // This delay time is necessary
LCD_nRESET = 1;
    delaysms(50); // Delay 50 ms
//***** Start Initial Sequence *****//
LCD_CtrlWrite_ILI9325(0x00E3, 0x3008); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00E7, 0x0012); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00EF, 0x1231); // Set internal timing
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
    delaysms(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]
    delaysms(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0012, 0x0018); // External reference voltage= Vci;
    delaysms(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, 0x000C); // Set Frame Rate
    delaysms(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(0x0007, 0x0133); // 262K color and display ON
}

```

void LCD_ExitSleep_ILI9325(void)

```

{
//*****Power On sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0080); // 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)

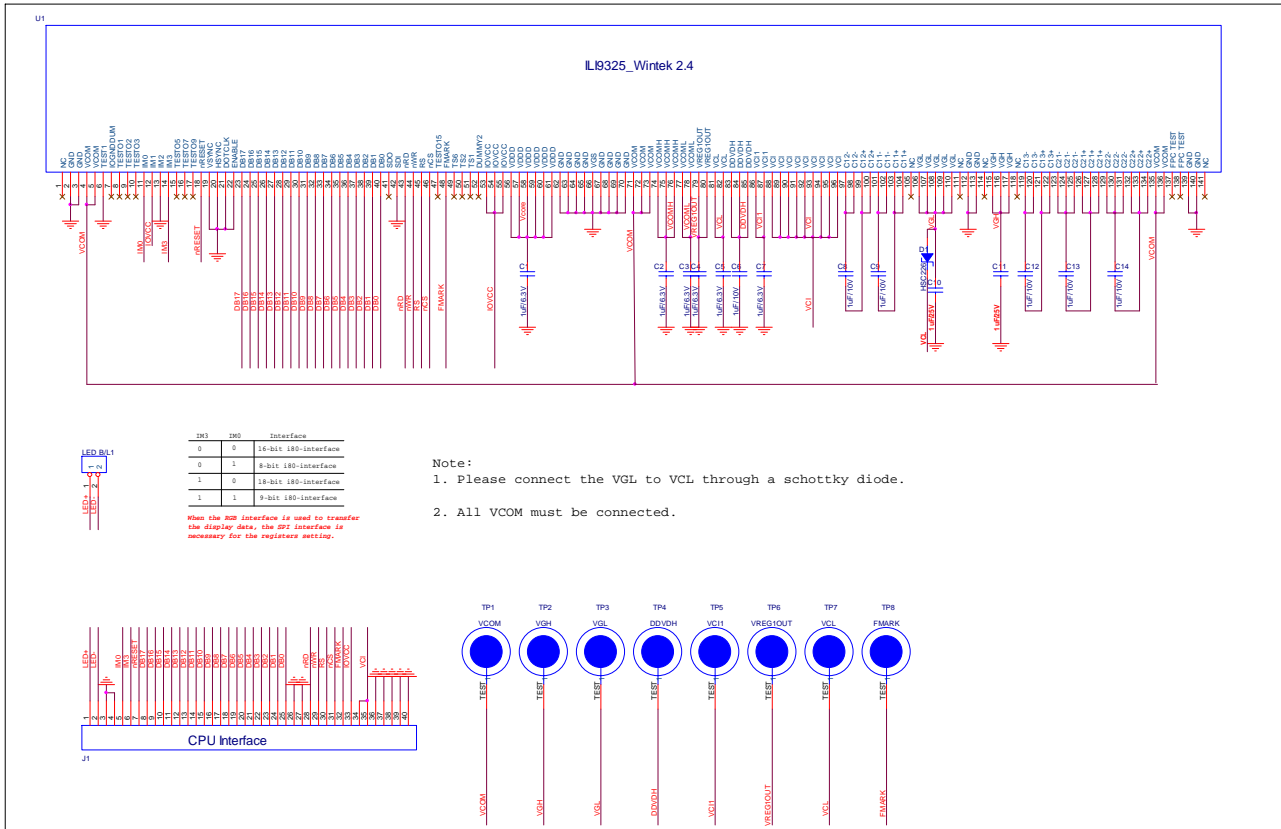
```

{
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, 0x0080); // 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, 0x0082); // SAP, BT[3:0], APE, AP, DSTB, SLP
}

```

5. Wintek Panel

2.4" Panel



- Note:
1. Please connect the VGL to VCL through a schottky diode.
 2. All VCOM must be connected.

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(0x00E3, 0x3008); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00E7, 0x0012); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00EF, 0x1231); // Set internal timing
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); // 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, 0x1600); // Set VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x001D); // Set VCM[5:0] for VCOMH
LCD_CtrlWrite_ILI9325(0x002B, 0x000C); // 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, 0x0204);
LCD_CtrlWrite_ILI9325(0x0031, 0x0507);
LCD_CtrlWrite_ILI9325(0x0032, 0x0204);
LCD_CtrlWrite_ILI9325(0x0035, 0x0107);
LCD_CtrlWrite_ILI9325(0x0036, 0x0207);
LCD_CtrlWrite_ILI9325(0x0037, 0x0305);
LCD_CtrlWrite_ILI9325(0x0038, 0x0002);
LCD_CtrlWrite_ILI9325(0x0039, 0x0305);
LCD_CtrlWrite_ILI9325(0x003C, 0x0701);
LCD_CtrlWrite_ILI9325(0x003D, 0x060A);
//----- 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(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, 0x0080); // 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, 0x0082); // SAP, BT[3:0], APE, AP, DSTB, SLP
}

```

void LCD_ExitSleep_ILI9325(void)

```

{
//*****Power On sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0080); // SAP, BT[3:0], AP, STB, 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, 0x1290); // SAP, BT[3:0], AP, DSTB, SLP, STB
LCD_CtrlWrite_ILI9325(0x0011, 0x0227); // R11h=0x0227 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, 0x1600); // Set VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x001D); // Set VCM[5:0] for VCOMH
delays(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0007, 0x0133); // 262K color and display ON
}

```


6. LPL Panel

6.1 LPL 2.4" Initial Code

void ILI9325_LPL24_Initial(void)

```
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1;
    delaysms(1); // Delay 1ms
LCD_nRESET = 0;
    delaysms(10); // Delay 10ms           // This delay time is necessary
LCD_nRESET = 1;
    delaysms(50); // Delay 50 ms
//***** Start Initial Sequence *****//
LCD_CtrlWrite_ILI9325(0x00E3, 0x3008); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00E7, 0x0012); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00EF, 0x1231); // Set internal timing
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
    delaysms(200); // Dis-charge capacitor power voltage
LCD_CtrlWrite_ILI9325(0x0010, 0x1190); // SAP, BT[3:0], AP, DSTB, SLP, STB
LCD_CtrlWrite_ILI9325(0x0011, 0x0227); // DC1[2:0], DC0[2:0], VC[2:0]
    delaysms(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0012, 0x001C); // Internal reference voltage= Vci;
    delaysms(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x1A00); // Set VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x0011); // Set VCM[5:0] for VCOMH
LCD_CtrlWrite_ILI9325(0x002B, 0x000C); // Set Frame Rate
    delaysms(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, 0x0003);
LCD_CtrlWrite_ILI9325(0x0031, 0x0705);
LCD_CtrlWrite_ILI9325(0x0032, 0x0007);
LCD_CtrlWrite_ILI9325(0x0035, 0x0007);
LCD_CtrlWrite_ILI9325(0x0036, 0x000F);
LCD_CtrlWrite_ILI9325(0x0037, 0x0007);
LCD_CtrlWrite_ILI9325(0x0038, 0x0200);
LCD_CtrlWrite_ILI9325(0x0039, 0x0407);
LCD_CtrlWrite_ILI9325(0x003C, 0x0700);
LCD_CtrlWrite_ILI9325(0x003D, 0x1604);
//----- 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
}
```

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```

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

```

void LCD_ExitSleep_ILI9325(void)

```

{
//*****Power On sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0080); // 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, 0x1190); // 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, 0x001C); //Internal reference voltage =Vci;
    delays(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x1A00); // VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x0011); // VCM[5:0] for VCOMH
    delays(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0007, 0x0133); // 262K color and display ON
}

```

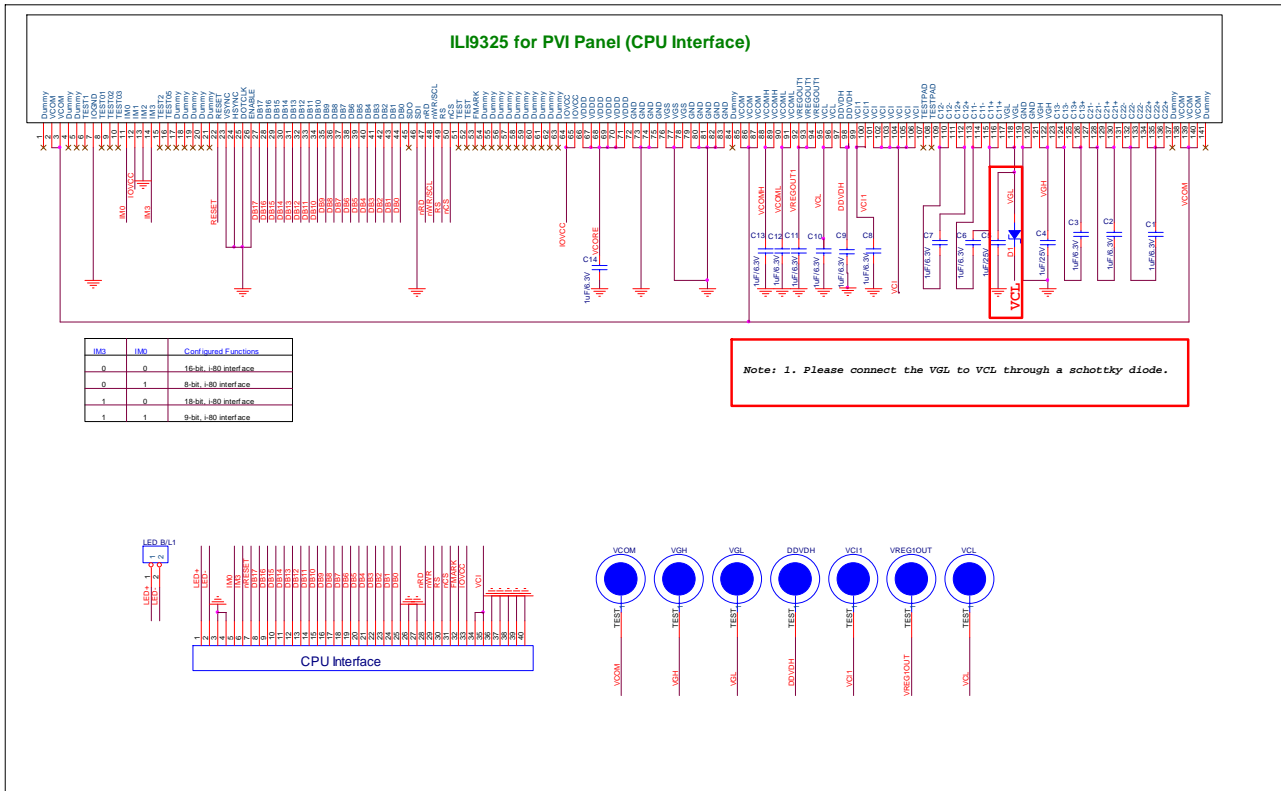
void LCD_EnterSleep_ILI9325(void)

```

{
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, 0x0080); // 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, 0x0082); // SAP, BT[3:0], APE, AP, DSTB, SLP
}

```

7. PVI 2.8 Panel



7.1 PVI 2.8" Initial Code

void ILI9325_PVI28_Initial(void)

```
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1;
    delaysms(1); // Delay 1ms
LCD_nRESET = 0;
    delaysms(10); // Delay 10ms           // This delay time is necessary
LCD_nRESET = 1;
    delaysms(50); // Delay 50 ms
//***** Start Initial Sequence *****//
LCD_CtrlWrite_ILI9325(0x00E3, 0x3008); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00E7, 0x0012); // Set internal timing
LCD_CtrlWrite_ILI9325(0x00EF, 0x1231); // Set internal timing
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
    delaysms(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]
    delaysms(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0012, 0x001B); // Internal reference voltage= Vci;
    delaysms(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x1100); // Set VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x0019); // Set VCM[5:0] for VCOMH
LCD_CtrlWrite_ILI9325(0x002B, 0x000C); // Set Frame Rate
    delaysms(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, 0x0204);
LCD_CtrlWrite_ILI9325(0x0032, 0x0200);
LCD_CtrlWrite_ILI9325(0x0035, 0x0007);
LCD_CtrlWrite_ILI9325(0x0036, 0x1404);
LCD_CtrlWrite_ILI9325(0x0037, 0x0705);
LCD_CtrlWrite_ILI9325(0x0038, 0x0305);
LCD_CtrlWrite_ILI9325(0x0039, 0x0707);
LCD_CtrlWrite_ILI9325(0x003C, 0x0701);
LCD_CtrlWrite_ILI9325(0x003D, 0x000E);
//----- 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(0x0007, 0x0133); // 262K color and display ON
}

```

void LCD_ExitSleep_ILI9325(void)

```

{
//*****Power On sequence *****//
LCD_CtrlWrite_ILI9325(0x0010, 0x0080); // 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, 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, 0x1100); // VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x0019); // 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, 0x0080); // 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, 0x0082); // SAP, BT[3:0], APE, AP, DSTB, SLP
}

```

Revision History

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Version No.	Date	Page	Description
V0.1	2007/07/05		New
V0.13	2007/10/12	14,23	ADD CMO2.4 Wintek2.4 initial code
V0.14	2007/10/17	17,3	ADD AUO initial code and modify CPT FPC
V0.15	2007/11/17	all	Removed the schottky of VGH
V0.16	2007/12/24	6	Modify CMO RGB Interface Circuit
V0.17	2007/12/27	23	Add CPT 2.8" CMO 3.2initial code Modify WK 2,4"initial code
V0.18	2008/01/08	all	Modify Sleep IN/OUT APE Bit setting
V0.19	2008/01/18	25	Add LPL 2.4" panel initial code
		27	Add PVI 2.4" panel FPC circuit and initial code
		9	Add another CMO Panel FPC circuit
		12	Modify CMO2.8" initial code
V0.20	2008/01/29	14	Modify CMO2.4 inch initial code
V0.21	2008/02/28	4~7	Modify CPT initial code
		all	Remove the resistor between VCI and VCI1
V0.22	2008/03/04	9	Modify CMO2.4 inch F02414 (PD024MC6L)FPC circuit