

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

Application Notes

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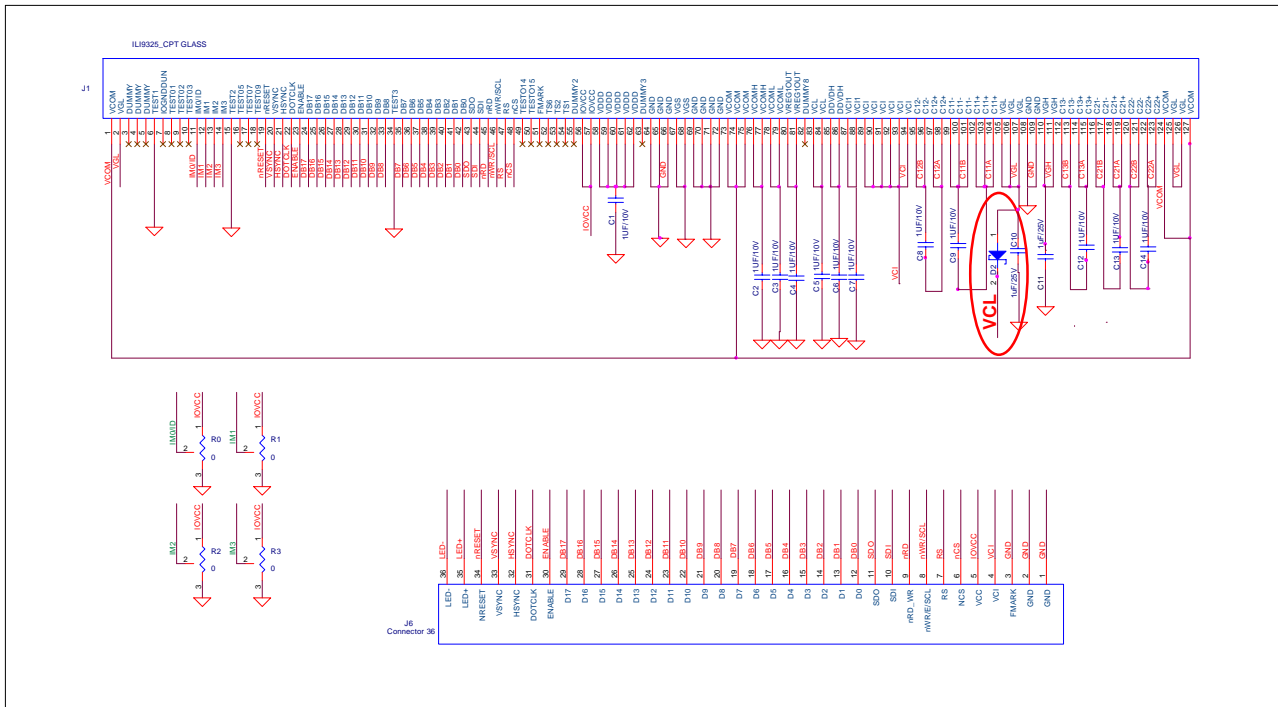
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1. CPT PANEL.....	3
1.1 CPT initial code.....	4
2. CMO PANEL.....	8
2.1 CMO3.2 INITIAL CODE.....	10
2.2 CMO2.8 INITIAL CODE.....	12
2.3 CMO2.4 INITIAL CODE.....	14
3. AUO PANEL.....	16
3.21 AUO 2.8 INITIAL CODE.....	17
4. HITCH PANEL.....	19
4.1 HITCH INITIAL CODE.....	20
5. WINTEK PANEL.....	22
5.1 WINTEK 2.4 INITIAL CODE.....	23
6. LPL PANEL.....	25
6.1LPL INITIAL CODE.....	25
7. PVI PANEL.....	27
7.1 PVI INITIAL CODE.....	28
6.REVISION HISTORY.....	30

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
    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); //Inernal reference voltage =Vci;
    delays(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0013, 0x1A00); // VDV[4:0] for VCOM amplitude
LCD_CtrlWrite_ILI9325(0x0029, 0x0025); // 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
}

```

1.2. CPT 2.8” Initial Code

void ILI9325_CPT28_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, 0x001A); // Internal reference voltage= Vci;
    delaysms(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
    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, 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)

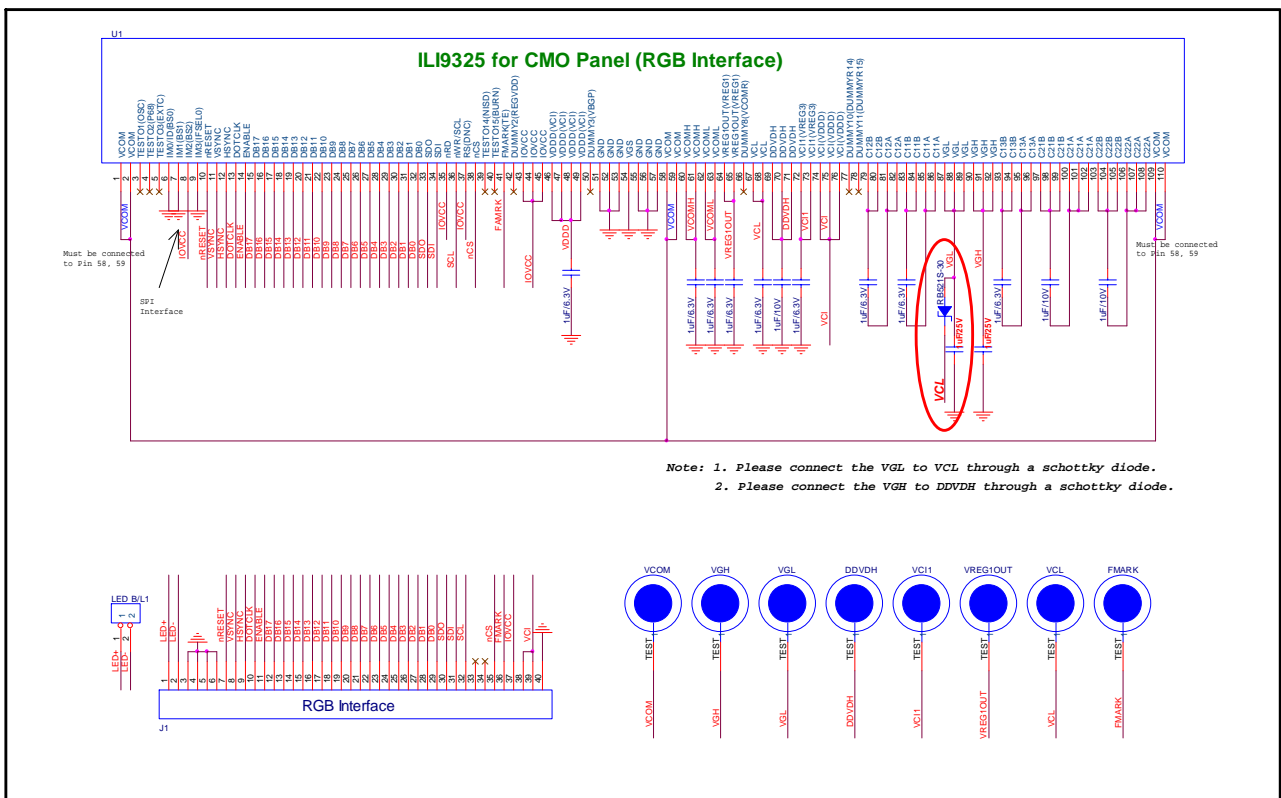
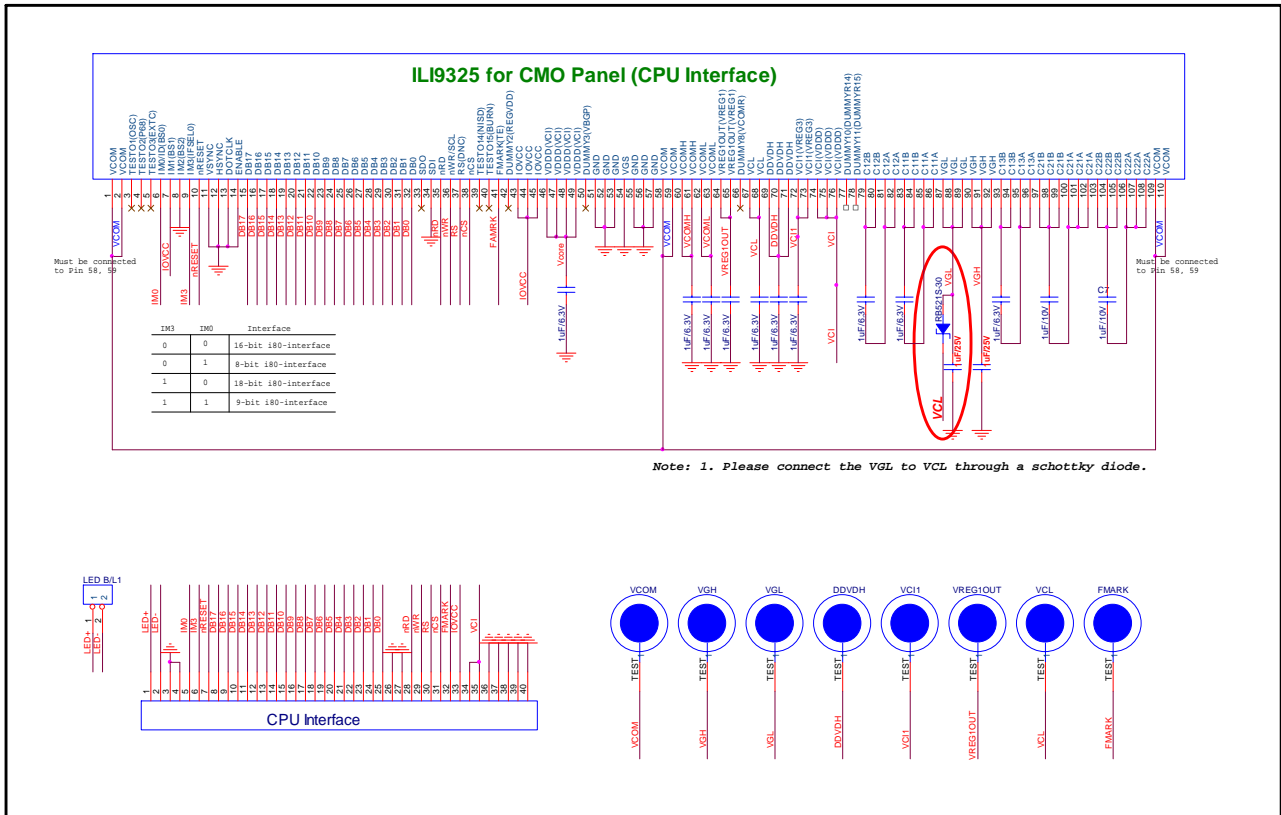
```

{
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
}

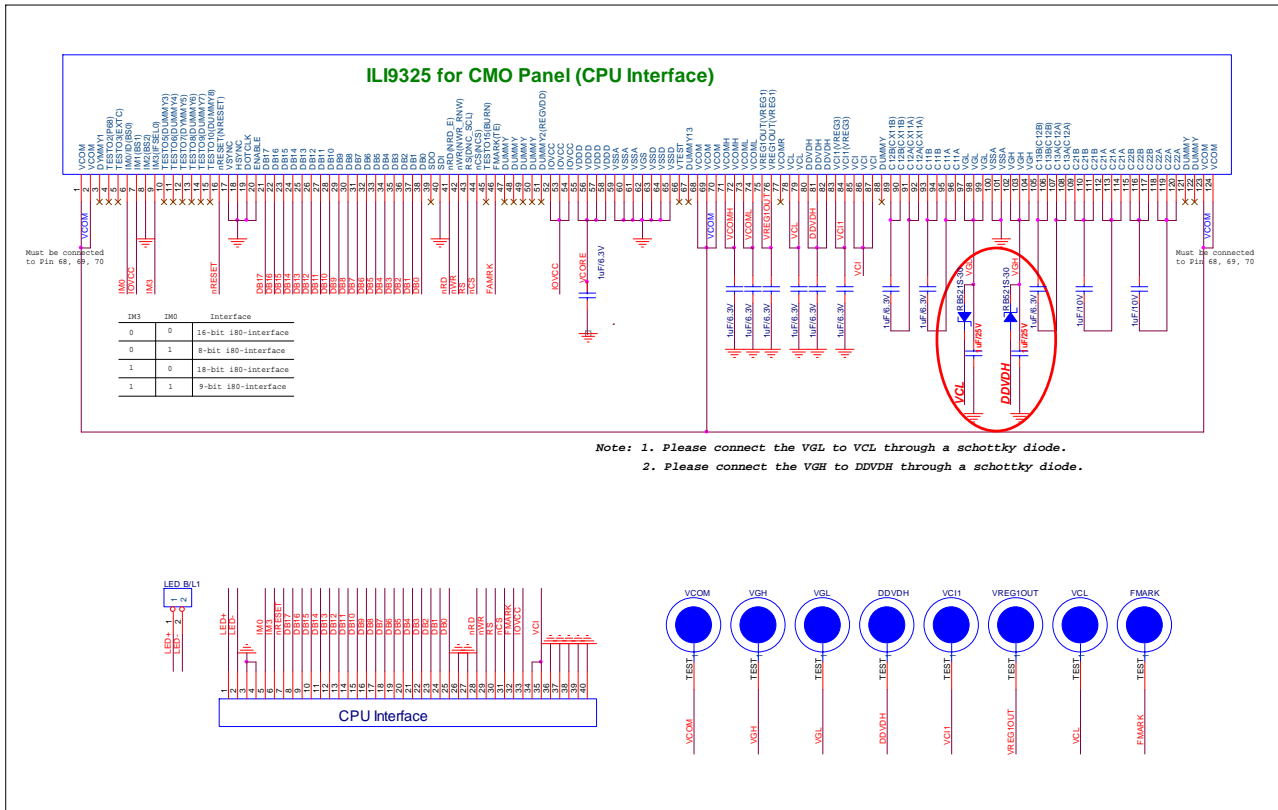
```

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;
    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, 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
    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); // SetVCM[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, 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)

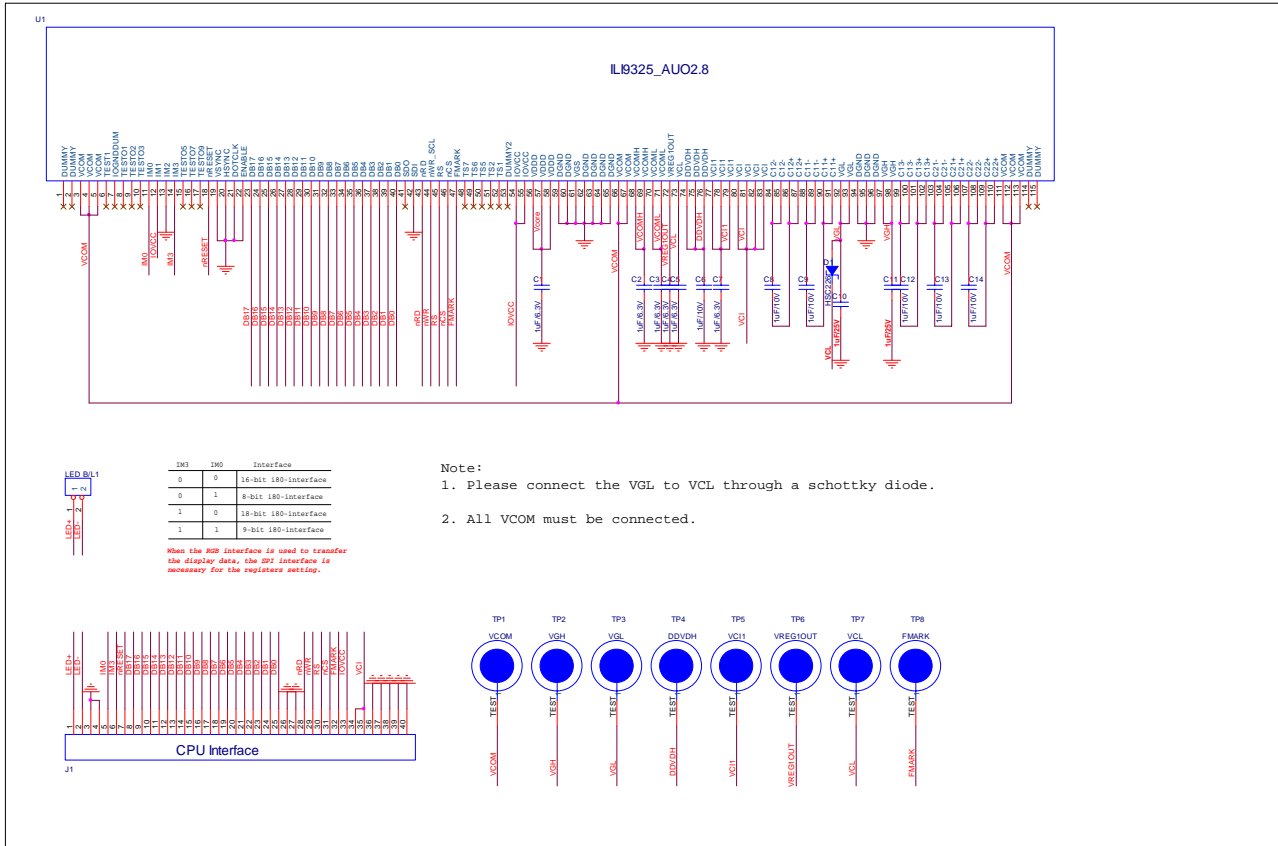
```

{
//*****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



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, 0x0067);
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)

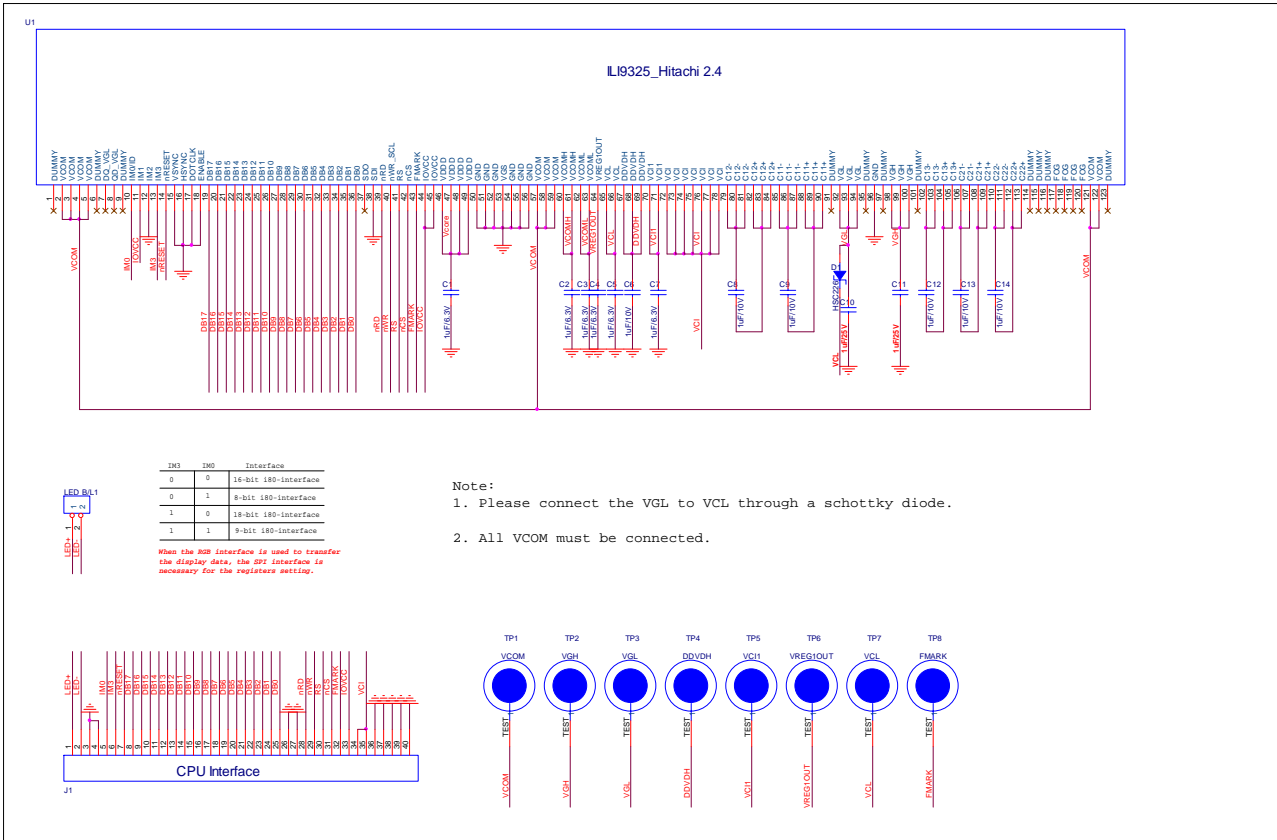
```

{
//*****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)

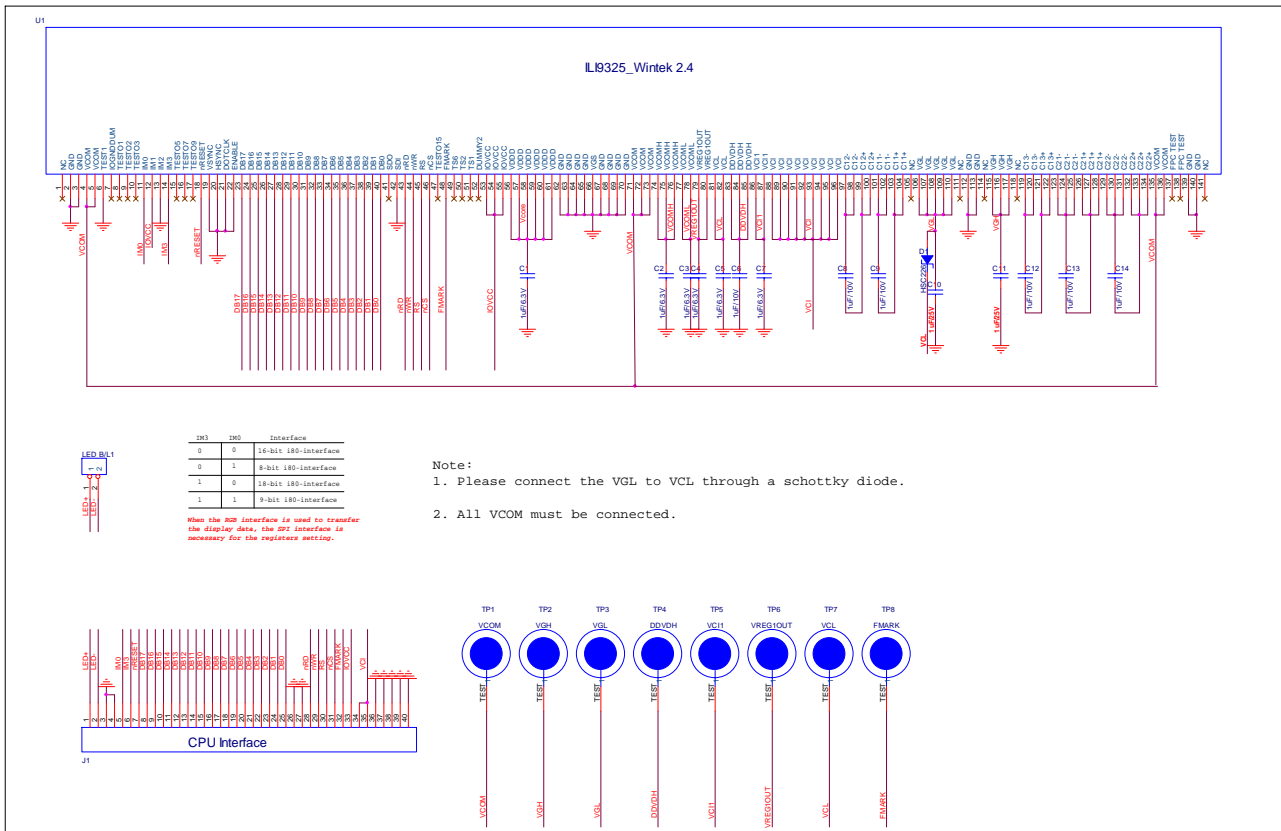
```

{
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



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
delayms(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]
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, 0x0011); // VCM[5:0] for VCOMH
delayms(50); // Delay 50ms
LCD_CtrlWrite_ILI9325(0x0007, 0x0133); // 262K color and display ON
}

```

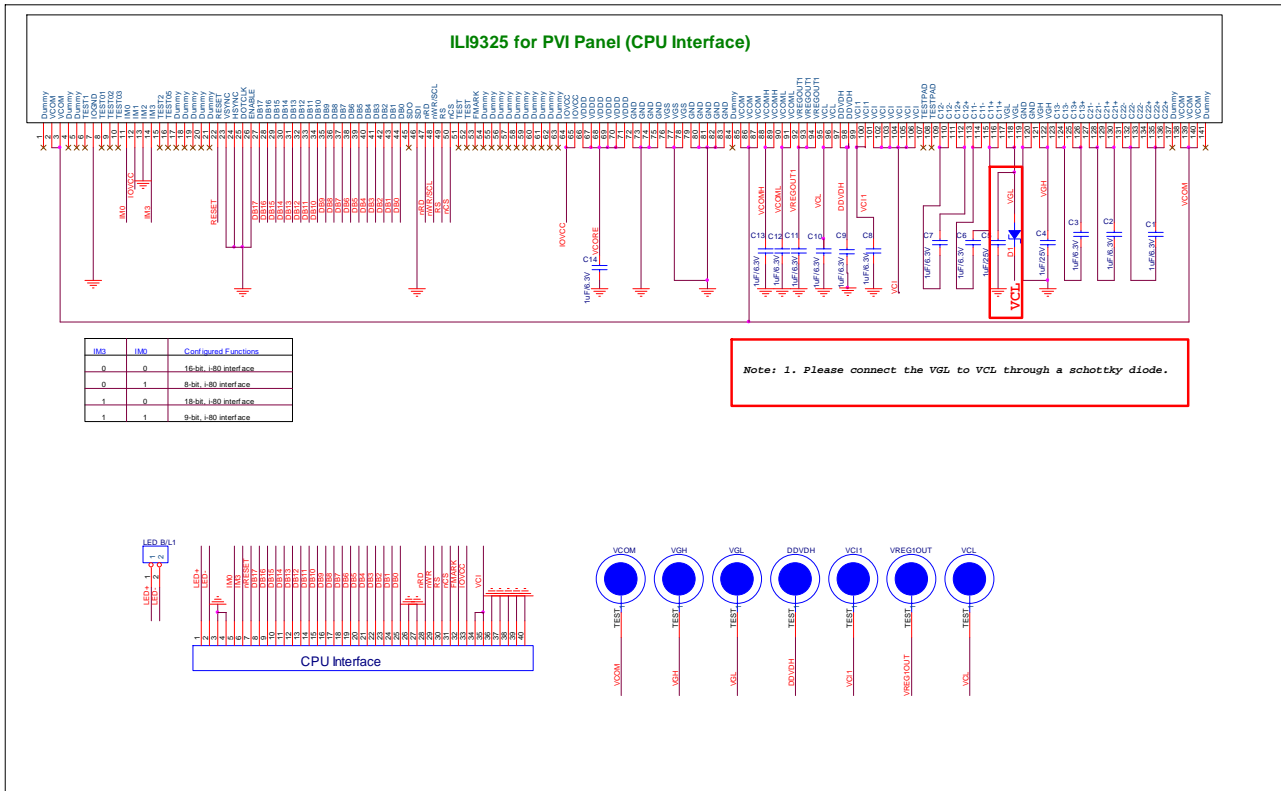
void LCD_EnterSleep_ILI9325(void)

```

{
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
}

```

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