

**a-Si TFT LCD Single Chip Driver with  
176RGBx220 Resolution and 262K color**

**Application Notes**

Version: Preliminary V0.6

Date: July, 13<sup>th</sup>, 2009

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## 1.2 CPT 2.0 inch initial code

### void ILI9225B\_CPT20\_Initial(void)

```

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

    //***** Start Initial Sequence *****//
    LCD_CtrlWrite_ILI9225B(0x0001, 0x011C); // set SS and NL bit
    LCD_CtrlWrite_ILI9225B(0x0002, 0x0100); // set 1 line inversion
    LCD_CtrlWrite_ILI9225B(0x0003, 0x1030); // set GRAM write direction and BGR=1.
    LCD_CtrlWrite_ILI9225B(0x0008, 0x0808); // set BP and FP
    LCD_CtrlWrite_ILI9225B(0x000C, 0x0000); // RGB interface setting  R0Ch=0x0110 for RGB 18Bit and R0Ch=0111for
    RGB16Bit
    LCD_CtrlWrite_ILI9225B(0x000F, 0x0801); // Set frame rate
    LCD_CtrlWrite_ILI9225B(0x0020, 0x0000); // Set GRAM Address
    LCD_CtrlWrite_ILI9225B(0x0021, 0x0000); // Set GRAM Address

    //*****Power On sequence *****//
    delayms(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00); // Set SAP,DSTB,STB
    LCD_CtrlWrite_ILI9225B(0x0011, 0x1038); // Set APON,PON,AON,VCI1EN,VC
    delayms(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0012, 0x1121); // Internal reference voltage= Vci;
    LCD_CtrlWrite_ILI9225B(0x0013, 0x0066); // Set GVDD
    LCD_CtrlWrite_ILI9225B(0x0014, 0x5F60); // Set VCOMH/VCOML voltage

    //----- Set GRAM area -----//
    LCD_CtrlWrite_ILI9225B (0x30, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x31, 0x00DB);
    LCD_CtrlWrite_ILI9225B (0x32, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x33, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x34, 0x00DB);
    LCD_CtrlWrite_ILI9225B (0x35, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x36, 0x00AF);
    LCD_CtrlWrite_ILI9225B (0x37, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x38, 0x00DB);
    LCD_CtrlWrite_ILI9225B (0x39, 0x0000);

    // ----- Adjust the Gamma Curve -----//
    LCD_CtrlWrite_ILI9225B(0x0050, 0x0400);
    LCD_CtrlWrite_ILI9225B(0x0051, 0x060B);
    LCD_CtrlWrite_ILI9225B(0x0052, 0x0C0A);
    LCD_CtrlWrite_ILI9225B(0x0053, 0x0105);
    LCD_CtrlWrite_ILI9225B(0x0054, 0x0A0C);
    LCD_CtrlWrite_ILI9225B(0x0055, 0x0B06);
    LCD_CtrlWrite_ILI9225B(0x0056, 0x0004);
    LCD_CtrlWrite_ILI9225B(0x0057, 0x0501);
    LCD_CtrlWrite_ILI9225B(0x0058, 0x0E00);
    LCD_CtrlWrite_ILI9225B(0x0059, 0x000E);
    delayms(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);
}

```

**void LCD\_Enter Standby\_ILI9225B(void)**

```
{  
    LCD_CtrlWrite_ILI9225B(0x0007, 0x0000);    // Set D1=0, D0=1  
    delayms(50);  
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A01);    // Enter Standby mode  
}
```

**void LCD\_Exit Standby\_ILI9225B(void)**

```
{  
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00);    // Exit Sleep/ Standby mode  
    delayms(50)  
    LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);    // Set D1=0, D0=1  
}
```



## 2.2 WTK 1.8,2.0,2.2 inch Initial Code

### void ILI9225B\_Wintek\_Initial(void)

```

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

    //***** Start Initial Sequence *****//
    LCD_CtrlWrite_ILI9225B(0x0001, 0x011C); // set SS and NL bit
    LCD_CtrlWrite_ILI9225B(0x0002, 0x0100); // set 1 line inversion
    LCD_CtrlWrite_ILI9225B(0x0003, 0x1030); // set GRAM write direction and BGR=1.
    LCD_CtrlWrite_ILI9225B(0x0008, 0x0808); // set BP and FP
    LCD_CtrlWrite_ILI9225B(0x000C, 0x0000); // RGB interface setting  R0Ch=0x0110 for RGB 18Bit and R0Ch=0111for
    RGB16Bit
    LCD_CtrlWrite_ILI9225B(0x000F, 0x0801); // Set frame rate
    LCD_CtrlWrite_ILI9225B(0x0020, 0x0000); // Set GRAM Address
    LCD_CtrlWrite_ILI9225B(0x0021, 0x0000); // Set GRAM Address

    //*****Power On sequence *****//
    delayms(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00); // Set SAP,DSTB,STB
    LCD_CtrlWrite_ILI9225B(0x0011, 0x1038); // Set APON,PON,AON,VCI1EN,VC
    delayms(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0012, 0x6121); // Internal reference voltage= Vci;
    LCD_CtrlWrite_ILI9225B(0x0013, 0x0062); // Set GVDD
    LCD_CtrlWrite_ILI9225B(0x0014, 0x5b60); // Set VCOMH/VCOML voltage

    //----- Set GRAM area -----//
    LCD_CtrlWrite_ILI9225B (0x30, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x31, 0x00DB);
    LCD_CtrlWrite_ILI9225B (0x32, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x33, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x34, 0x00DB);
    LCD_CtrlWrite_ILI9225B (0x35, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x36, 0x00AF);
    LCD_CtrlWrite_ILI9225B (0x37, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x38, 0x00DB);
    LCD_CtrlWrite_ILI9225B (0x39, 0x0000);

    // ----- Adjust the Gamma Curve -----//
    LCD_CtrlWrite_ILI9225B(0x0050, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0051, 0x000B);
    LCD_CtrlWrite_ILI9225B(0x0052, 0x0a01);
    LCD_CtrlWrite_ILI9225B(0x0053, 0x010c);
    LCD_CtrlWrite_ILI9225B(0x0054, 0x010a);
    LCD_CtrlWrite_ILI9225B(0x0055, 0x0B00);
    LCD_CtrlWrite_ILI9225B(0x0056, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0057, 0x0c01);
    LCD_CtrlWrite_ILI9225B(0x0058, 0x0E00);
    LCD_CtrlWrite_ILI9225B(0x0059, 0x000E);
    delayms(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);
}

```

---

**void LCD\_Enter Standby\_ILI9225B(void)**

```
{  
    LCD_CtrlWrite_ILI9225B(0x0007, 0x0000);    // Set D1=0, D0=1  
    delayms(50);  
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A01);    // // Enter Standby mode  
}
```

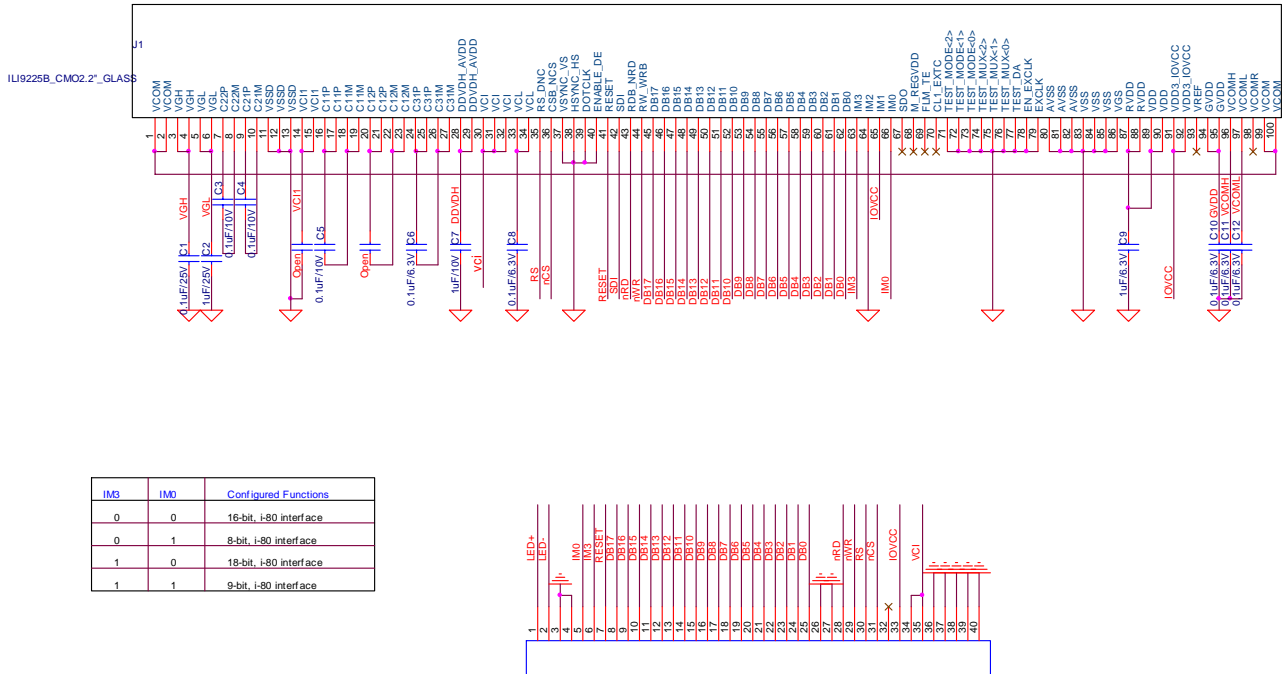
**void LCD\_Exit Standby\_ILI9225B(void)**

```
{  
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00);    // Exit Sleep/ Standby mode  
    delayms(50)  
    LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);    // Set D1=0, D0=1  
}
```



## 3. CMO 2.2 inch Panel

### 3.1 Application FPC Circuit



## 3.2 CM0 2.2 inch Panel Initial Code

```
void ILI9225B_CMO22_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_ILI9225B(0x0001, 0x011C);    // set SS and NL bit
    LCD_CtrlWrite_ILI9225B(0x0002, 0x0100);    // set 1 line inversion
    LCD_CtrlWrite_ILI9225B(0x0003, 0x1030);    // set GRAM write direction and BGR=1.
    LCD_CtrlWrite_ILI9225B(0x0008, 0x0808);    // set BP and FP
    LCD_CtrlWrite_ILI9225B(0x000C, 0x0000);    // RGB interface setting  R0Ch=0x0110 for RGB 18Bit and R0Ch=0111for
    RGB16Bit
    LCD_CtrlWrite_ILI9225B(0x000F, 0x0801);    // Set frame rate
    LCD_CtrlWrite_ILI9225B(0x0020, 0x0000);    // Set GRAM Address
    LCD_CtrlWrite_ILI9225B(0x0021, 0x0000);    // Set GRAM Address
    //*****Power On sequence *****//
    delaysms(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00);    // Set SAP,DSTB,STB
    LCD_CtrlWrite_ILI9225B(0x0011, 0x103B);    // Set APON,PON,AON,VCI1EN,VC
    delaysms(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0012, 0x3121);    // Internal reference voltage= Vci;
    LCD_CtrlWrite_ILI9225B(0x0013, 0x0066);    // Set GVDD
    LCD_CtrlWrite_ILI9225B(0x0014, 0x3660);    // Set VCOMH/VCOML voltage
    //----- Set GRAM area -----//
    LCD_CtrlWrite_ILI9225B (0x30, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x31, 0x00DB);
    LCD_CtrlWrite_ILI9225B (0x32, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x33, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x34, 0x00DB);
    LCD_CtrlWrite_ILI9225B (0x35, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x36, 0x00AF);
    LCD_CtrlWrite_ILI9225B (0x37, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x38, 0x00DB);
    LCD_CtrlWrite_ILI9225B (0x39, 0x0000);
    // ----- Adjust the Gamma Curve -----//
    LCD_CtrlWrite_ILI9225B(0x0050, 0x0400);
    LCD_CtrlWrite_ILI9225B(0x0051, 0x080B);
    LCD_CtrlWrite_ILI9225B(0x0052, 0x0E0C);
    LCD_CtrlWrite_ILI9225B(0x0053, 0x0103);
    LCD_CtrlWrite_ILI9225B(0x0054, 0x0C0E);
    LCD_CtrlWrite_ILI9225B(0x0055, 0x0B08);
    LCD_CtrlWrite_ILI9225B(0x0056, 0x0004);
    LCD_CtrlWrite_ILI9225B(0x0057, 0x0301);
    LCD_CtrlWrite_ILI9225B(0x0058, 0x0E00);
    LCD_CtrlWrite_ILI9225B(0x0059, 0x000E);
    delaysms(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);
}
```

**void LCD\_Enter Standby\_ILI9225B(void)**

```
{  
    LCD_CtrlWrite_ILI9225B(0x0007, 0x0000);    // Set D1=0, D0=1  
    delayms(50);  
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A01);    // // Enter Standby mode  
}
```

**void LCD\_Exit Standby\_ILI9225B(void)**

```
{  
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00);    // Exit Sleep/ Standby mode  
    delayms(50)  
    LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);    // Set D1=0, D0=1  
}
```



## 4.2 Hydis 2.2 inch Panel Initial Code

### void ILI9225B\_Hydis22\_Initial(void)

```

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

    //***** Start Initial Sequence *****//
    LCD_CtrlWrite_ILI9225B(0x0001, 0x011C); // set SS and NL bit
    LCD_CtrlWrite_ILI9225B(0x0002, 0x0100); // set 1 line inversion
    LCD_CtrlWrite_ILI9225B(0x0003, 0x1030); // set GRAM write direction and BGR=1.
    LCD_CtrlWrite_ILI9225B(0x0008, 0x0808); // set BP and FP
    LCD_CtrlWrite_ILI9225B(0x000C, 0x0000); // RGB interface setting  R0Ch=0x0110 for RGB 18Bit and R0Ch=0111for
    RGB16Bit
    LCD_CtrlWrite_ILI9225B(0x000F, 0x0801); // Set frame rate
    LCD_CtrlWrite_ILI9225B(0x0020, 0x0000); // Set GRAM Address
    LCD_CtrlWrite_ILI9225B(0x0021, 0x0000); // Set GRAM Address

    //*****Power On sequence *****//
    delayms(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00); // Set SAP,DSTB,STB
    LCD_CtrlWrite_ILI9225B(0x0011, 0x103B); // Set APON,PON,AON,VCI1EN,VC
    delayms(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0012, 0x6121); // Internal reference voltage= Vci;
    LCD_CtrlWrite_ILI9225B(0x0013, 0x006F); // Set GVDD
    LCD_CtrlWrite_ILI9225B(0x0014, 0x495F); // Set VCOMH/VCOML voltage

    //----- Set GRAM area -----//
    LCD_CtrlWrite_ILI9225B (0x30, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x31, 0x00DB);
    LCD_CtrlWrite_ILI9225B (0x32, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x33, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x34, 0x00DB);
    LCD_CtrlWrite_ILI9225B (0x35, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x36, 0x00AF);
    LCD_CtrlWrite_ILI9225B (0x37, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x38, 0x00DB);
    LCD_CtrlWrite_ILI9225B (0x39, 0x0000);

    // ----- Adjust the Gamma Curve -----//
    LCD_CtrlWrite_ILI9225B(0x0050, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0051, 0x0808);
    LCD_CtrlWrite_ILI9225B(0x0052, 0x080A);
    LCD_CtrlWrite_ILI9225B(0x0053, 0x000A);
    LCD_CtrlWrite_ILI9225B(0x0054, 0x0A08);
    LCD_CtrlWrite_ILI9225B(0x0055, 0x0808);
    LCD_CtrlWrite_ILI9225B(0x0056, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0057, 0x0A00);
    LCD_CtrlWrite_ILI9225B(0x0058, 0x1007);
    LCD_CtrlWrite_ILI9225B(0x0059, 0x0710);
    delayms(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);
}

```

**void LCD\_Enter Standby\_ILI9225B(void)**

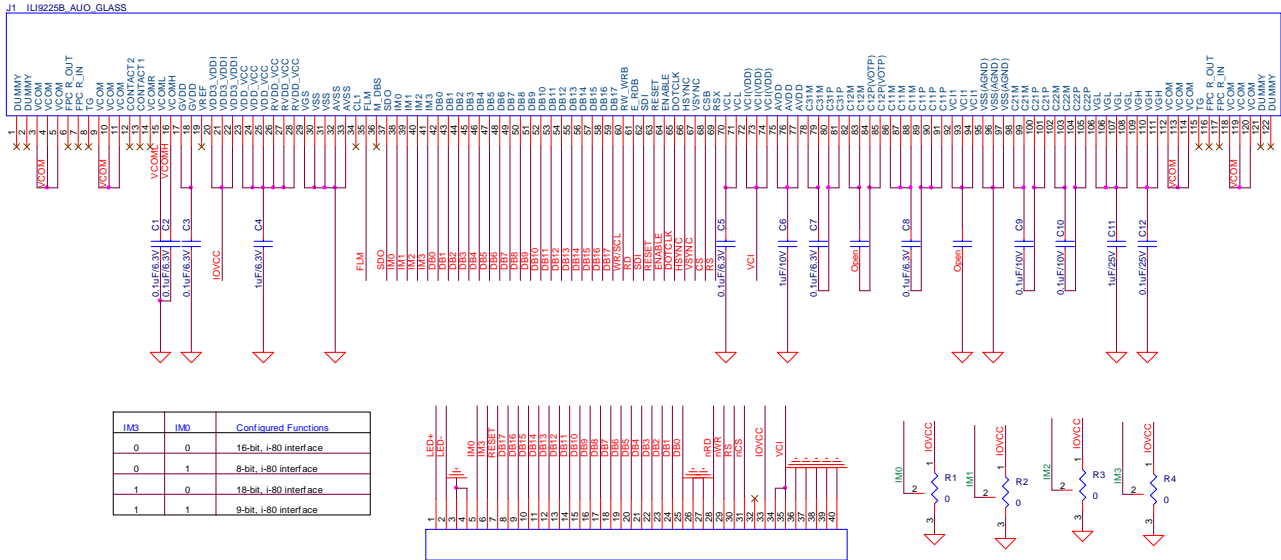
```
{  
    LCD_CtrlWrite_ILI9225B(0x0007, 0x0000);    // Set D1=0, D0=1  
    delayms(50);  
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A01);    // // Enter Standby mode  
}
```

**void LCD\_Exit Standby\_ILI9225B(void)**

```
{  
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00);    // Exit Sleep/ Standby mode  
    delayms(50)  
    LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);    // Set D1=0, D0=1  
}
```

## 5 AUO 2.2"&AUO2.0" Panel

### 5.1 AUO 2.2" & AUO2.0" Application FPC Circuit



## 5.2 AUO 2.0" Panel Initial Code

```

void ILI9225B_AUO20_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_ILI9225B(0x0001, 0x011C); // set SS and NL bit
    LCD_CtrlWrite_ILI9225B(0x0002, 0x0100); // set 1 line inversion
    LCD_CtrlWrite_ILI9225B(0x0003, 0x1030); // set GRAM write direction and BGR=1.
    LCD_CtrlWrite_ILI9225B(0x0008, 0x0808); // set BP and FP
    LCD_CtrlWrite_ILI9225B(0x000C, 0x0000); // RGB interface setting R0Ch=0x0110 for RGB 18Bit and R0Ch=0111for RGB16Bit
    LCD_CtrlWrite_ILI9225B(0x000F, 0x0B01); // Set frame rate
    LCD_CtrlWrite_ILI9225B(0x0020, 0x0000); // Set GRAM Address
    LCD_CtrlWrite_ILI9225B(0x0021, 0x0000); // Set GRAM Address
    //*****Power On sequence *****//
    delays(50);                // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0800); // Set SAP,DSTB,STB
    LCD_CtrlWrite_ILI9225B(0x0011, 0x1038); // Set APON,PON,AON,VCI1EN,VC
    delays(50);                // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0012, 0x1121); // Internal reference voltage= Vci;
    LCD_CtrlWrite_ILI9225B(0x0013, 0x0063); // Set GVDD
    LCD_CtrlWrite_ILI9225B(0x0014, 0x3944); // Set VCOMH/VCOML voltage
    //----- Set GRAM area -----//
    LCD_CtrlWrite_ILI9225B(0x0030, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0031, 0x00DB);
    LCD_CtrlWrite_ILI9225B(0x0032, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0033, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0034, 0x00DB);
    LCD_CtrlWrite_ILI9225B(0x0035, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0036, 0x00AF);
    LCD_CtrlWrite_ILI9225B(0x0037, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0038, 0x00DB);
    LCD_CtrlWrite_ILI9225B(0x0039, 0x0000);
    // ----- Adjust the Gamma Curve -----//
    LCD_CtrlWrite_ILI9225B(0x0050, 0x0003);
    LCD_CtrlWrite_ILI9225B(0x0051, 0x0900);
    LCD_CtrlWrite_ILI9225B(0x0052, 0x0d05);
    LCD_CtrlWrite_ILI9225B(0x0053, 0x0900);
    LCD_CtrlWrite_ILI9225B(0x0054, 0x0407);
    LCD_CtrlWrite_ILI9225B(0x0055, 0x0502);
    LCD_CtrlWrite_ILI9225B(0x0056, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0057, 0x0005);
    LCD_CtrlWrite_ILI9225B(0x0058, 0x1700);
    LCD_CtrlWrite_ILI9225B(0x0059, 0x001F);
    delays(50);                // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);
}
  
```



---

**void LCD\_Enter\_Standby\_ILI9225B(void)**

```
{  
    LCD_CtrlWrite_ILI9225B(0x0007, 0x0000); // Set D1=0, D0=1  
    delayms(50);  
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0801); // Enter Standby mode  
}
```

**void LCD\_Exit\_Standby\_ILI9225B(void)**

```
{  
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0800); // Exit Sleep/ Standby mode  
    delayms(50)  
    LCD_CtrlWrite_ILI9225B(0x0007, 0x1017); // Set D1=0, D0=1  
}
```

### 5.3 AUO 2.2" Panel Initial Code

#### void ILI9225B\_AUO22\_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_ILI9225B(0x0001, 0x011C); // set SS and NL bit
    LCD_CtrlWrite_ILI9225B(0x0002, 0x0100); // set 1 line inversion
    LCD_CtrlWrite_ILI9225B(0x0003, 0x1030); // set GRAM write direction and BGR=1.
    LCD_CtrlWrite_ILI9225B(0x0008, 0x0808); // set BP and FP
    LCD_CtrlWrite_ILI9225B(0x000C, 0x0000); // RGB interface setting R0Ch=0x0110 for RGB 18Bit and R0Ch=0111for RGB16Bit
    LCD_CtrlWrite_ILI9225B(0x000F, 0x0801); // Set frame rate
    LCD_CtrlWrite_ILI9225B(0x0020, 0x0000); // Set GRAM Address
    LCD_CtrlWrite_ILI9225B(0x0021, 0x0000); // Set GRAM Address
    //*****Power On sequence *****//
    delays(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00); // Set SAP,DSTB,STB
    LCD_CtrlWrite_ILI9225B(0x0011, 0x1038); // Set APON,PON,AON,VCI1EN,VC
    delays(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0012, 0x2121); // Internal reference voltage= Vci;
    LCD_CtrlWrite_ILI9225B(0x0013, 0x007A); // Set GVDD
    LCD_CtrlWrite_ILI9225B(0x0014, 0x5260); // Set VCOMH/VCOML voltage
    //----- Set GRAM area -----//
    LCD_CtrlWrite_ILI9225B(0x0030, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0031, 0x00DB);
    LCD_CtrlWrite_ILI9225B(0x0032, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0033, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0034, 0x00DB);
    LCD_CtrlWrite_ILI9225B(0x0035, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0036, 0x00AF);
    LCD_CtrlWrite_ILI9225B(0x0037, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0038, 0x00DB);
    LCD_CtrlWrite_ILI9225B(0x0039, 0x0000);
    // ----- Adjust the Gamma Curve -----//
    LCD_CtrlWrite_ILI9225B(0x0050, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0051, 0x0704);
    LCD_CtrlWrite_ILI9225B(0x0052, 0x0C08);
    LCD_CtrlWrite_ILI9225B(0x0053, 0x0502);
    LCD_CtrlWrite_ILI9225B(0x0054, 0x080C);
    LCD_CtrlWrite_ILI9225B(0x0055, 0x0407);
    LCD_CtrlWrite_ILI9225B(0x0056, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0057, 0x0205);
    LCD_CtrlWrite_ILI9225B(0x0058, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0059, 0x0000);
    delays(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);
}

```

---

**void LCD\_Enter\_Standby\_ILI9225B(void)**

```
{  
    LCD_CtrlWrite_ILI9225B(0x0007, 0x0000); // Set D1=0, D0=1  
    delayms(50);  
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A01); // Enter Standby mode  
}
```

**void LCD\_Exit\_Standby\_ILI9225B(void)**

```
{  
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00); // Exit Sleep/ Standby mode  
    delayms(50)  
    LCD_CtrlWrite_ILI9225B(0x0007, 0x1017); // Set D1=0, D0=1  
}
```



## 6.2 TM 2.0" Panel Initial Code

### void ILI9225B\_TM20\_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_ILI9225B(0x0001, 0x011C); // set SS and NL bit
LCD_CtrlWrite_ILI9225B(0x0002, 0x0100); // set 1 line inversion
LCD_CtrlWrite_ILI9225B(0x0003, 0x1030); // set GRAM write direction and BGR=1.
LCD_CtrlWrite_ILI9225B(0x0008, 0x0808); // set BP and FP
LCD_CtrlWrite_ILI9225B(0x000C, 0x0000); // RGB interface setting R0Ch=0x0110 for RGB 18Bit and R0Ch=0111for RGB16Bit
LCD_CtrlWrite_ILI9225B(0x000F, 0x0A01); // Set frame rate
LCD_CtrlWrite_ILI9225B(0x0020, 0x0000); // Set GRAM Address
LCD_CtrlWrite_ILI9225B(0x0021, 0x0000); // Set GRAM Address
//*****Power On sequence *****//
    delays(50);                // Delay 50ms
LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00); // Set SAP,DSTB,STB
LCD_CtrlWrite_ILI9225B(0x0011, 0x1038); // Set APON,PON,AON,VCI1EN,VC
    delays(50);                // Delay 50ms
LCD_CtrlWrite_ILI9225B(0x0012, 0x1121); // Internal reference voltage= Vci;
LCD_CtrlWrite_ILI9225B(0x0013, 0x006C); // Set GVDD
LCD_CtrlWrite_ILI9225B(0x0014, 0x676F); // Set VCOMH/VCOML voltage
//----- Set GRAM area -----//
LCD_CtrlWrite_ILI9225B(0x0030, 0x0000);
LCD_CtrlWrite_ILI9225B(0x0031, 0x00DB);
LCD_CtrlWrite_ILI9225B(0x0032, 0x0000);
LCD_CtrlWrite_ILI9225B(0x0033, 0x0000);
LCD_CtrlWrite_ILI9225B(0x0034, 0x00DB);
LCD_CtrlWrite_ILI9225B(0x0035, 0x0000);
LCD_CtrlWrite_ILI9225B(0x0036, 0x00AF);
LCD_CtrlWrite_ILI9225B(0x0037, 0x0000);
LCD_CtrlWrite_ILI9225B(0x0038, 0x00DB);
LCD_CtrlWrite_ILI9225B(0x0039, 0x0000);
// ----- Adjust the Gamma Curve -----//
LCD_CtrlWrite_ILI9225B(0x0050, 0x0000);
LCD_CtrlWrite_ILI9225B(0x0051, 0x060A);
LCD_CtrlWrite_ILI9225B(0x0052, 0x0D0A);
LCD_CtrlWrite_ILI9225B(0x0053, 0x0303);
LCD_CtrlWrite_ILI9225B(0x0054, 0x0A0D);
LCD_CtrlWrite_ILI9225B(0x0055, 0x0A06);
LCD_CtrlWrite_ILI9225B(0x0056, 0x0000);
LCD_CtrlWrite_ILI9225B(0x0057, 0x0303);
LCD_CtrlWrite_ILI9225B(0x0058, 0x0000);
LCD_CtrlWrite_ILI9225B(0x0059, 0x0000);
    delays(50);                // Delay 50ms
LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);
}
```

---

**void LCD\_Enter\_Standby\_ILI9225B(void)**

```
{  
    LCD_CtrlWrite_ILI9225B(0x0007, 0x0000); // Set D1=0, D0=1  
    delayms(50);  
    LCD_CtrlWrite_ILI9225B(0x0011, 0x0007); // Set APON,PON,AON,VC11EN,VC  
    delayms(50);  
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A01); // Enter Standby mode  
}
```

**void LCD\_Exit\_Standby\_ILI9225B(void)**

```
{  
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00); // Exit Sleep/ Standby mode  
    LCD_CtrlWrite_ILI9225B(0x0011, 0x1038); // Set APON,PON,AON,VC11EN,VC  
    delayms(50)  
    LCD_CtrlWrite_ILI9225B(0x0007, 0x1017); // Set D1=0, D0=1  
}
```

## 6.3 TM 2.2" Panel Initial Code

### void ILI9225B\_TM22\_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_ILI9225B(0x0001, 0x011C); // set SS and NL bit
    LCD_CtrlWrite_ILI9225B(0x0002, 0x0100); // set 1 line inversion
    LCD_CtrlWrite_ILI9225B(0x0003, 0x1030); // set GRAM write direction and BGR=1.
    LCD_CtrlWrite_ILI9225B(0x0008, 0x0808); // set BP and FP
    LCD_CtrlWrite_ILI9225B(0x000C, 0x0000); // RGB interface setting R0Ch=0x0110 for RGB 18Bit and R0Ch=0111for RGB16Bit
    LCD_CtrlWrite_ILI9225B(0x000F, 0x0801); // Set frame rate
    LCD_CtrlWrite_ILI9225B(0x0020, 0x0000); // Set GRAM Address
    LCD_CtrlWrite_ILI9225B(0x0021, 0x0000); // Set GRAM Address
    //*****Power On sequence *****//
    delays(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00); // Set SAP,DSTB,STB
    LCD_CtrlWrite_ILI9225B(0x0011, 0x1038); // Set APON,PON,AON,VCI1EN,VC
    delays(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0012, 0x1121); // Internal reference voltage= Vci;
    LCD_CtrlWrite_ILI9225B(0x0013, 0x006E); // Set GVDD
    LCD_CtrlWrite_ILI9225B(0x0014, 0x6561); // Set VCOMH/VCOML voltage
    //----- Set GRAM area -----//
    LCD_CtrlWrite_ILI9225B(0x0030, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0031, 0x00DB);
    LCD_CtrlWrite_ILI9225B(0x0032, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0033, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0034, 0x00DB);
    LCD_CtrlWrite_ILI9225B(0x0035, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0036, 0x00AF);
    LCD_CtrlWrite_ILI9225B(0x0037, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0038, 0x00DB);
    LCD_CtrlWrite_ILI9225B(0x0039, 0x0000);
    // ----- Adjust the Gamma Curve -----//
    LCD_CtrlWrite_ILI9225B(0x0050, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0051, 0x0705);
    LCD_CtrlWrite_ILI9225B(0x0052, 0x0E0A);
    LCD_CtrlWrite_ILI9225B(0x0053, 0x0300);
    LCD_CtrlWrite_ILI9225B(0x0054, 0x0A0E);
    LCD_CtrlWrite_ILI9225B(0x0055, 0x0507);
    LCD_CtrlWrite_ILI9225B(0x0056, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0057, 0x0003);
    LCD_CtrlWrite_ILI9225B(0x0058, 0x090A);
    LCD_CtrlWrite_ILI9225B(0x0059, 0x0A09);
    delays(50); // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);
}

```

**void LCD\_Enter\_Standby\_ILI9225B(void)**

```
{  
    LCD_CtrlWrite_ILI9225B(0x0007, 0x0000); // Set D1=0, D0=1  
    delayms(50);  
    LCD_CtrlWrite_ILI9225B(0x0011, 0x0007); // Set APON,PON,AON,VC11EN,VC  
    delayms(50);  
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A01); // Enter Standby mode  
}
```

**void LCD\_Exit\_Standby\_ILI9225B(void)**

```
{  
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00); // Exit Sleep/ Standby mode  
    LCD_CtrlWrite_ILI9225B(0x0011, 0x1038); // Set APON,PON,AON,VC11EN,VC  
    delayms(50)  
    LCD_CtrlWrite_ILI9225B(0x0007, 0x1017); // Set D1=0, D0=1  
}
```



## Revision History

Version No.	Date	Page	Description
V0.1	2008/09/11		New Created
V0.2	2009/1/15		Add AUO 2.2" & 2.0" FPC and AUO2.2" initial code
V0.3	2009/2/13		Revise FPC (0D12C) and Add AUO2.0" initial code
V0.4	2009/2/26		Revise CPT 、CMO FPC
V0.5	2009/4/2		Revise enter standby mode function
V0.6	2009/7/13		Add TM 2.0" & 2.2" FPC and initial code