

## **a-Si TFT LCD Single Chip Driver with 132RGBx163 Resolution and 262K color**

### **Application Notes**

Version: Preliminary V0.2

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#### **ILI TECHNOLOGY CORP.**

8F, No.38, Taiyuan St., Jhubei City, Hsinchu County,  
Taiwan 302, R.O.C.

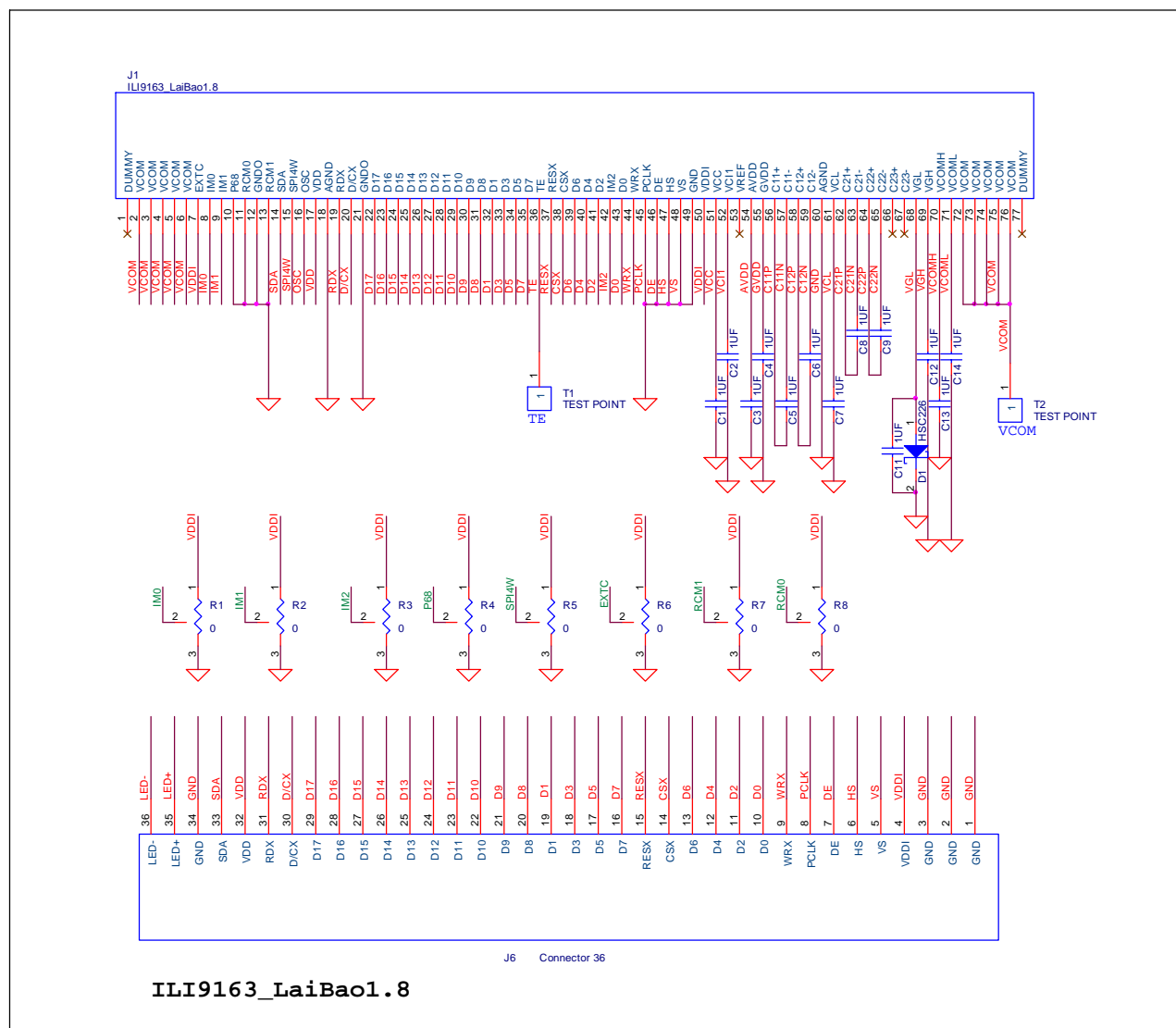
Tel.886-3-5600099; Fax.886-3-56--585

<http://www.ilitek.com>

<b>1. LAIBO PANEL.....</b>	<b>3</b>
<b>1.1 LAIBO1.8” LINITIAL CODE.....</b>	<b>4</b>
<b>2. CMO PANEL.....</b>	<b>6</b>
<b>2. 1. CMO1.8” INITIAL CODE.....</b>	<b>7</b>
<b>REVISION HISTORY .....</b>	<b>10</b>

# 1. LAIBO Panel

## 1.8" Panel



## **1.1 Laibo1.8" Initial Code**

```
void ILI9163_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_ILI9163_CMD(0x11); //Exit Sleep
Delayms(20);
LCD_ILI9163_CMD(0x26); //Set Default Gamma
LCD_ILI9163_INDEX(0x04);
LCD_ILI9163_CMD(0xF2); //E0h & E1h Enable/Disable
LCD_ILI9163_INDEX(0x00);
LCD_ILI9163_CMD(0xB1);
LCD_ILI9163_INDEX(0x0C);
LCD_ILI9163_INDEX(0x14);
LCD_ILI9163_CMD(0xC0); //Set VRH1[4:0] & VC[2:0] for VCI1 & GVDD
LCD_ILI9163_INDEX(0x0C);
LCD_ILI9163_INDEX(0x05);
LCD_ILI9163_CMD(0xC1); //Set BT[2:0] for AVDD & VCL & VGH & VGL
LCD_ILI9163_INDEX(0x02);
LCD_ILI9163_CMD(0xC5); //Set VMH[6:0] & VML[6:0] for VOMH & VCOML
LCD_ILI9163_INDEX(0x32);
LCD_ILI9163_INDEX(0x3B);
LCD_ILI9163_CMD(0xC7);
LCD_ILI9163_INDEX(0x40);

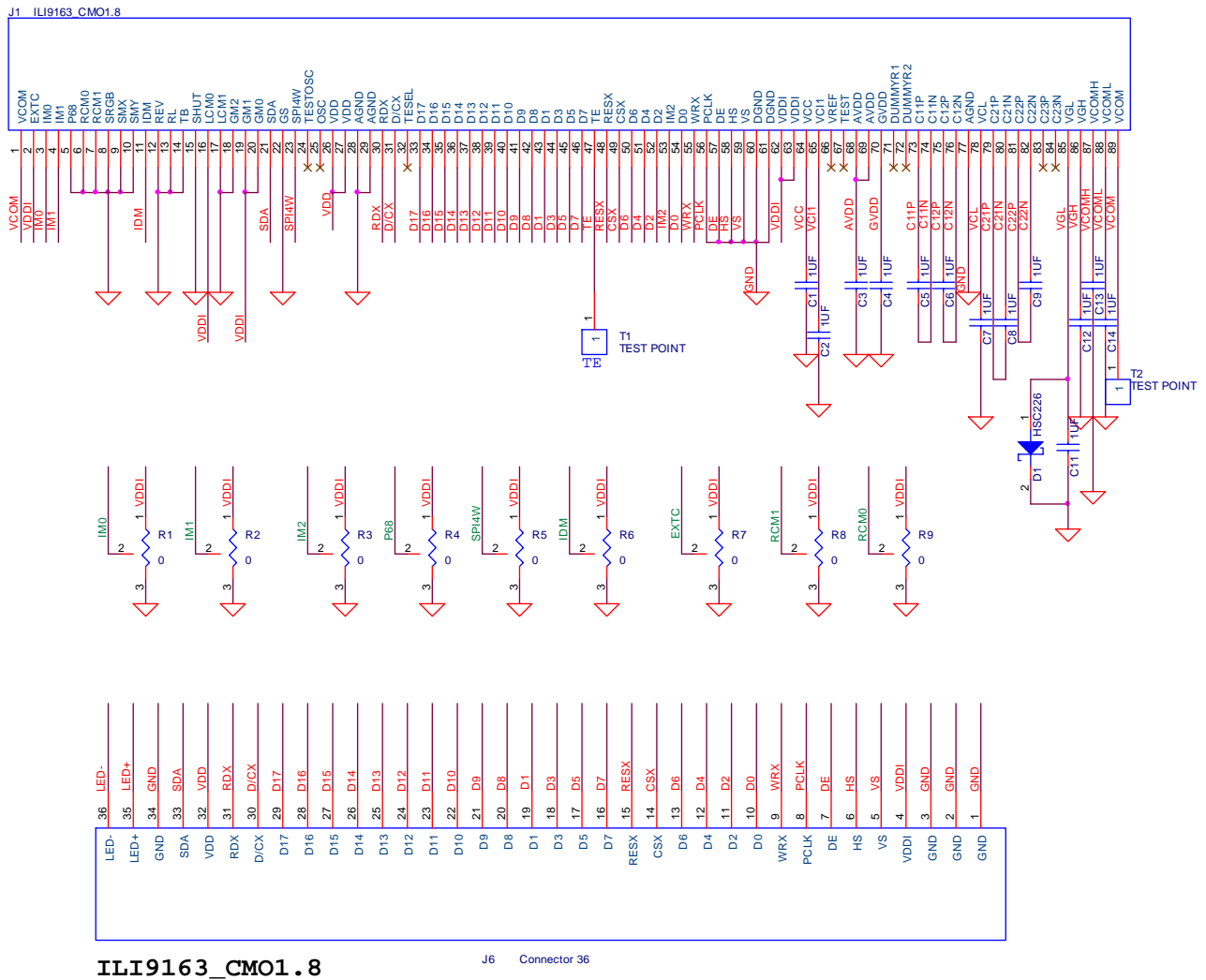
LCD_ILI9163_CMD(0x3a); //Set Color Format
LCD_ILI9163_INDEX(0x05);

LCD_ILI9163_CMD(0x2A); //Set Column Address
LCD_ILI9163_INDEX(0x00);
LCD_ILI9163_INDEX(0x00);
```

```
LCD_ILI9163_INDEX(0x00);  
LCD_ILI9163_INDEX(0x7F);  
LCD_ILI9163_CMD(0x2B); //Set Page Address  
LCD_ILI9163_INDEX(0x00);  
LCD_ILI9163_INDEX(0x00);  
LCD_ILI9163_INDEX(0x00);  
LCD_ILI9163_INDEX(0x9F);  
LCD_ILI9163_CMD(0x36); //Set Scanning Direction  
LCD_ILI9163_INDEX(0xC0);  
LCD_ILI9163_CMD(0x29); // Display On  
LCD_ILI9163_CMD(0x2C);  
}
```

## 2. CMO Panel

### 1.8" Panel



## 2. 1. CMO1.8" Initial Code

```

void ILI9163_Initial_CMO177(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_ILI9163_CMD(0x11); //Exit Sleep
Delayms(20);
LCD_ILI9163_CMD(0x26); //Set Default Gamma
LCD_ILI9163_INDEX(0x04);
//LCD_ILI9163_CMD(0xF2); //E0h & E1h Enable/Disable
//LCD_ILI9163_INDEX(0x00);
LCD_ILI9163_CMD(0xB1);
LCD_ILI9163_INDEX(0x0C);
LCD_ILI9163_INDEX(0x14);
LCD_ILI9163_CMD(0xC0); //Set VRH1[4:0] & VC[2:0] for VCI1 & GVDD
LCD_ILI9163_INDEX(0x0C);
LCD_ILI9163_INDEX(0x05);
LCD_ILI9163_CMD(0xC1); //Set BT[2:0] for AVDD & VCL & VGH & VGL
LCD_ILI9163_INDEX(0x02);
LCD_ILI9163_CMD(0xC5); //Set VMH[6:0] & VML[6:0] for VOMH & VCOML
LCD_ILI9163_INDEX(0x29);
LCD_ILI9163_INDEX(0x43);
LCD_ILI9163_CMD(0xC7);
LCD_ILI9163_INDEX(0x40);

LCD_ILI9163_CMD(0x3a); //Set Color Format
LCD_ILI9163_INDEX(0x05);
LCD_ILI9163_CMD(0x2A); //Set Column Address
LCD_ILI9163_INDEX(0x00);
LCD_ILI9163_INDEX(0x00);
LCD_ILI9163_INDEX(0x00);
LCD_ILI9163_INDEX(0x7F);

```

```
LCD_ILI9163_CMD(0x2B); //Set Page Address
LCD_ILI9163_INDEX(0x00);
LCD_ILI9163_INDEX(0x00);
LCD_ILI9163_INDEX(0x00);
LCD_ILI9163_INDEX(0x9F);
LCD_ILI9163_CMD(0x36); //Set Scanning Direction
LCD_ILI9163_INDEX(0xC0);
LCD_ILI9163_CMD(0xB7); //Set Source Output Direction
LCD_ILI9163_INDEX(0x00);
```

```
LCD_ILI9163_CMD(0xf2); //Enable Gamma bit
LCD_ILI9163_INDEX(0x01);
LCD_ILI9163_CMD(0xE0);
LCD_ILI9163_INDEX(0x36); //p1
LCD_ILI9163_INDEX(0x29); //p2
LCD_ILI9163_INDEX(0x12); //p3
LCD_ILI9163_INDEX(0x22); //p4
LCD_ILI9163_INDEX(0x1C); //p5
LCD_ILI9163_INDEX(0x15); //p6
LCD_ILI9163_INDEX(0x42); //p7
LCD_ILI9163_INDEX(0xB7); //p8
LCD_ILI9163_INDEX(0x2F); //p9
LCD_ILI9163_INDEX(0x13); //p10
LCD_ILI9163_INDEX(0x12); //p11
LCD_ILI9163_INDEX(0x0A); //p12
LCD_ILI9163_INDEX(0x11); //p13
LCD_ILI9163_INDEX(0x0B); //p14
LCD_ILI9163_INDEX(0x06); //p15
LCD_ILI9163_CMD(0xE1);
LCD_ILI9163_INDEX(0x09); //p1
LCD_ILI9163_INDEX(0x16); //p2
LCD_ILI9163_INDEX(0x2D); //p3
LCD_ILI9163_INDEX(0x0D); //p4
LCD_ILI9163_INDEX(0x13); //p5
LCD_ILI9163_INDEX(0x15); //p6
LCD_ILI9163_INDEX(0x40); //p7
LCD_ILI9163_INDEX(0x48); //p8
LCD_ILI9163_INDEX(0x53); //p9
LCD_ILI9163_INDEX(0x0C); //p10
```



```
LCD_ILI9163_INDEX(0x1D); //p11
LCD_ILI9163_INDEX(0x25); //p12
LCD_ILI9163_INDEX(0x2E); //p13
LCD_ILI9163_INDEX(0x34); //p14
LCD_ILI9163_INDEX(0x39); //p15
```

```
LCD_ILI9163_CMD(0x29); // Display On
LCD_ILI9163_CMD(0x2C);
}
```

## Revision History

Version No.	Date	Page	Description
V0.1	20080617		New
V0.2	20080807		Add CMO1.8" Panel an Initial Code