

ST7775R Application Note

**Ver 1.1
2010/12**

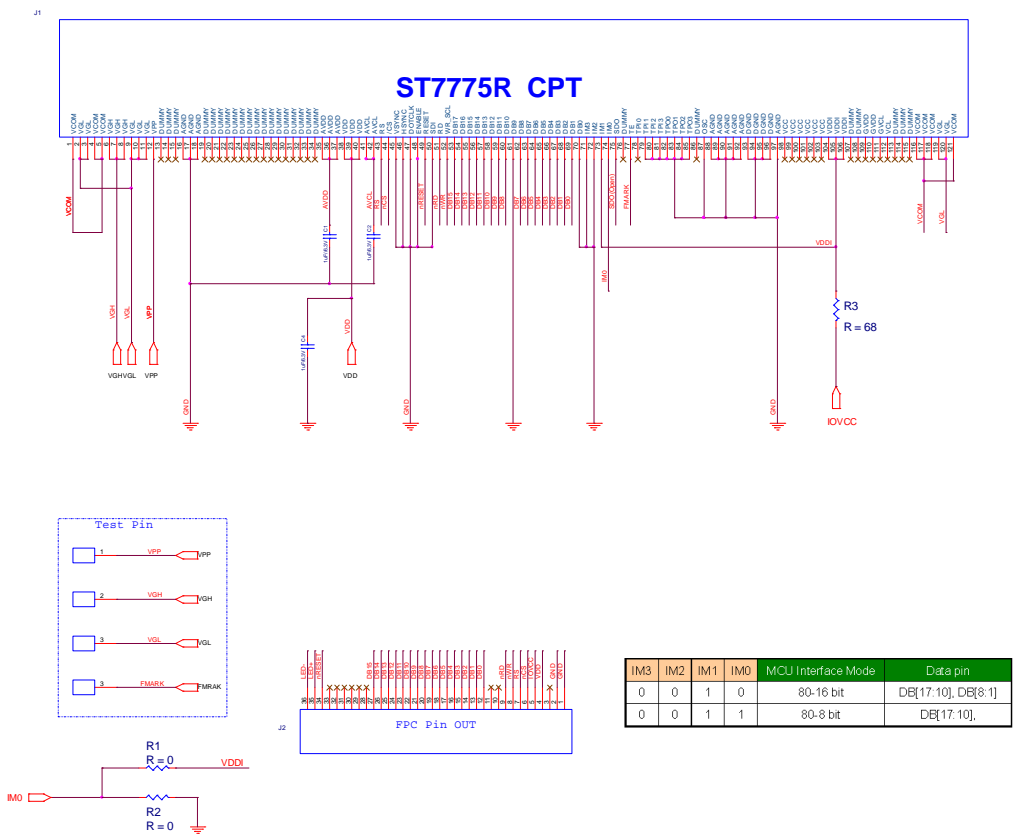
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1 CPT 2.0 inch Panel

1.1 Application FPC Circuit



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1.2 CPT Software Reference Code

Void ST7775R_PanellInitialCode (void)

```
{
//-----ST7775R Reset Sequence-----//
    LCD_nRESET=1;
    Delayms (1);                      //Delay 1ms
    LCD_nRESET=0;
    Delayms (1);                      //Delay 1ms
    LCD_nRESET=1;
    Delayms (10);

//-----Display Control Setting-----//
    Write(Command,0x0001);
    Write(Data,0x011C);
    Write(Command,0x0002);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x1030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x000C);
    Write(Data,0x0000);
    Write(Command,0x000F);
    Write(Data,0x0001);
    Write(Command,0x0020);
    Write(Data,0x0000);
    Write(Command,0x0021);
    Write(Data,0x0000);

//-----End Display Control setting-----//
//----- Power Control Registers Initial -----//
    Write(Command,0x0010);
    Write(Data,0x0000);
    Write(Command,0x0011);
    Write(Data,0x1000);

//-----End Power Control Registers Initial -----//
    Delayms (100);

//-----Display Windows 176 X 220-----//
    Write(Command,0x0030);
    Write(Data,0x0000);
```

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```
Write(Command,0x0031);
Write(Data,0x00DB);
Write(Command,0x0032);
Write(Data,0x0000);
Write(Command,0x0033);
Write(Data,0x0000);
Write(Command,0x0034);
Write(Data,0x00DB);
Write(Command,0x0035);
Write(Data,0x0000);
Write(Command,0x0036);
Write(Data,0x00AF);
Write(Command,0x0037);
Write(Data,0x0000);
Write(Command,0x0038);
Write(Data,0x00DB);
Write(Command,0x0039);
Write(Data,0x0000);
```

```
//-----End Display Windows 176 X 220-----//
```

```
delay_ms(10);
Write(Command,0x00ff);
Write(Data,0x0003);
```

```
//-----Gamma Cluster Setting-----//
```

```
Write(Command,0x0050);
Write(Data,0x0103);
Write(Command,0x0051);
Write(Data,0x0808);
Write(Command,0x0052);
Write(Data,0x0207);
Write(Command,0x0053);
Write(Data,0x2222);
Write(Command,0x0054);
Write(Data,0x0703);
Write(Command,0x0055);
Write(Data,0x0103);
Write(Command,0x0056);
Write(Data,0x0808);
Write(Command,0x0057);
Write(Data,0x0207);
```

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```
Write(Command,0x0058);
Write(Data,0x2222);
Write(Command,0x0059);
Write(Data,0x0603);

//-----End Gamma Setting-----//
//-----Vcom Setting-----//
Write(Command,0x00B0);
Write(Data,0x1201);

//-----End Vcom Setting-----//

Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200); //Delay 200ms
}

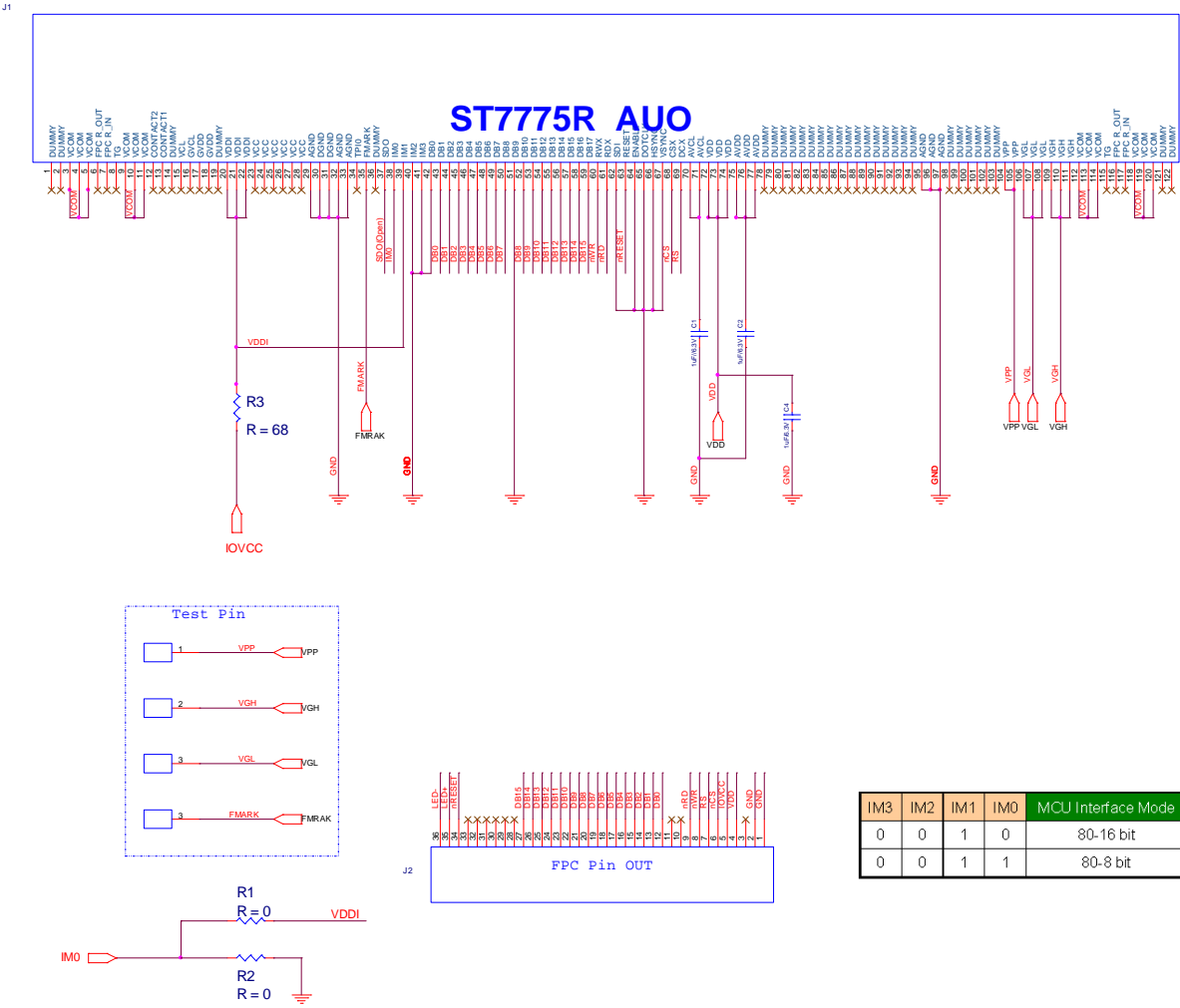
Void ST7775R_PanelEnterStandby (void)
{
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x0000);
Delayms (50); //Delay 50ms
Write(Command,0x0010);
Write(Data,0x0003);
Delayms (200); //Delay 200ms
}

Void ST7775R_PanelExitStandby (void)
{
Delayms (200);
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0010);
Write(Data,0x0000);
Delayms (50); //Delay 50ms
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200); //Delay 200ms
}
```

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2 AUO 2.0/2.2 inch Panel

2.1 Application FPC Circuit



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2.2 AUO 2.0" Software Reference Code

Void ST7775R_PanellInitialCode (void)

```
{
//-----ST7775R Reset Sequence-----//
    LCD_nRESET=1;
    Delayms (1);                      //Delay 1ms
    LCD_nRESET=0;
    Delayms (1);                      //Delay 1ms
    LCD_nRESET=1;
    Delayms (10);
//-----End ST7775R Reset Sequence -----//
//-----Display Control Setting-----//
    Write(Command,0x0001);
    Write(Data,0x011C);
    Write(Command,0x0002);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x1030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x000C);
    Write(Data,0x0000);
    Write(Command,0x000F);
    Write(Data,0x0001);
    Write(Command,0x0020);
    Write(Data,0x0000);
    Write(Command,0x0021);
    Write(Data,0x0000);
//-----End Display Control setting-----//
//----- Power Control Registers Initial -----//
    Write(Command,0x0010);
    Write(Data,0x0000);
    Write(Command,0x0011);
    Write(Data,0x1000);
//-----End Power Control Registers Initial -----//
    Delayms (100);
//-----Display Windows 176 X 220-----//
    Write(Command,0x0030);
```


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```
Write(Data,0x0000);
Write(Command,0x0031);
Write(Data,0x00DB);
Write(Command,0x0032);
Write(Data,0x0000);
Write(Command,0x0033);
Write(Data,0x0000);
Write(Command,0x0034);
Write(Data,0x00DB);
Write(Command,0x0035);
Write(Data,0x0000);
Write(Command,0x0036);
Write(Data,0x00AF);
Write(Command,0x0037);
Write(Data,0x0000);
Write(Command,0x0038);
Write(Data,0x00DB);
Write(Command,0x0039);
Write(Data,0x0000);
```

//-----End Display Windows 176 X 220-----//

```
delay_ms(10);
Write(Command,0x00ff);
Write(Data,0x0003);
```

//-----Gamma Cluster Setting-----//

```
Write(Command,0x0050);
Write(Data,0x0002);
Write(Command,0x0051);
Write(Data,0x0705);
Write(Command,0x0052);
Write(Data,0x0207);
Write(Command,0x0053);
Write(Data,0x1811);
Write(Command,0x0054);
Write(Data,0x0701);
Write(Command,0x0055);
Write(Data,0x0002);
Write(Command,0x0056);
Write(Data,0x0503);
Write(Command,0x0057);
```

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```
Write(Data,0x0106);
Write(Command,0x0058);
Write(Data,0x1811);
Write(Command,0x0059);
Write(Data,0x0702);

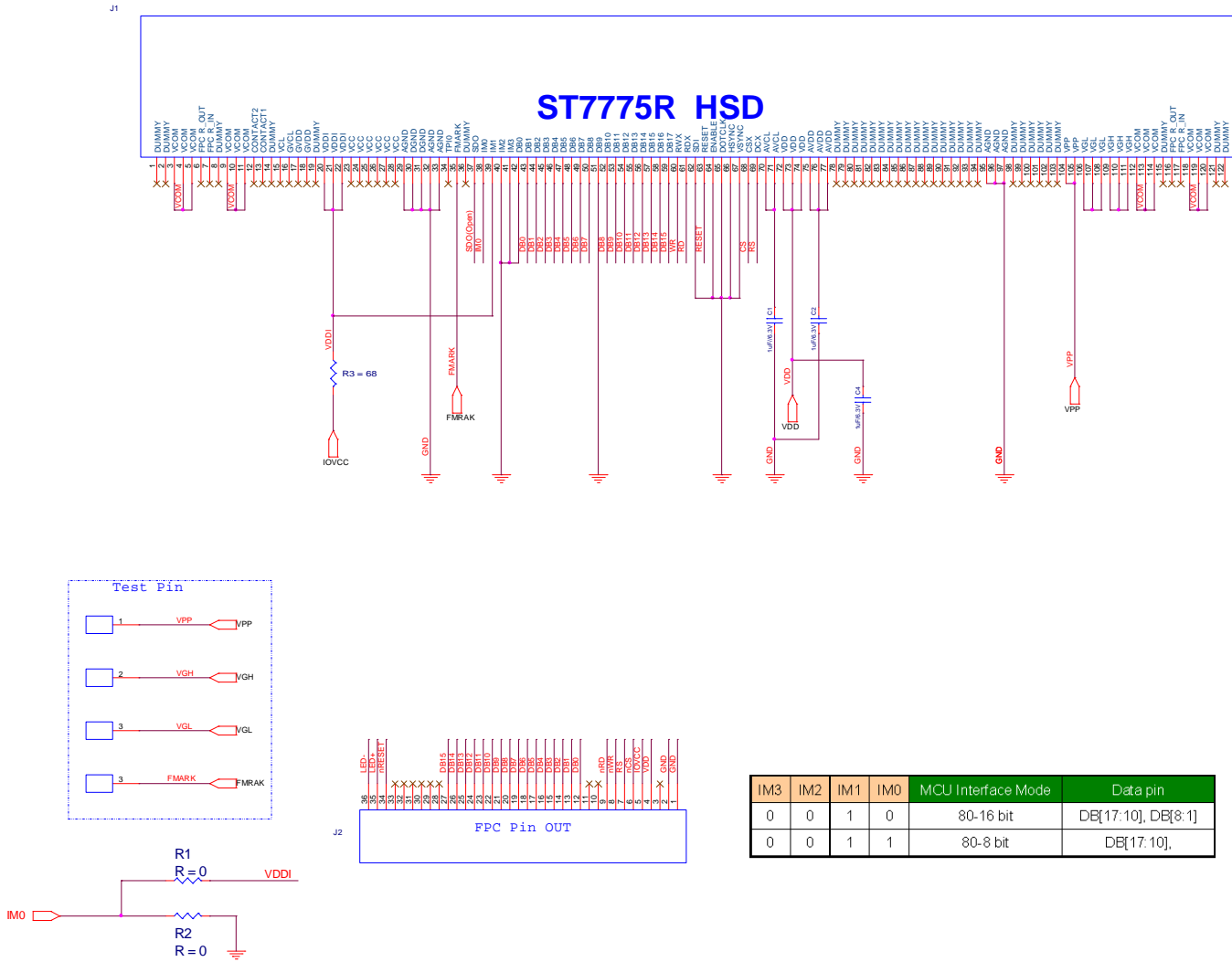
//-----End Gamma Setting-----//
Write(Command,0x00B0);
Write(Data,0x1001);

//-----End Vcom Setting-----//
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200);                                //Delay 200ms
}
Void ST7775R_PanelEnterStandby (void)
{
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x0000);
Delayms (50);                                //Delay 50ms
Write(Command,0x0010);
Write(Data,0x0003);
Delayms (200);                                //Delay 200ms
}
Void ST7775R_PanelExitStandby (void)
{
Delayms (200);
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0010);
Write(Data,0x0000);
Delayms (50);                                //Delay 50ms
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200);                                //Delay 200ms
}
```

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3 HSD 2.0" & 2.2" inch Panel

3.1 HSD 2.0" Application FPC Circuit



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3.2 HSD 2.0" Software Reference Code

Void ST7775R_PanellInitialCode (void)

```
{
    LCD_nRESET=1;
    Delayms (1);                      //Delay 1ms
    LCD_nRESET=0;
    Delayms (1);                      //Delay 1ms
    LCD_nRESET=1;
    Delayms (10);

//-----End ST7775R Reset Sequence -----//
//-----Display Control Setting-----//
    Write(Command,0x0001);
    Write(Data,0x011C);
    Write(Command,0x0002);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x1030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x000C);
    Write(Data,0x0000);
    Write(Command,0x000F);
    Write(Data,0x0001);
    Write(Command,0x0020);
    Write(Data,0x0000);
    Write(Command,0x0021);
    Write(Data,0x0000);

//-----End Display Control setting-----//
//----- Power Control Registers Initial -----//
    Write(Command,0x0010);
    Write(Data,0x0000);
    Write(Command,0x0011);
    Write(Data,0x1000);

//-----End Power Control Registers Initial -----//
    Delayms (100);

//-----Display Windows 176 X 220-----//
    Write(Command,0x0030);
    Write(Data,0x0000);
```

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```
Write(Command,0x0031);
Write(Data,0x00DB);
Write(Command,0x0032);
Write(Data,0x0000);
Write(Command,0x0033);
Write(Data,0x0000);
Write(Command,0x0034);
Write(Data,0x00DB);
Write(Command,0x0035);
Write(Data,0x0000);
Write(Command,0x0036);
Write(Data,0x00AF);
Write(Command,0x0037);
Write(Data,0x0000);
Write(Command,0x0038);
Write(Data,0x00DB);
Write(Command,0x0039);
Write(Data,0x0000);

//-----End Display Windows 176 X 220-----//
    delay_ms(10);
    Write(Command,0x00ff);
    Write(Data,0x0003);

//-----Gamma Cluster Setting-----//
    Write(Command,0x0050);
    Write(Data,0x0203);
    Write(Command,0x0051);
    Write(Data,0x0a09);
    Write(Command,0x0052);
    Write(Data,0x0005);
    Write(Command,0x0053);
    Write(Data,0x1021);
    Write(Command,0x0054);
    Write(Data,0x0602);
    Write(Command,0x0055);
    Write(Data,0x0003);
    Write(Command,0x0056);
    Write(Data,0x0703);
    Write(Command,0x0057);
    Write(Data,0x0507);
```

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```
Write(Command,0x0058);
Write(Data,0x1021);
Write(Command,0x0059);
Write(Data,0x0703);

//-----End Gamma Setting-----//
//-----Vcom Setting-----//
Write(Command,0x00B0);
Write(Data,0x2301);

//-----End Vcom Setting-----//

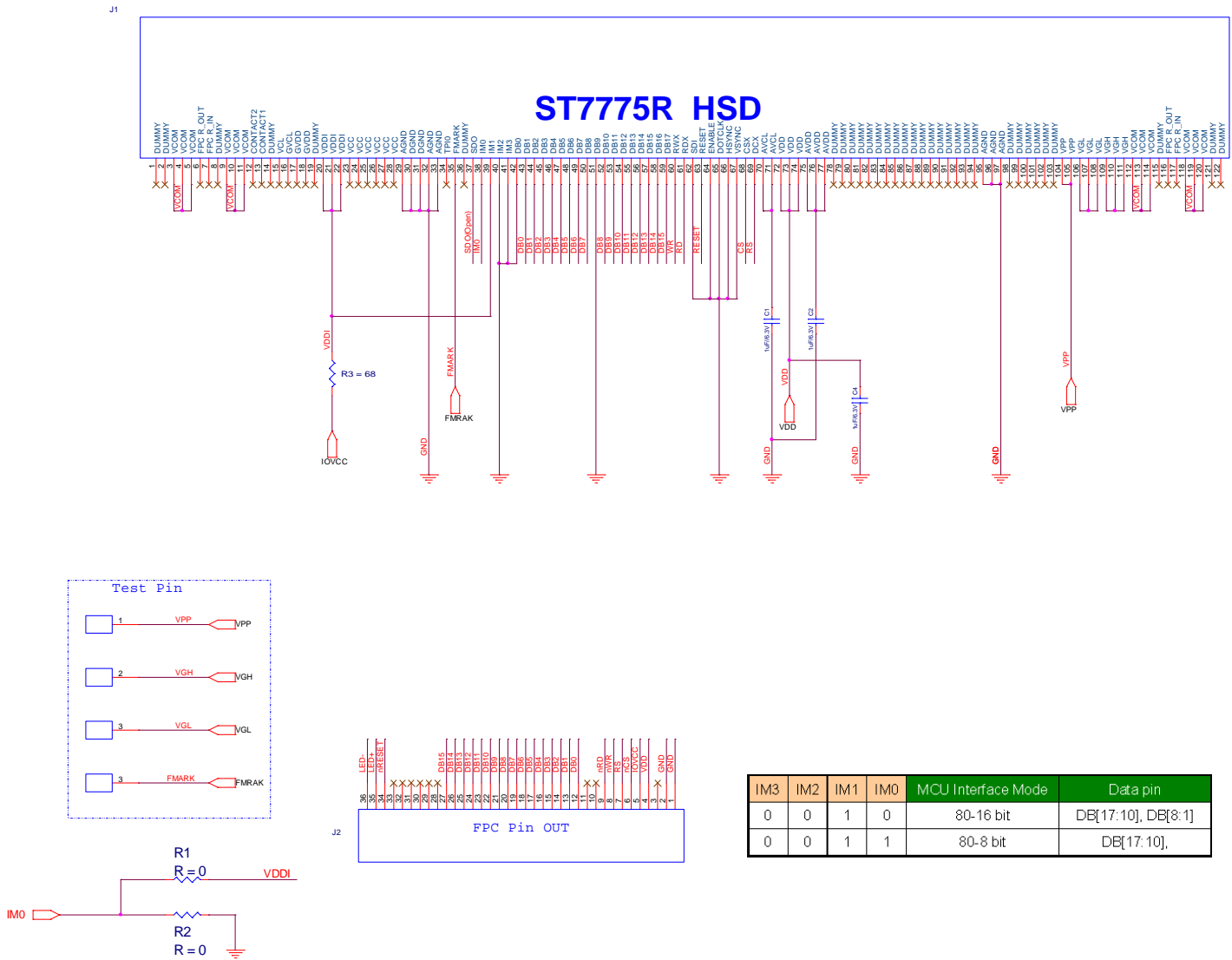
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200); //Delay 200ms
}

Void ST7775R_PanelEnterStandby (void)
{
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x0000);
Delayms (50); //Delay 50ms
Write(Command,0x0010);
Write(Data,0x0003);
Delayms (200); //Delay 200ms
}

Void ST7775R_PanelExitStandby (void)
{
Delayms (200);
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0010);
Write(Data,0x0000);
Delayms (50); //Delay 50ms
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200); //Delay 200ms
}
```

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3.3 HSD 2.2" Panel Application FPC Circuit



3.4 HSD 2.2" Software Reference Code

Void ST7775R_PanellInitialCode (void)

```
{
    LCD_nRESET=1;
    Delayms (1);                      //Delay 1ms
    LCD_nRESET=0;
    Delayms (1);                      //Delay 1ms
    LCD_nRESET=1;
    Delayms (10);

//-----End ST7775R Reset Sequence -----//
//-----Display Control Setting-----//
    Write(Command,0x0001);
    Write(Data,0x011C);
    Write(Command,0x0002);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x1030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x000C);
    Write(Data,0x0000);
    Write(Command,0x000F);
    Write(Data,0x0001);
    Write(Command,0x0020);
    Write(Data,0x0000);
    Write(Command,0x0021);
    Write(Data,0x0000);

//-----End Display Control setting-----//
//----- Power Control Registers Initial -----//
    Write(Command,0x0010);
    Write(Data,0x0000);
    Write(Command,0x0011);
    Write(Data,0x1000);

//-----End Power Control Registers Initial -----//
    Delayms (100);

//-----Display Windows 176 X 220-----//
    Write(Command,0x0030);
```


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```
Write(Data,0x0000);
Write(Command,0x0031);
Write(Data,0x00DB);
Write(Command,0x0032);
Write(Data,0x0000);
Write(Command,0x0033);
Write(Data,0x0000);
Write(Command,0x0034);
Write(Data,0x00DB);
Write(Command,0x0035);
Write(Data,0x0000);
Write(Command,0x0036);
Write(Data,0x00AF);
Write(Command,0x0037);
Write(Data,0x0000);
Write(Command,0x0038);
Write(Data,0x00DB);
Write(Command,0x0039);
Write(Data,0x0000);
```

//-----End Display Windows 176 X 220-----//

```
delay_ms(10);
Write(Command,0x00ff);
Write(Data,0x0003);
```

//-----Gamma Cluster Setting-----//

```
Write(Command,0x0050);
Write(Data,0x0102);
Write(Command,0x0051);
Write(Data,0x0a09);
Write(Command,0x0052);
Write(Data,0x0409);
Write(Command,0x0053);
Write(Data,0x0811);
Write(Command,0x0054);
Write(Data,0x0601);
Write(Command,0x0055);
Write(Data,0x0102);
Write(Command,0x0056);
Write(Data,0x0a08);
Write(Command,0x0057);
```

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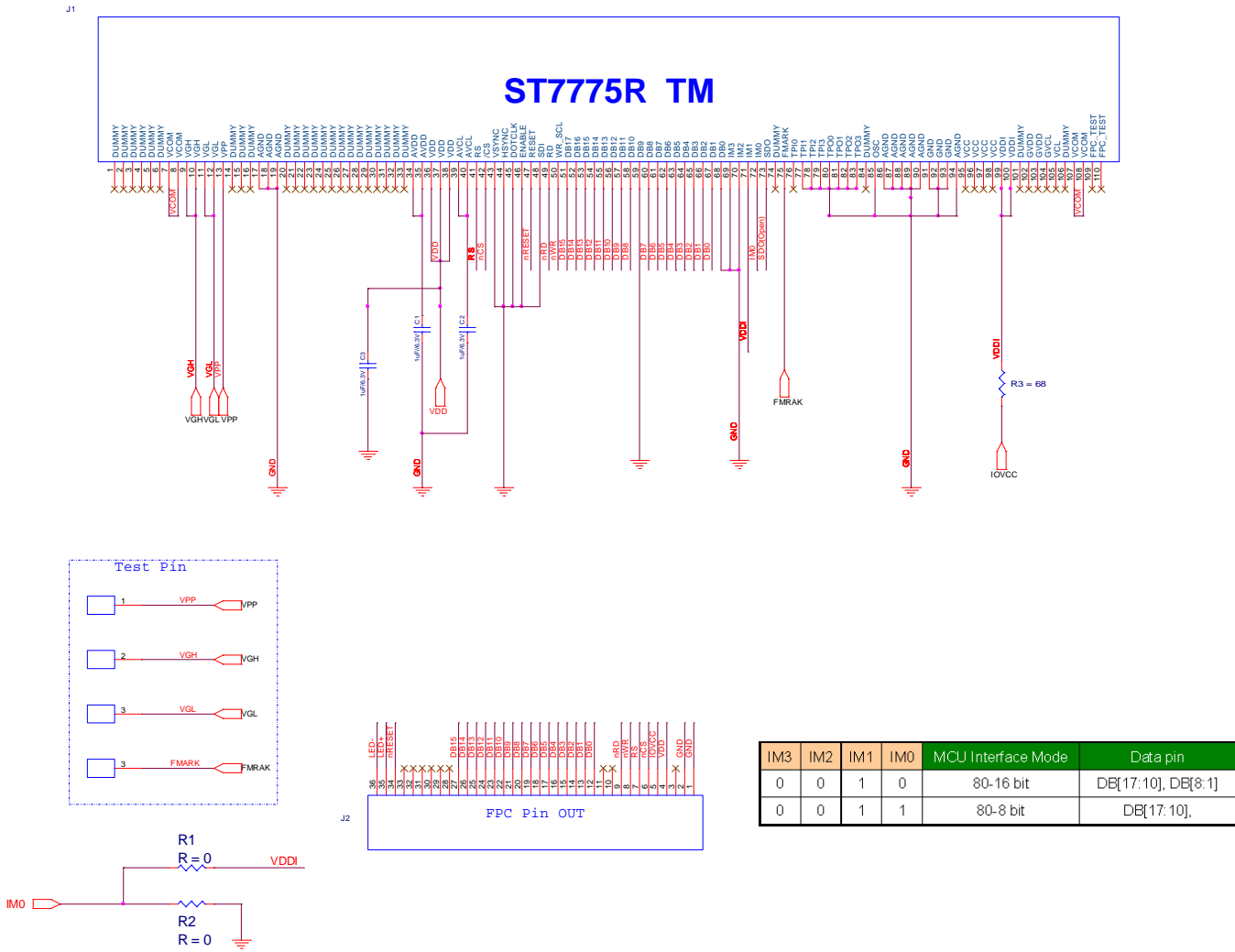
```
Write(Data,0x0309);
Write(Command,0x0058);
Write(Data,0x0811);
Write(Command,0x0059);
Write(Data,0x0702);

//-----End Gamma Setting-----//
//-----Vcom Setting-----//
Write(Command,0x00B0);
Write(Data,0x1C01);

//-----End Vcom Setting-----//
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200); //Delay 200ms
}
Void ST7775R_PanelEnterStandby (void)
{
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x0000);
Delayms (50); //Delay 50ms
Write(Command,0x0010);
Write(Data,0x0003);
Delayms (200); //Delay 200ms
}
Void ST7775R_PanelExitStandby (void)
{
Delayms (200);
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0010);
Write(Data,0x0000);
Delayms (50); //Delay 50ms
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200); //Delay 200ms
}
```

4 TM 2.0” & 2.2” Panel

4.1 Application FPC Circuit



4.2 TM 2.2" Software Reference Code

Void ST7775R_PanellInitialCode (void)

```
{
    LCD_nRESET=1;
    Delayms (1);                      //Delay 1ms
    LCD_nRESET=0;
    Delayms (1);                      //Delay 1ms
    LCD_nRESET=1;
    Delayms (10);

//-----End ST7775R Reset Sequence -----//
//-----Display Control Setting-----//
    Write(Command,0x0001);
    Write(Data,0x011C);
    Write(Command,0x0002);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x1030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x000C);
    Write(Data,0x0000);
    Write(Command,0x000F);
    Write(Data,0x0001);
    Write(Command,0x0020);
    Write(Data,0x0000);
    Write(Command,0x0021);
    Write(Data,0x0000);

//-----End Display Control setting-----//
//----- Power Control Registers Initial -----//
    Write(Command,0x0010);
    Write(Data,0x0000);
    Write(Command,0x0011);
    Write(Data,0x1000);

//-----End Power Control Registers Initial -----//
    Delayms (100);

//-----Display Windows 176 X 220-----//
    Write(Command,0x0030);
```

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```
Write(Data,0x0000);
Write(Command,0x0031);
Write(Data,0x00DB);
Write(Command,0x0032);
Write(Data,0x0000);
Write(Command,0x0033);
Write(Data,0x0000);
Write(Command,0x0034);
Write(Data,0x00DB);
Write(Command,0x0035);
Write(Data,0x0000);
Write(Command,0x0036);
Write(Data,0x00AF);
Write(Command,0x0037);
Write(Data,0x0000);
Write(Command,0x0038);
Write(Data,0x00DB);
Write(Command,0x0039);
Write(Data,0x0000);
```

//-----End Display Windows 176 X 220-----//

```
delay_ms(10);
Write(Command,0x00ff);
Write(Data,0x0003);
```

//-----Gamma Cluster Setting-----//

```
Write(Command,0x0050);
Write(Data,0x0103);
Write(Command,0x0051);
Write(Data,0x0708);
Write(Command,0x0052);
Write(Data,0x0007);
Write(Command,0x0053);
Write(Data,0x0811);
Write(Command,0x0054);
Write(Data,0x0803);
Write(Command,0x0055);
Write(Data,0x0003);
Write(Command,0x0056);
Write(Data,0x0101);
Write(Command,0x0057);
```

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```
Write(Data,0x0004);
Write(Command,0x0058);
Write(Data,0x0811);
Write(Command,0x0059);
Write(Data,0x0703);

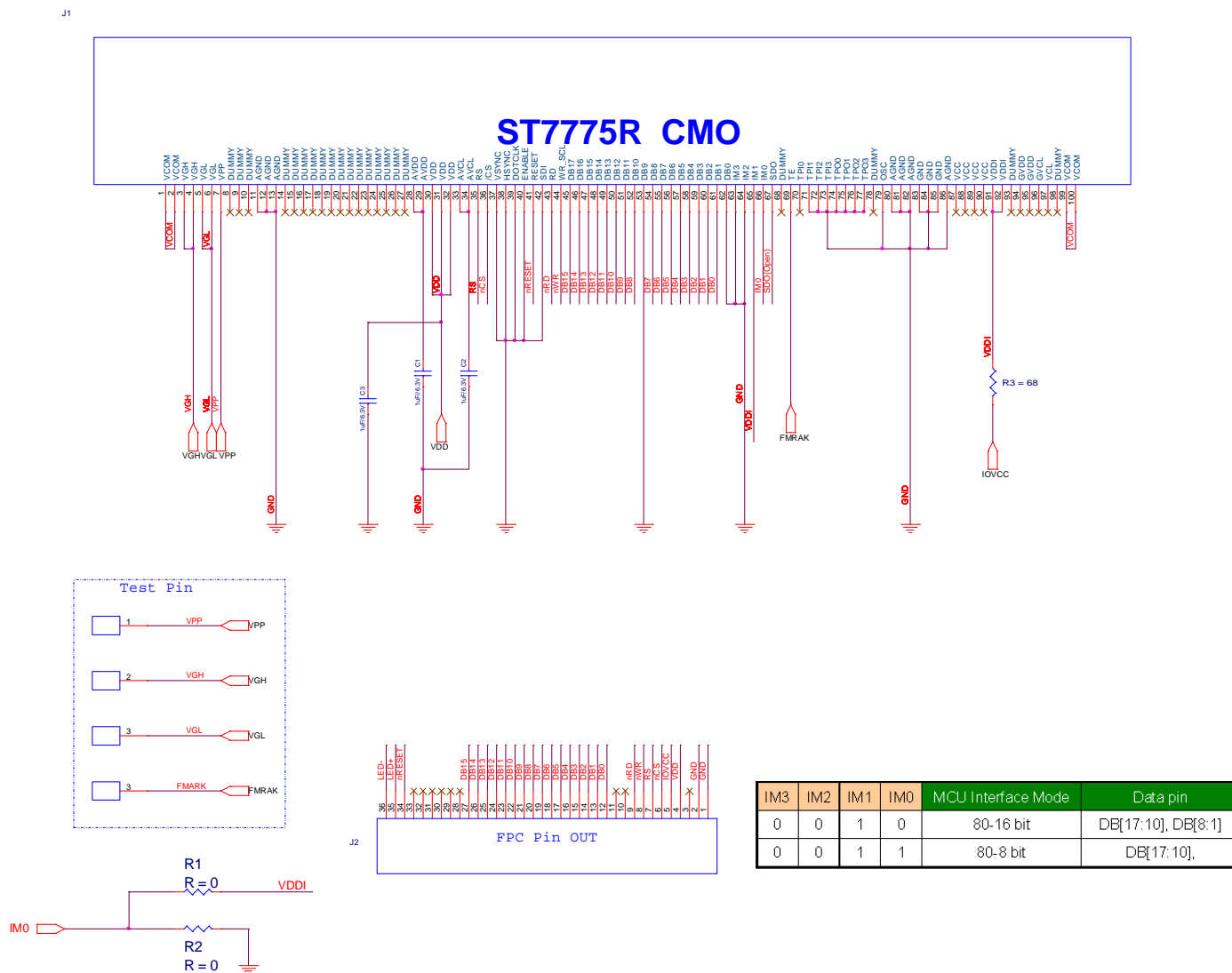
//-----End Gamma Setting-----//
Write(Command,0x00B0);
Write(Data,0x0A01);

//-----End Vcom Setting-----//
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200); //Delay 200ms
}
Void ST7775R_PanelEnterStandby (void)
{
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x0000);
Delayms (50); //Delay 50ms
Write(Command,0x0010);
Write(Data,0x0003);
Delayms (200); //Delay 200ms
}
Void ST7775R_PanelExitStandby (void)
{
Delayms (200);
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0010);
Write(Data,0x0000);
Delayms (50); //Delay 50ms
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200); //Delay 200ms
}
```

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5 CMO 2.0" Panel

5.1 Application FPC Circuit



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5.2 CMO 2.0" Software Reference Code

Void ST7775R_PanellInitialCode (void)

```
{
    LCD_nRESET=1;
    Delayms (1);                      //Delay 1ms
    LCD_nRESET=0;
    Delayms (1);                      //Delay 1ms
    LCD_nRESET=1;
    Delayms (10);

//-----End ST7775R Reset Sequence -----//
//-----Display Control Setting-----//
    Write(Command,0x0001);
    Write(Data,0x011C);
    Write(Command,0x0002);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x1030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x000C);
    Write(Data,0x0000);
    Write(Command,0x000F);
    Write(Data,0x0001);
    Write(Command,0x0020);
    Write(Data,0x0000);
    Write(Command,0x0021);
    Write(Data,0x0000);

//-----End Display Control setting-----//
//----- Power Control Registers Initial -----//
    Write(Command,0x0010);
    Write(Data,0x0000);
    Write(Command,0x0011);
    Write(Data,0x1000);

//-----End Power Control Registers Initial -----//
    Delayms (100);

//-----Display Windows 176 X 220-----//
    Write(Command,0x0030);
    Write(Data,0x0000);
```


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```
Write(Command,0x0031);
Write(Data,0x00DB);
Write(Command,0x0032);
Write(Data,0x0000);
Write(Command,0x0033);
Write(Data,0x0000);
Write(Command,0x0034);
Write(Data,0x00DB);
Write(Command,0x0035);
Write(Data,0x0000);
Write(Command,0x0036);
Write(Data,0x00AF);
Write(Command,0x0037);
Write(Data,0x0000);
Write(Command,0x0038);
Write(Data,0x00DB);
Write(Command,0x0039);
Write(Data,0x0000);

//-----End Display Windows 176 X 220-----//
    delay_ms(10);
    Write(Command,0x00ff);
    Write(Data,0x0003);

//-----Gamma Cluster Setting-----//
    Write(Command,0x0050);
    Write(Data,0x0000);
    Write(Command,0x0051);
    Write(Data,0x0300);
    Write(Command,0x0052);
    Write(Data,0x0103);
    Write(Command,0x0053);
    Write(Data,0x2011);
    Write(Command,0x0054);
    Write(Data,0x0703);
    Write(Command,0x0055);
    Write(Data,0x0000);
    Write(Command,0x0056);
    Write(Data,0x0400);
    Write(Command,0x0057);
    Write(Data,0x0107);
```

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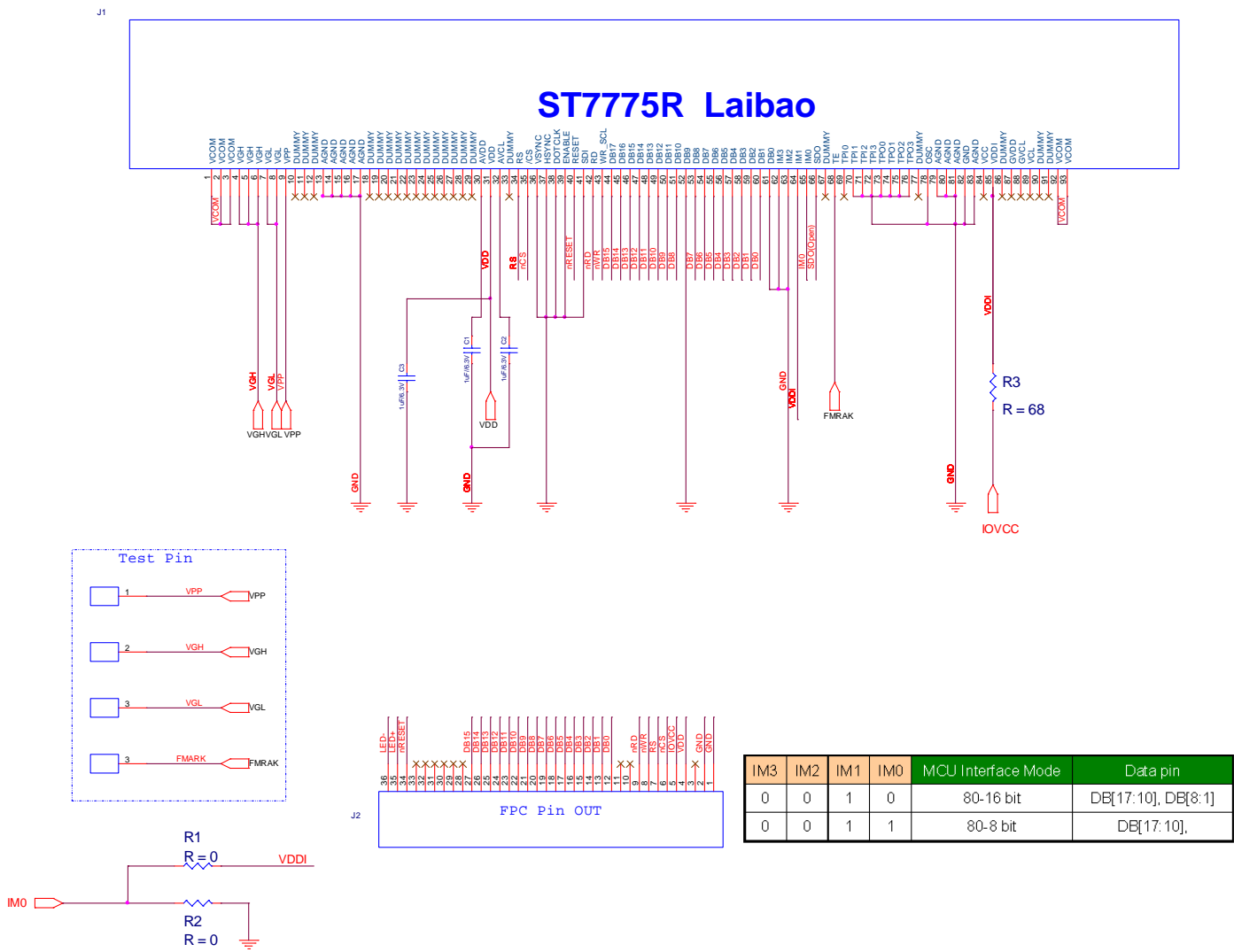
```
Write(Command,0x0058);
Write(Data,0x2011);
Write(Command,0x0059);
Write(Data,0x0703);

//-----End Gamma Setting-----//
Write(Command,0x00B0);
Write(Data,0x1d01);

//-----End Vcom Setting-----//
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200);                //Delay 200ms
}
Void ST7775R_PanelEnterStandby (void)
{
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x0000);
Delayms (50);                //Delay 50ms
Write(Command,0x0010);
Write(Data,0x0003);
Delayms (200);                //Delay 200ms
}
Void ST7775R_PanelExitStandby (void)
{
Delayms (200);
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0010);
Write(Data,0x0000);
Delayms (50);                //Delay 50ms
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200);                //Delay 200ms
}
```

6 Laibao 2.0” Panel

6.1 Application FPC Circuit



ST7775R

6.2 Laibao 2.0" Software Reference Code

Void ST7775R_PanellInitialCode (void)

```
{
    LCD_nRESET=1;
    Delayms (1);                      //Delay 1ms
    LCD_nRESET=0;
    Delayms (1);                      //Delay 1ms
    LCD_nRESET=1;
    Delayms (10);

//-----End ST7775R Reset Sequence -----//
//-----Display Control Setting-----//
    Write(Command,0x0001);
    Write(Data,0x011C);
    Write(Command,0x0002);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x1030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x000C);
    Write(Data,0x0000);
    Write(Command,0x000F);
    Write(Data,0x0001);
    Write(Command,0x0020);
    Write(Data,0x0000);
    Write(Command,0x0021);
    Write(Data,0x0000);

//-----End Display Control setting-----//
//----- Power Control Registers Initial -----//
    Write(Command,0x0010);
    Write(Data,0x0000);
    Write(Command,0x0011);
    Write(Data,0x1000);

//-----End Power Control Registers Initial -----//
    Delayms (100);

//-----Display Windows 176 X 220-----//
    Write(Command,0x0030);
    Write(Data,0x0000);
```

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```
Write(Command,0x0031);
Write(Data,0x00DB);
Write(Command,0x0032);
Write(Data,0x0000);
Write(Command,0x0033);
Write(Data,0x0000);
Write(Command,0x0034);
Write(Data,0x00DB);
Write(Command,0x0035);
Write(Data,0x0000);
Write(Command,0x0036);
Write(Data,0x00AF);
Write(Command,0x0037);
Write(Data,0x0000);
Write(Command,0x0038);
Write(Data,0x00DB);
Write(Command,0x0039);
Write(Data,0x0000);
```

//-----End Display Windows 176 X 220-----//

```
delay_ms(10);
Write(Command,0x00ff);
Write(Data,0x0003);
```

//-----Gamma Cluster Setting-----//

```
Write(Command,0x0050);
Write(Data,0x0103);
Write(Command,0x0051);
Write(Data,0x0b08);
Write(Command,0x0052);
Write(Data,0x0108);
Write(Command,0x0053);
Write(Data,0x1222);
Write(Command,0x0054);
Write(Data,0x0502);
Write(Command,0x0055);
Write(Data,0x0103);
Write(Command,0x0056);
Write(Data,0x0604);
Write(Command,0x0057);
Write(Data,0x0107);
```

ST7775R

```
Write(Command,0x0058);
Write(Data,0x1222);
Write(Command,0x0059);
Write(Data,0x0502);

//-----End Gamma Setting-----//
Write(Command,0x00B0);
Write(Data, 0x1901);

//-----End Vcom Setting-----//
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200);                //Delay 200ms
}
Void ST7775R_PanelEnterStandby (void)
{
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x0000);
Delayms (50);                //Delay 50ms
Write(Command,0x0010);
Write(Data,0x0003);
Delayms (200);                //Delay 200ms
}
Void ST7775R_PanelExitStandby (void)
{
Delayms (200);
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0010);
Write(Data,0x0000);
Delayms (50);                //Delay 50ms
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200);                //Delay 200ms
}
```


ST7775R

7.2 LG 2.2" Software Reference Code

Void ST7775R_PanellInitialCode (void)

```
{
//-----ST7775R Reset Sequence-----//
    LCD_nRESET=1;
    Delayms (1);                      //Delay 1ms
    LCD_nRESET=0;
    Delayms (1);                      //Delay 1ms
    LCD_nRESET=1;
    Delayms (10);
//-----End ST7775R Reset Sequence -----//
//-----Display Control Setting-----//
    Write(Command,0x0001);
    Write(Data,0x011C);
    Write(Command,0x0002);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x1030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x000C);
    Write(Data,0x0000);
    Write(Command,0x000F);
    Write(Data,0x0001);
    Write(Command,0x0020);
    Write(Data,0x0000);
    Write(Command,0x0021);
    Write(Data,0x0000);
//-----End Display Control setting-----//
//----- Power Control Registers Initial -----//
    Write(Command,0x0010);
    Write(Data,0x0000);
    Write(Command,0x0011);
    Write(Data,0x1000);
//-----End Power Control Registers Initial -----//
    Delayms (100);
//-----Display Windows 176 X 220-----//
    Write(Command,0x0030);
```


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```
Write(Data,0x0000);
Write(Command,0x0031);
Write(Data,0x00DB);
Write(Command,0x0032);
Write(Data,0x0000);
Write(Command,0x0033);
Write(Data,0x0000);
Write(Command,0x0034);
Write(Data,0x00DB);
Write(Command,0x0035);
Write(Data,0x0000);
Write(Command,0x0036);
Write(Data,0x00AF);
Write(Command,0x0037);
Write(Data,0x0000);
Write(Command,0x0038);
Write(Data,0x00DB);
Write(Command,0x0039);
Write(Data,0x0000);
```

//-----End Display Windows 176 X 220-----//

```
delay_ms(10);
Write(Command,0x00ff);
Write(Data,0x0003);
```

//-----Gamma Cluster Setting-----//

```
Write(Command,0x0050);
Write(Data,0x0507);
Write(Command,0x0051);
Write(Data,0x090a);
Write(Command,0x0052);
Write(Data,0x0207);
Write(Command,0x0053);
Write(Data,0x1941);
Write(Command,0x0054);
Write(Data,0x0705);
Write(Command,0x0055);
Write(Data,0x0607);
Write(Command,0x0056);
Write(Data,0x0708);
Write(Command,0x0057);
```

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```
Write(Data,0x0207);
Write(Command,0x0058);
Write(Data,0x1941);
Write(Command,0x0059);
Write(Data,0x0605);

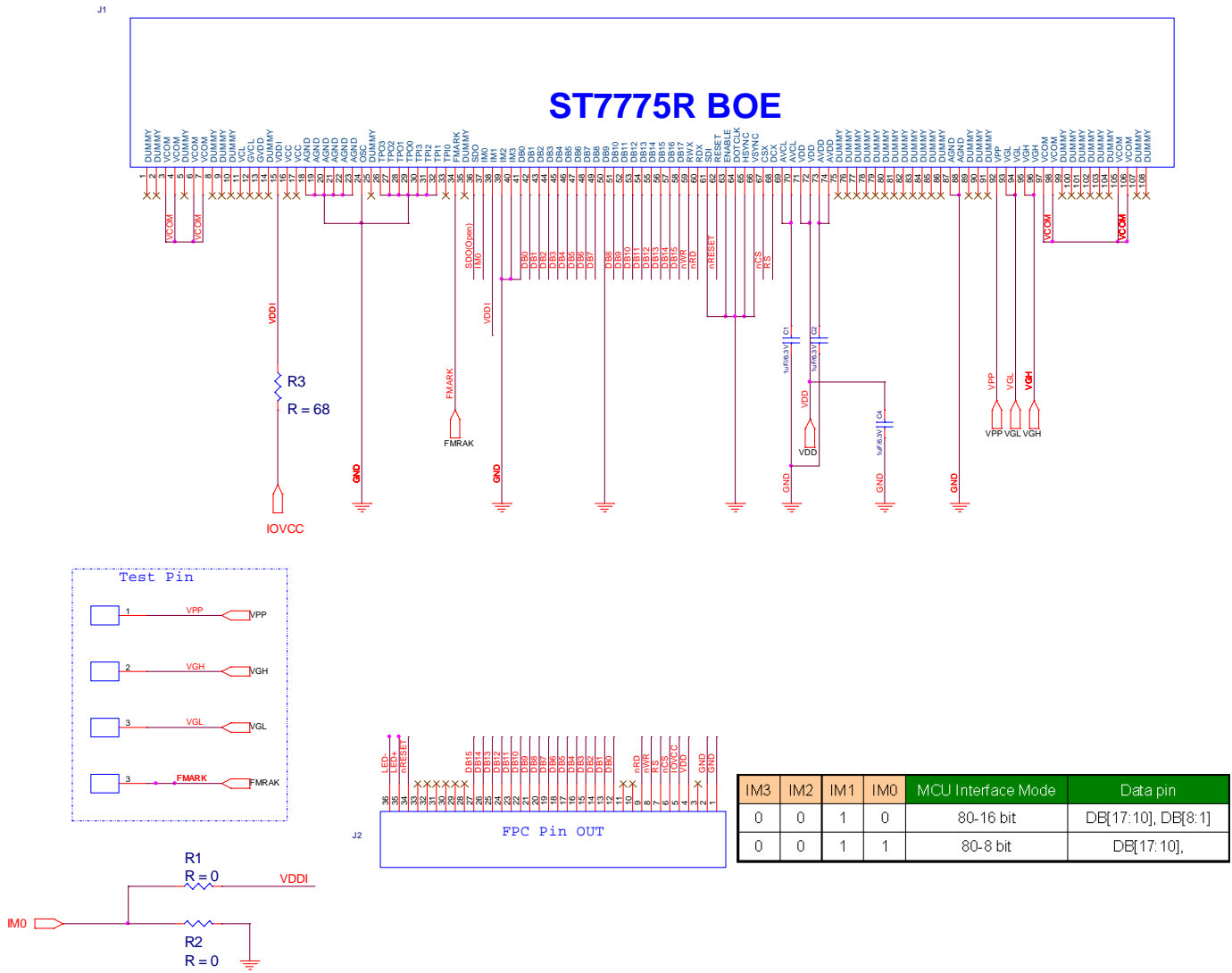
//-----End Gamma Setting-----//
Write(Command,0x00B0);
Write(Data,0x0A01);

//-----End Vcom Setting-----//
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200);                                //Delay 200ms
}
Void ST7775R_PanelEnterStandby (void)
{
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x0000);
Delayms (50);                                //Delay 50ms
Write(Command,0x0010);
Write(Data,0x0003);
Delayms (200);                                //Delay 200ms
}
Void ST7775R_PanelExitStandby (void)
{
Delayms (200);
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0010);
Write(Data,0x0000);
Delayms (50);                                //Delay 50ms
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200);                                //Delay 200ms
}
```

ST7775R

8 BOE 2.0" & 2.2" Panel

8.1 BOE 2.0" Panel Application FPC Circuit



8.2 BOE 2.0" Software Reference Code

```
Void ST7775R_PanellInitialCode (void)
{
//-----ST7775R Reset Sequence-----//
    LCD_nRESET=1;
    Delayms (1);                //Delay 1ms
    LCD_nRESET=0;
    Delayms (1);                //Delay 1ms
    LCD_nRESET=1;
    Delayms (10);
//-----Display Control Setting-----//
    Write(Command,0x0001);
    Write(Data,0x011C);
    Write(Command,0x0002);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x1030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x000C);
    Write(Data,0x0000);
    Write(Command,0x000F);
    Write(Data,0x0001);
    Write(Command,0x0020);
    Write(Data,0x0000);
    Write(Command,0x0021);
    Write(Data,0x0000);
//-----End Display Control setting-----//
//----- Power Control Registers Initial -----//
    Write(Command,0x0010);
    Write(Data,0x0000);
    Write(Command,0x0011);
    Write(Data,0x1000);
//-----End Power Control Registers Initial -----//
    Delayms (100);
//-----Display Windows 176 X 220-----//
    Write(Command,0x0030);
```

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```
Write(Data,0x0000);
Write(Command,0x0031);
Write(Data,0x00DB);
Write(Command,0x0032);
Write(Data,0x0000);
Write(Command,0x0033);
Write(Data,0x0000);
Write(Command,0x0034);
Write(Data,0x00DB);
Write(Command,0x0035);
Write(Data,0x0000);
Write(Command,0x0036);
Write(Data,0x00AF);
Write(Command,0x0037);
Write(Data,0x0000);
Write(Command,0x0038);
Write(Data,0x00DB);
Write(Command,0x0039);
Write(Data,0x0000);
```

//-----End Display Windows 176 X 220-----//

```
delay_ms(10);
Write(Command,0x00ff);
Write(Data,0x0003);
```

//-----Gamma Cluster Setting-----//

```
Write(Command,0x0050);
Write(Data,0x0505);
Write(Command,0x0051);
Write(Data,0x0a0a);
Write(Command,0x0052);
Write(Data,0x0309);
Write(Command,0x0053);
Write(Data,0x3022);
Write(Command,0x0054);
Write(Data,0x0705);
Write(Command,0x0055);
Write(Data,0x0405);
Write(Command,0x0056);
Write(Data,0x0a0a);
Write(Command,0x0057);
```

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```
Write(Data,0x0309);
Write(Command,0x0058);
Write(Data,0x3022);
Write(Command,0x0059);
Write(Data,0x0705);

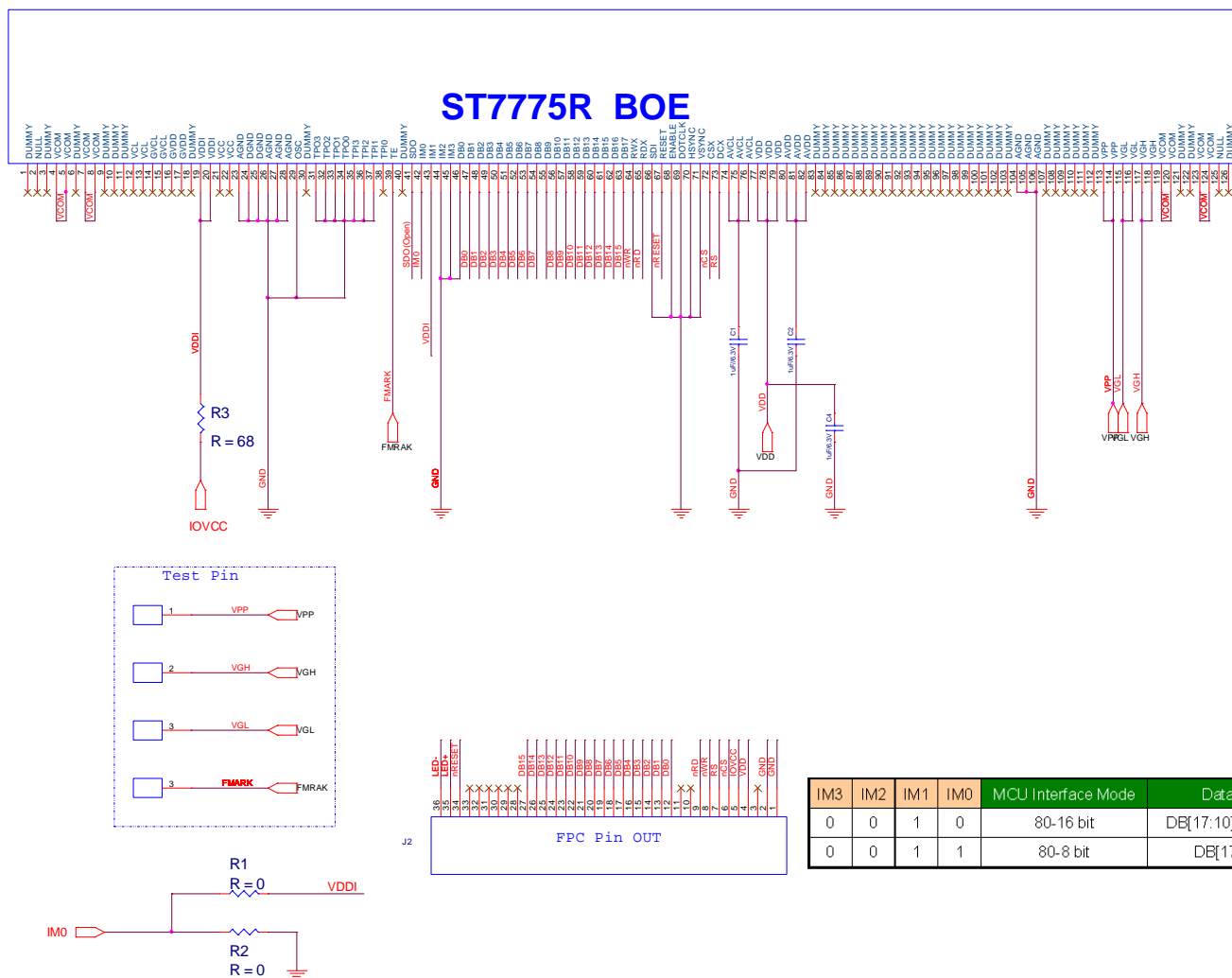
//-----End Gamma Setting-----//
Write(Command,0x00b0);
Write(Data,0x0300);

//-----End Vcom Setting-----//
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200); //Delay 200ms
}
Void ST7775R_PanelEnterStandby (void)
{
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x0000);
Delayms (50); //Delay 50ms
Write(Command,0x0010);
Write(Data,0x0003);
Delayms (200); //Delay 200ms
}
Void ST7775R_PanelExitStandby (void)
{
Delayms (200);
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0010);
Write(Data,0x0000);
Delayms (50); //Delay 50ms
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200); //Delay 200ms
}
```

ST7775R

8.3 BOE 2.2" Panel Application FPC Circuit

J1



IM3	IM2	IM1	IM0	MCU Interface Mode	Data pin
0	0	1	0	80-16 bit	DB[17:10], DB{8:1}
0	0	1	1	80-8 bit	DB[17:10],

8.4 BOE 2.2" Software Reference Code

Void ST7775R_PanellInitialCode (void)

```
{
//-----ST7775R Reset Sequence-----//
    LCD_nRESET=1;
    Delayms (1);                //Delay 1ms
    LCD_nRESET=0;
    Delayms (1);                //Delay 1ms
    LCD_nRESET=1;
    Delayms (10);
//-----Display Control Setting-----//
    Write(Command,0x0001);
    Write(Data,0x011C);
    Write(Command,0x0002);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x1030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x000C);
    Write(Data,0x0000);
    Write(Command,0x000F);
    Write(Data,0x0001);
    Write(Command,0x0020);
    Write(Data,0x0000);
    Write(Command,0x0021);
    Write(Data,0x0000);
//-----End Display Control setting-----//
//----- Power Control Registers Initial -----//
    Write(Command,0x0010);
    Write(Data,0x0000);
    Write(Command,0x0011);
    Write(Data,0x1000);
//-----End Power Control Registers Initial -----//
    Delayms (100);
//-----Display Windows 176 X 220-----//
    Write(Command,0x0030);
```


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```
Write(Data,0x0000);
Write(Command,0x0031);
Write(Data,0x00DB);
Write(Command,0x0032);
Write(Data,0x0000);
Write(Command,0x0033);
Write(Data,0x0000);
Write(Command,0x0034);
Write(Data,0x00DB);
Write(Command,0x0035);
Write(Data,0x0000);
Write(Command,0x0036);
Write(Data,0x00AF);
Write(Command,0x0037);
Write(Data,0x0000);
Write(Command,0x0038);
Write(Data,0x00DB);
Write(Command,0x0039);
Write(Data,0x0000);
```

//-----End Display Windows 176 X 220-----//

```
delay_ms(10);
Write(Command,0x00ff);
Write(Data,0x0003);
```

//-----Gamma Cluster Setting-----//

```
Write(Command,0x0050);
Write(Data,0x0000);
Write(Command,0x0051);
Write(Data,0x0a06);
Write(Command,0x0052);
Write(Data,0x0206);
Write(Command,0x0053);
Write(Data,0x0911);
Write(Command,0x0054);
Write(Data,0x0705);
Write(Command,0x0055);
Write(Data,0x0000);
Write(Command,0x0056);
Write(Data,0x0702);
Write(Command,0x0057);
```

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```
Write(Data,0x0207);
Write(Command,0x0058);
Write(Data,0x0911);
Write(Command,0x0059);
Write(Data,0x0707);

//-----End Gamma Setting-----//
Write(Command,0x00B0);
Write(Data,0x0800);

//-----End Vcom Setting-----//
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200);                                //Delay 200ms
}
Void ST7775R_PanelEnterStandby (void)
{
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0007);
Write(Data,0x0000);
Delayms (50);                                //Delay 50ms
Write(Command,0x0010);
Write(Data,0x0003);
Delayms (200);                                //Delay 200ms
}
Void ST7775R_PanelExitStandby (void)
{
Delayms (200);
Write(Command,0x00ff);
Write(Data,0x0000);
Write(Command,0x0010);
Write(Data,0x0000);
Delayms (50);                                //Delay 50ms
Write(Command,0x0007);
Write(Data,0x1017);
Delayms (200);                                //Delay 200ms
}
```

9 Support Panel Cell Model

No	Glass Company	Model name	Size
	CPT	CLAF020FE	2.0"
	HSD	HSD020B2NA-A	2.0"
	HSD	HSD022F2N6	2.2"
	CMO	F02019	2.0"
	CMO	F02220	2.2"
	BOE	BT020QCME101	2.0"
	BOE	BT022QCME101	2.2"
	AUO	H200HN05	2.0"
	AUO	H220HN00	2.2"
	LGD	LH176J	1.8"
	LGD	LH200J	2.0"
	LGD	LH220J	2.2"
	HYDIS	HTT20QC1	2.0"
	HYDIS	HTT22QC2	2.2"
	TIANMA	TM020GDH013	2.0"
	TIANMA	TM022YH10	2.2"
	TIANMA	TM022GDH14	2.2"
	LAIBAO		2.0"
	LAIBAO		2.2"
	WINTEK	FHE421	2.0"
	WINTEK	FHE430	2.2"
	GP	GPF022QC	2.2"

10 History

ST7775R Application Note Revision History		
Version	Data	Description
1.0	2010/10	First Issue
1.1	2010/12	Add Resistor