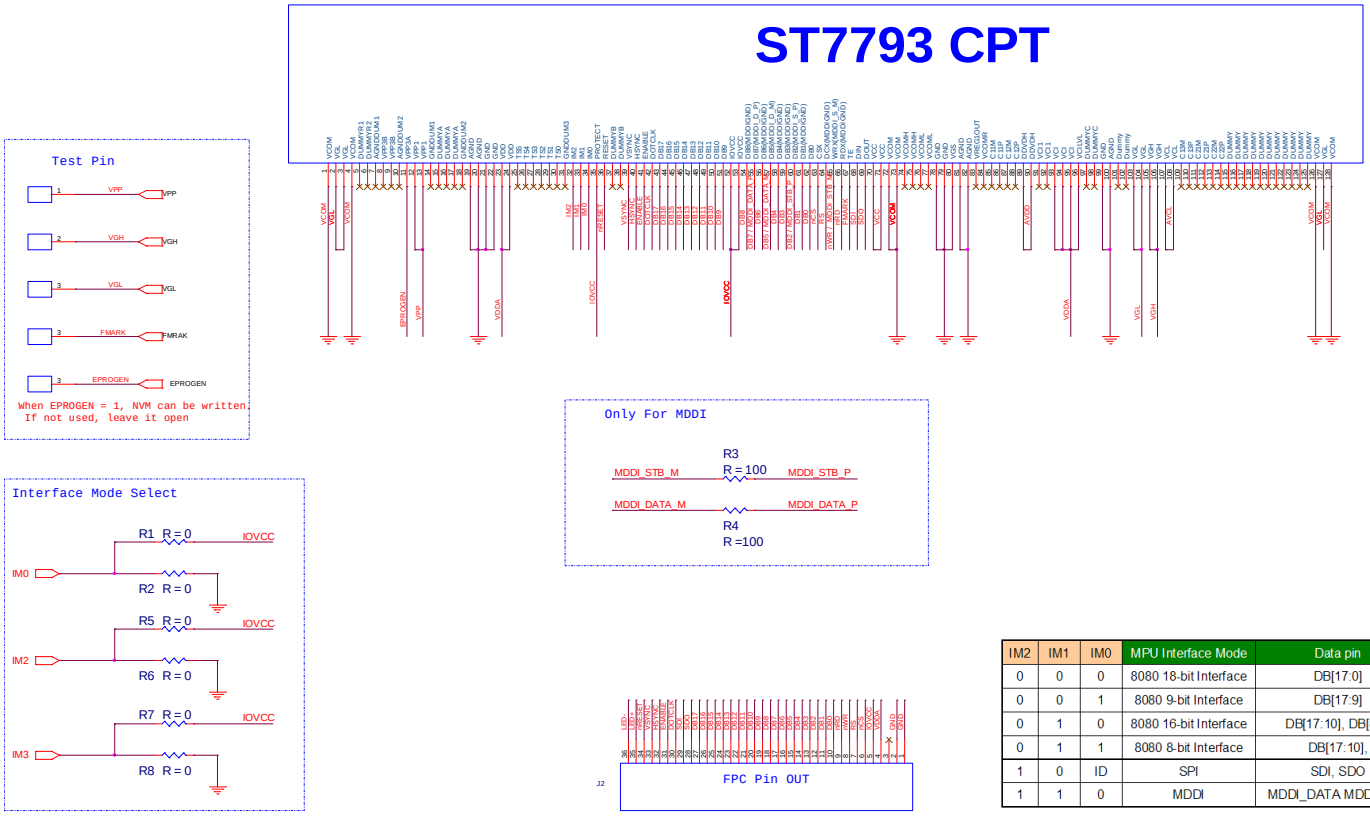
ST7793 Application Note

Ver 0.7
2012/09

Sitronix

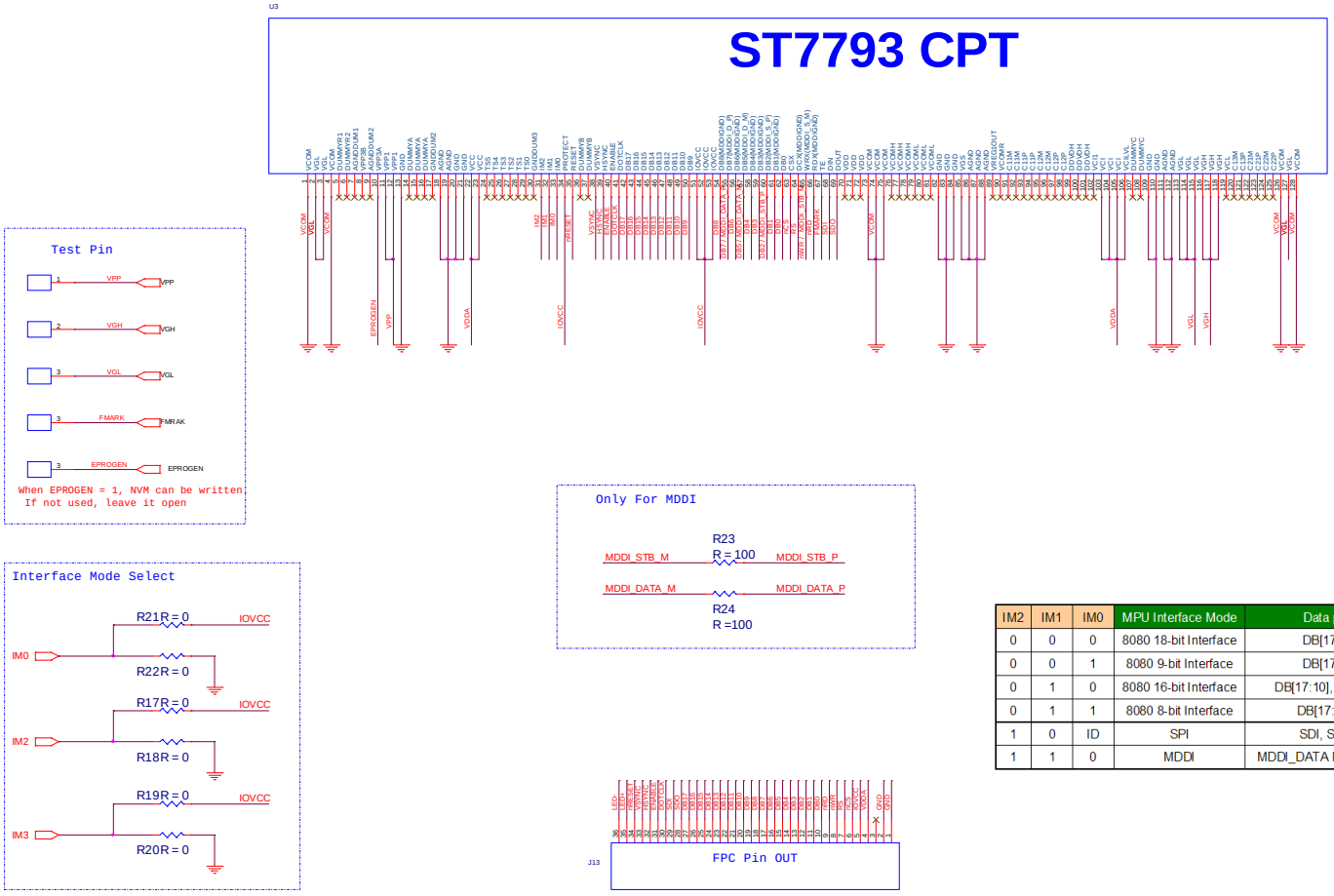
1 CPT 3.0”& 3.2” & 3.6” Panel

- **CPT 3.0”(CLAF030JB01) Application FPC Circuit**



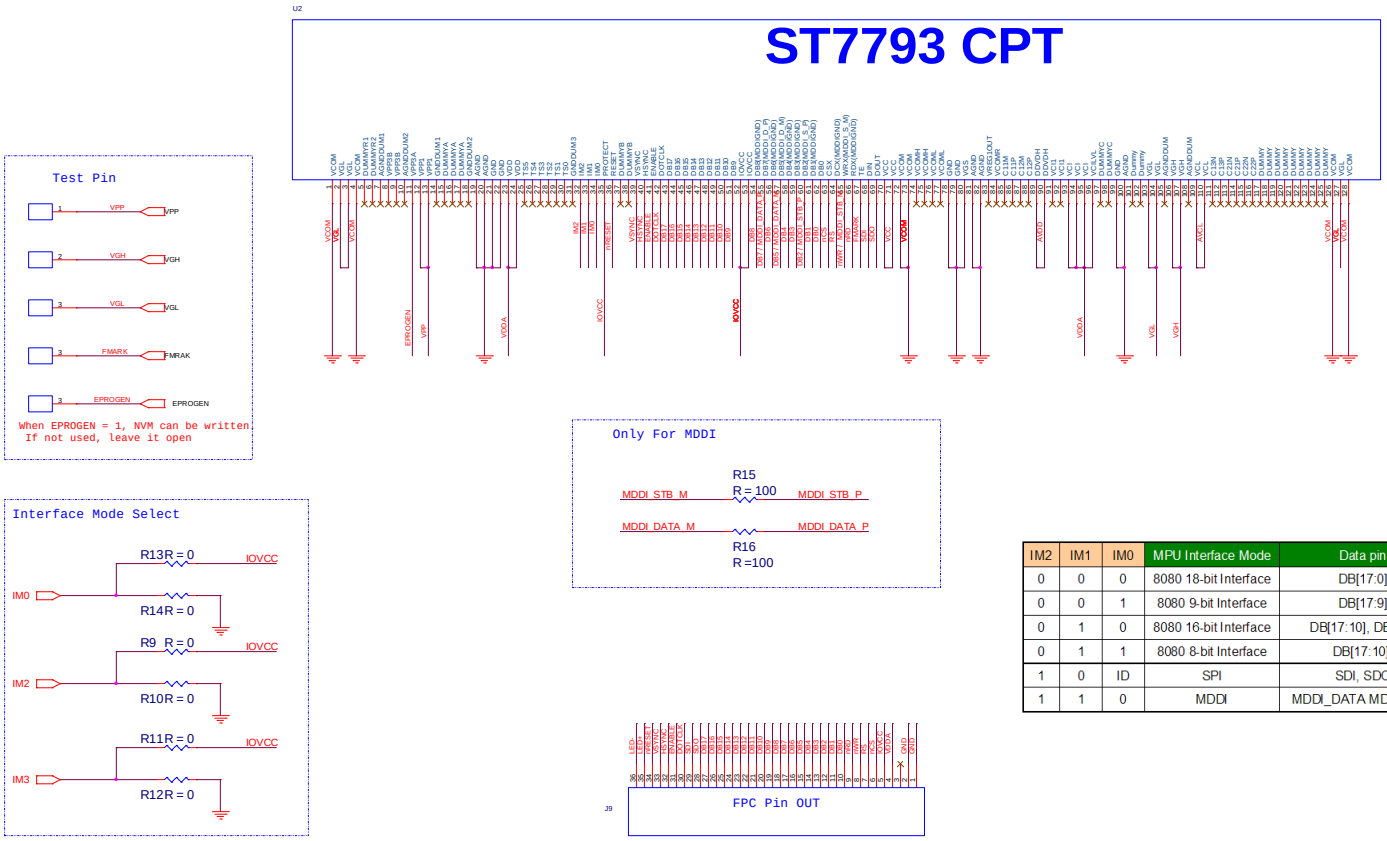
IM2	IM1	IM0	MPU Interface Mode	Data pin
0	0	0	8080 18-bit Interface	DB[17:0]
0	0	1	8080 9-bit Interface	DB[17:9]
0	1	0	8080 16-bit Interface	DB[17:10], DB[8:1]
0	1	1	8080 8-bit Interface	DB[17:10],
1	0	ID	SPI	SDI, SDO
1	1	0	MDDI	MDDI_DATA MDDI_STB

- **CPT 3.2”(CLAF032JA01) Application FPC Circuit**



IM2	IM1	IM0	MPU Interface Mode	Data pin
0	0	0	8080 18-bit Interface	DB[17:0]
0	0	1	8080 9-bit Interface	DB[17:9]
0	1	0	8080 16-bit Interface	DB[17:10], DB[8:1]
0	1	1	8080 8-bit Interface	DB[17:10],
1	0	ID	SPI	SDI, SDO
1	1	0	MDDI	MDDI_DATA MDDI_STB

- **CPT 3.6 (CLAG036JA01 AX) Application FPC Circuit**



IM2	IM1	IM0	MPU Interface Mode	Data pin
0	0	0	8080 18-bit Interface	DB[17:0]
0	0	1	8080 9-bit Interface	DB[17:9]
0	1	0	8080 16-bit Interface	DB[17:10], DB[8:1]
0	1	1	8080 8-bit Interface	DB[17:10],
1	0	ID	SPI	SDI, SDO
1	1	0	MDDI	MDDI_DATA MDDI_STB

CPT 3.0”（CLAF030JB01) Software Reference Code

```
Void ST7793_PanelInitialCode (void)
{
//------------------------------------ST7793 Reset Sequence-------------------------------------//
    LCD_Nreset=1;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=0;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=1;
    Delayms (10);
//-----------------------------------Display Control Setting-----------------------------------------//
    delay_ms(200);
    Write(Command,0x0001);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x9030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x0090);
    Write(Data,0x8000);
    Write(Command,0x0400);
    Write(Data,0x6200);
    Write(Command,0x0401);
    Write(Data,0x0001);
//-----------------------------------End Display Control setting-------------------------------------//
//------------------------------ Power Control Registers Initial ----------------------------------//
    Write(Command,0x00ff);
    Write(Data,0x0001);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Write(Command,0x0710);
    Write(Data,0x0018);
    Write(Command,0x0712);
    Write(Data,0x0011);
    Write(Command,0x0752);
    Write(Data,0x002f);
    Write(Command,0x0759);
    Write(Data,0x0070);
```

```
//---------------------------------End Power Control Registers Initial ----------------------------//
      Delayms (100);
//---------------------------------Display Windows    240 X 400-------------------------------------//
      Write(Command,0x0210);
      Write(Data,0x0000);
      Write(Command,0x0211);
      Write(Data,0x00ef);
      Write(Command,0x0212);
      Write(Data,0x0000);
      Write(Command,0x0213);
      Write(Data,0x018F);
//---------------------------------End Display Windows 240 X 400---------------------------------//
      delay_ms(10);
//-------------------------------------Gamma Cluster Setting-----------------------------------------//
      Write(Command,0x0380);
      Write(Data,0x0101);
      Write(Command,0x0381);
      Write(Data,0x6c1b);
      Write(Command,0x0382);
      Write(Data,0x0704);
      Write(Command,0x0383);
      Write(Data,0x0612);
      Write(Command,0x0384);
      Write(Data,0x3211);
      Write(Command,0x0385);
      Write(Data,0x0101);
      Write(Command,0x0386);
      Write(Data,0x6c1c);
      Write(Command,0x0387);
      Write(Data,0x0803);
      Write(Command,0x0388);
      Write(Data,0x0611);
      Write(Command,0x0389);
      Write(Data,0x3211);
//-------------------------------------End Gamma Setting---------------------------------------//
//-------------------------------------Vcom Setting---------------------------------------//
      Write(Command,0x0702);
      Write(Data,0x0056);
      Write(Command,0x00ff);
```

```
    Write(Data,0x0000);
//-------------------------------------End Vcom Setting-----------------------------------------//
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
    Write(Command,0x0200);
    Write(Data,0x0000);
    Write(Command,0x0201);
    Write(Data,0x0000);
}

Void ST7793_PanelEnterStandby (void)
{
    Write(Command,0x0007);
    Write(Data,0x0000);
    Delayms (50);                                   //Delay 50ms
    Write(Command, 0x0102);
    Write(Data,0x0180);
    Delayms (200);                                  //Delay 200ms
}
Void ST7793_PanelExitStandby (void)
{
    Delayms (200);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Delayms (50);                                   //Delay 50ms
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
}
```

CPT 3.2”(CLAF032JA01) Software Reference Code

```
Void ST7793_PanelInitialCode (void)
{
//------------------------------------ST7793 Reset Sequence-------------------------------------//
    LCD_Nreset=1;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=0;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=1;
    Delayms (10);
//-----------------------------------Display Control Setting-----------------------------------------//
    delay_ms(200);
    Write(Command,0x0001);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x9030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x0090);
    Write(Data,0x8000);
    Write(Command,0x0400);
    Write(Data,0x6200);
    Write(Command,0x0401);
    Write(Data,0x0001);
//-----------------------------------End Display Control setting--------------------------------------//
//------------------------------ Power Control Registers Initial ----------------------------------//
    Write(Command,0x00ff);
    Write(Data,0x0001);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Write(Command,0x0710);
    Write(Data,0x0016);
    Write(Command,0x0712);
    Write(Data,0x000f);
    Write(Command,0x0713);
    Write(Data,0x0057);
    Write(Command,0x0752);
    Write(Data,0x002f);
```

```
    Write(Command,0x0759);
    Write(Data,0x0070);
//---------------------------------End Power Control Registers Initial ----------------------------//
    Delayms (100);
//---------------------------------Display Windows    240 X 400-----------------------------------//
    Write(Command,0x0210);
    Write(Data,0x0000);
    Write(Command,0x0211);
    Write(Data,0x00ef);
    Write(Command,0x0212);
    Write(Data,0x0000);
    Write(Command,0x0213);
    Write(Data,0x018F);
//---------------------------------End Display Windows 240 X 400--------------------------------//
    delay_ms(10);
//-----------------------------------Gamma Cluster Setting-----------------------------------------//
    Write(Command,0x0380);
    Write(Data,0x0100);
    Write(Command,0x0381);
    Write(Data,0x5c0f);
    Write(Command,0x0382);
    Write(Data,0x0703);
    Write(Command,0x0383);
    Write(Data,0x0611);
    Write(Command,0x0384);
    Write(Data,0x2230);
    Write(Command,0x0385);
    Write(Data,0x0000);
    Write(Command,0x0386);
    Write(Data,0x6e0f);
    Write(Command,0x0387);
    Write(Data,0x0503);
    Write(Command,0x0388);
    Write(Data,0x0611);
    Write(Command,0x0389);
    Write(Data,0x2230);
//-----------------------------------End Gamma Setting---------------------------------------//
//-----------------------------------Vcom Setting---------------------------------------//
    Write(Command,0x0702);
```

```
    Write(Data,0x005c);
    Write(Command,0x00ff);
    Write(Data,0x0000);
//-------------------------------------End Vcom Setting-------------------------------------------//
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
    Write(Command,0x0200);
    Write(Data,0x0000);
    Write(Command,0x0201);
    Write(Data,0x0000);
}

Void ST7793_PanelEnterStandby (void)
{
    Write(Command,0x0007);
    Write(Data,0x0000);
    Delayms (50);                                   //Delay 50ms
    Write(Command, 0x0102);
    Write(Data,0x0180);
    Delayms (200);                                  //Delay 200ms
}
Void ST7793_PanelExitStandby (void)
{
    Delayms (200);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Delayms (50);                                   //Delay 50ms
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
}
```

CPT 3.55” Software Reference Code

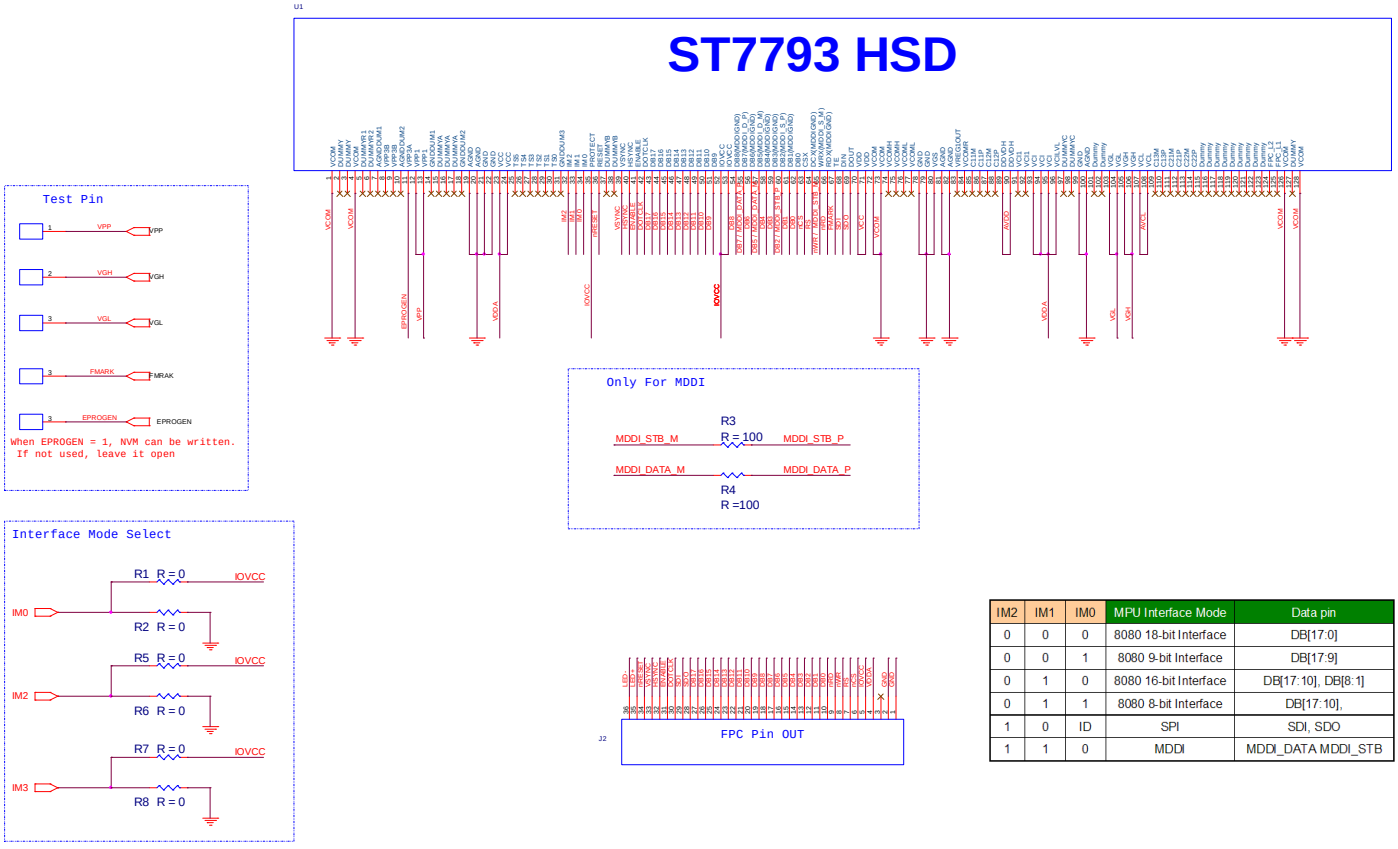
```
Void ST7793_PanelInitialCode (void)
{
//-------------------------------------ST7793 Reset Sequence-------------------------------------//
      LCD_Nreset=1;
      Delayms (1);                                  //Delay 1ms
      LCD_Nreset=0;
      Delayms (1);                                  //Delay 1ms
      LCD_Nreset=1;
      Delayms (10);
//-----------------------------------Display Control Setting-----------------------------------------//
      delay_ms(200);
      Write(Command,0x0001);
      Write(Data,0x0100);
      Write(Command,0x0003);
      Write(Data,0x9030);
      Write(Command,0x0008);
      Write(Data,0x0808);
      Write(Command,0x0090);
      Write(Data,0x8000);
      Write(Command,0x0400);
      Write(Data,0x6200);
      Write(Command,0x0401);
      Write(Data,0x0001);
//---------------------------------End Display Control setting-------------------------------------//
//------------------------------ Power Control Registers Initial ----------------------------------//
      Write(Command,0x00ff);
      Write(Data,0x0001);
      Write(Command,0x0102);
      Write(Data,0x01b0);
      Write(Command,0x0710);
      Write(Data,0x0016);
      Write(Command,0x0712);
      Write(Data,0x000f);
      Write(Command,0x0752);
      Write(Data,0x002f);
      Write(Command,0x0759);
```

```
        Write(Data,0x0070);
//--------------------------------End Power Control Registers Initial ----------------------------//
        Delayms (100);
//---------------------------------Display Windows    240 X 400-------------------------------------//
        Write(Command,0x0210);
        Write(Data,0x0000);
        Write(Command,0x0211);
        Write(Data,0x00ef);
        Write(Command,0x0212);
        Write(Data,0x0000);
        Write(Command,0x0213);
        Write(Data,0x018F);
//---------------------------------End Display Windows 240 X 400---------------------------------//
        delay_ms(10);
//-------------------------------------Gamma Cluster Setting-----------------------------------------//
        Write(Command,0x0380);
        Write(Data,0x0100);
        Write(Command,0x0381);
        Write(Data,0x3718);
        Write(Command,0x0382);
        Write(Data,0x0802);
        Write(Command,0x0383);
        Write(Data,0x060f);
        Write(Command,0x0384);
        Write(Data,0x2223);
        Write(Command,0x0385);
        Write(Data,0x0000);
        Write(Command,0x0386);
        Write(Data,0x5816);
        Write(Command,0x0387);
        Write(Data,0x0503);
        Write(Command,0x0388);
        Write(Data,0x0510);
        Write(Command,0x0389);
        Write(Data,0x2233);
//-------------------------------------End Gamma Setting---------------------------------------//
//-------------------------------------Vcom Setting---------------------------------------//
        Write(Command,0x0702);
        Write(Data,0x0057);
```

```
    Write(Command,0x00ff);
    Write(Data,0x0000);
//-------------------------------------End Vcom Setting--------------------------------------------//
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
    Write(Command,0x0200);
    Write(Data,0x0000);
    Write(Command,0x0201);
    Write(Data,0x0000);
}

Void ST7793_PanelEnterStandby (void)
{
    Write(Command,0x0007);
    Write(Data,0x0000);
    Delayms (50);                                   //Delay 50ms
    Write(Command, 0x0102);
    Write(Data,0x0180);
    Delayms (200);                                  //Delay 200ms
}
Void ST7793_PanelExitStandby (void)
{
    Delayms (200);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Delayms (50);                                   //Delay 50ms
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
}
```

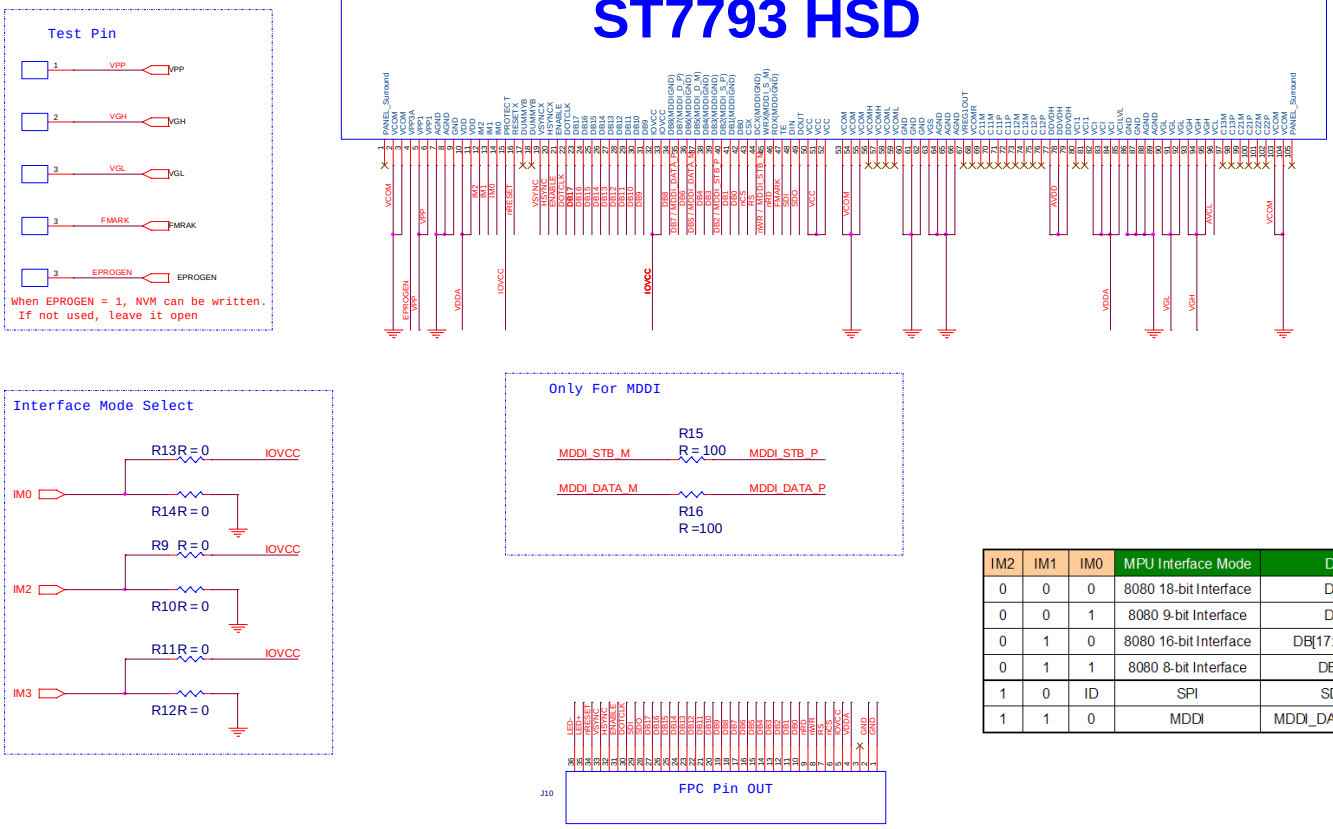
2 Hannstar 3.0”& 3.2” Panel

- **HSD030BAW1 & HSD032BAW2 Application FPC Circuit**



IM2	IM1	IM0	MPU Interface Mode	Data pin
0	0	0	8080 18-bit Interface	DB[17:0]
0	0	1	8080 9-bit Interface	DB[17:9]
0	1	0	8080 16-bit Interface	DB[17:10], DB[8:1]
0	1	1	8080 8-bit Interface	DB[17:10],
1	0	ID	SPI	SDI, SDO
1	1	0	MDDI	MDDI_DATA MDDI_STB

- **HSD036FAW1 & HSD040FAW1 Application FPC Circuit**



IM2	IM1	IM0	MPU Interface Mode	Data pin
0	0	0	8080 18-bit Interface	DB[17:0]
0	0	1	8080 9-bit Interface	DB[17:9]
0	1	0	8080 16-bit Interface	DB[17:10], DB[8:1]
0	1	1	8080 8-bit Interface	DB[17:10],
1	0	ID	SPI	SDI, SDO
1	1	0	MDDI	MDDI_DATA MDDI_STB

HSD 3.0” HSD030BAW1 Software Reference Code

```
Void ST7793_PanelInitialCode (void)
{
//-----------------------------------ST7793 Reset Sequence-----------------------------------//
    LCD_Nreset=1;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=0;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=1;
    Delayms (10);
//---------------------------------Display Control Setting-----------------------------------------//
    delay_ms(200);
    Write(Command,0x0001);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x9030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x0090);
    Write(Data,0x8000);
    Write(Command,0x0400);
    Write(Data,0x6200);
    Write(Command,0x0401);
    Write(Data,0x0001);
//---------------------------------End Display Control setting-------------------------------------//
//------------------------------ Power Control Registers Initial ----------------------------------//
    Write(Command,0x00ff);
    Write(Data,0x0001);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Write(Command,0x0710);
    Write(Data,0x0018);
    Write(Command,0x0712);
    Write(Data,0x000f);
    Write(Command,0x0752);
    Write(Data,0x002f);
    Write(Command,0x0759);
    Write(Data,0x0070);
```

```
        Write(Command,0x0724);
        Write(Data,0x001A);
//---------------------------------End Power Control Registers Initial ----------------------------//
        Delayms (100);
//---------------------------------Display Windows    240 X 400-------------------------------------//
        Write(Command,0x0210);
        Write(Data,0x0000);
        Write(Command,0x0211);
        Write(Data,0x00ef);
        Write(Command,0x0212);
        Write(Data,0x0000);
        Write(Command,0x0213);
        Write(Data,0x018F);
//---------------------------------End Display Windows 240 X 400---------------------------------//
        delay_ms(10);
//-----------------------------------Gamma Cluster Setting-----------------------------------------//
        Write(Command,0x0380);
        Write(Data,0x0000);
        Write(Command,0x0381);
        Write(Data,0x4e1a);
        Write(Command,0x0382);
        Write(Data,0x0a01);
        Write(Command,0x0383);
        Write(Data,0x0614);
        Write(Command,0x0384);
        Write(Data,0x0111);
        Write(Command,0x0385);
        Write(Data,0x0000);
        Write(Command,0x0386);
        Write(Data,0xaf15);
        Write(Command,0x0387);
        Write(Data,0x0605);
        Write(Command,0x0388);
        Write(Data,0x0612);
        Write(Command,0x0389);
        Write(Data,0x0111);
//-----------------------------------End Gamma Setting---------------------------------------//
//-----------------------------------Vcom Setting---------------------------------------//
        Write(Command,0x0702);
```

```
    Write(Data,0x0027);
    Write(Command,0x00ff);
    Write(Data,0x0000);
//-------------------------------------End Vcom Setting-------------------------------------------//
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
    Write(Command,0x0200);
    Write(Data,0x0000);
    Write(Command,0x0201);
    Write(Data,0x0000);
}

Void ST7793_PanelEnterStandby (void)
{
    Write(Command,0x0007);
    Write(Data,0x0000);
    Delayms (50);                                   //Delay 50ms
    Write(Command, 0x0102);
    Write(Data,0x0180);
    Delayms (200);                                  //Delay 200ms
}
Void ST7793_PanelExitStandby (void)
{
    Delayms (200);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Delayms (50);                                   //Delay 50ms
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
}
```

HSD 3.2” HSD032BAW2 Software Reference Code

```
Void ST7793_PanelInitialCode (void)
{
//-------------------------------------ST7793 Reset Sequence-------------------------------------//
    LCD_Nreset=1;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=0;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=1;
    Delayms (10);
//-----------------------------------Display Control Setting-----------------------------------------//
    delay_ms(200);
    Write(Command,0x0001);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x9030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x0090);
    Write(Data,0x8000);
    Write(Command,0x0400);
    Write(Data,0x6200);
    Write(Command,0x0401);
    Write(Data,0x0001);
//---------------------------------End Display Control setting-------------------------------------//
//------------------------------ Power Control Registers Initial ----------------------------------//
    Write(Command,0x00ff);
    Write(Data,0x0001);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Write(Command,0x0710);
    Write(Data,0x0016);
    Write(Command,0x0712);
    Write(Data,0x000f);
    Write(Command,0x0752);
    Write(Data,0x002f);
    Write(Command,0x0759);
```

```
    Write(Data,0x0070);
    Write(Command,0x0724);
    Write(Data,0x001A);
//---------------------------------End Power Control Registers Initial ----------------------------//
    Delayms (100);
//---------------------------------Display Windows    240 X 400-------------------------------------//
    Write(Command,0x0210);
    Write(Data,0x0000);
    Write(Command,0x0211);
    Write(Data,0x00ef);
    Write(Command,0x0212);
    Write(Data,0x0000);
    Write(Command,0x0213);
    Write(Data,0x018F);
//---------------------------------End Display Windows 240 X 400---------------------------------//
    delay_ms(10);
//-----------------------------------Gamma Cluster Setting-----------------------------------------//
    Write(Command,0x0380);
    Write(Data,0x0000);
    Write(Command,0x0381);
    Write(Data,0x3e1a);
    Write(Command,0x0382);
    Write(Data,0x0a02);
    Write(Command,0x0383);
    Write(Data,0x0614);
    Write(Command,0x0384);
    Write(Data,0x0111);
    Write(Command,0x0385);
    Write(Data,0x0000);
    Write(Command,0x0386);
    Write(Data,0x9f15);
    Write(Command,0x0387);
    Write(Data,0x0605);
    Write(Command,0x0388);
    Write(Data,0x0612);
    Write(Command,0x0389);
    Write(Data,0x0111);
//-------------------------------------End Gamma Setting-----------------------------------------//
//-------------------------------------Vcom Setting----------------------------------------------//
```

```
    Write(Command,0x0702);
    Write(Data,0x0031);
    Write(Command,0x00ff);
    Write(Data,0x0000);
//-------------------------------------End Vcom Setting-----------------------------------------//
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
    Write(Command,0x0200);
    Write(Data,0x0000);
    Write(Command,0x0201);
    Write(Data,0x0000);
}

Void ST7793_PanelEnterStandby (void)
{
    Write(Command,0x0007);
    Write(Data,0x0000);
    Delayms (50);                                   //Delay 50ms
    Write(Command, 0x0102);
    Write(Data,0x0180);
    Delayms (200);                                  //Delay 200ms
}
Void ST7793_PanelExitStandby (void)
{
    Delayms (200);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Delayms (50);                                   //Delay 50ms
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
}
```

HSD 3.6” HSD036FAW1 Software Reference Code

```
Void ST7793_PanelInitialCode (void)
{
//-------------------------------------ST7793 Reset Sequence-------------------------------------//
      LCD_Nreset=1;
      Delayms (1);                                  //Delay 1ms
      LCD_Nreset=0;
      Delayms (1);                                  //Delay 1ms
      LCD_Nreset=1;
      Delayms (10);
//-----------------------------------Display Control Setting-----------------------------------------//
      delay_ms(200);
      Write(Command,0x0001);
      Write(Data,0x0100);
      Write(Command,0x0003);
      Write(Data,0x9030);
      Write(Command,0x0008);
      Write(Data,0x0808);
      Write(Command,0x0090);
      Write(Data,0x8000);
      Write(Command,0x0400);
      Write(Data,0x6200);
      Write(Command,0x0401);
      Write(Data,0x0001);
//-----------------------------------End Display Control setting--------------------------------------//
//------------------------------ Power Control Registers Initial ----------------------------------//
      Write(Command,0x00ff);
      Write(Data,0x0001);
      Write(Command,0x0102);
      Write(Data,0x01b0);
      Write(Command,0x0710);
      Write(Data,0x0018);
      Write(Command,0x0712);
      Write(Data,0x000f);
      Write(Command,0x0752);
      Write(Data,0x003F);
      Write(Command,0x0759);
```

```
    Write(Data,0x0070);
    Write(Command,0x0724);
    Write(Data,0x001a);
//---------------------------------End Power Control Registers Initial ----------------------------//
    Delayms (100);
//---------------------------------Display Windows    240 X 400-------------------------------------//
    Write(Command,0x0210);
    Write(Data,0x0000);
    Write(Command,0x0211);
    Write(Data,0x00ef);
    Write(Command,0x0212);
    Write(Data,0x0000);
    Write(Command,0x0213);
    Write(Data,0x018F);
//---------------------------------End Display Windows 240 X 400---------------------------------//
    delay_ms(10);
//-----------------------------------Gamma Cluster Setting-----------------------------------------//
    Write(Command,0x0380);
    Write(Data,0x0103);
    Write(Command,0x0381);
    Write(Data,0x5c1b);
    Write(Command,0x0382);
    Write(Data,0x0b01);
    Write(Command,0x0383);
    Write(Data,0x0615);
    Write(Command,0x0384);
    Write(Data,0x0111);
    Write(Command,0x0385);
    Write(Data,0x0103);
    Write(Command,0x0386);
    Write(Data,0x9c17);
    Write(Command,0x0387);
    Write(Data,0x0607);
    Write(Command,0x0388);
    Write(Data,0x0614);
    Write(Command,0x0389);
    Write(Data,0x0111);
//-------------------------------------End Gamma Setting---------------------------------------//
//-------------------------------------Vcom Setting---------------------------------------------//
```

```
    Write(Command,0x0702);
    Write(Data,0x003C);
    Write(Command,0x00ff);
    Write(Data,0x0000);
//-------------------------------------End Vcom Setting-----------------------------------------//
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
    Write(Command,0x0200);
    Write(Data,0x0000);
    Write(Command,0x0201);
    Write(Data,0x0000);
}

Void ST7793_PanelEnterStandby (void)
{
    Write(Command,0x0007);
    Write(Data,0x0000);
    Delayms (50);                                   //Delay 50ms
    Write(Command, 0x0102);
    Write(Data,0x0180);
    Delayms (200);                                  //Delay 200ms
}
Void ST7793_PanelExitStandby (void)
{
    Delayms (200);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Delayms (50);                                   //Delay 50ms
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
}
```

HSD 3.97” HSD040FAW1 Software Reference Code

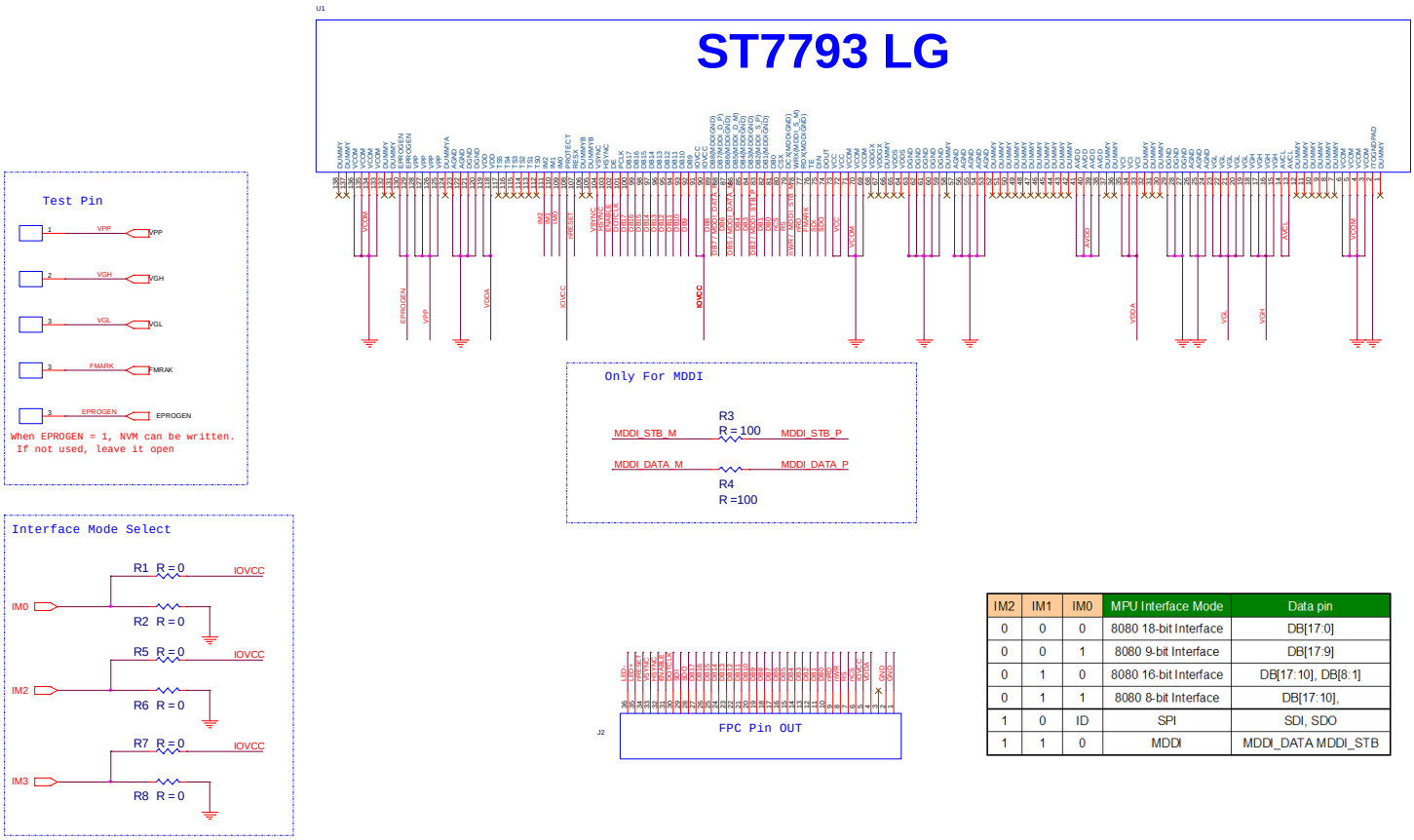
```
Void ST7793_PanelInitialCode (void)
{
//-------------------------------------ST7793 Reset Sequence-------------------------------------//
      LCD_Nreset=1;
      Delayms (1);                                  //Delay 1ms
      LCD_Nreset=0;
      Delayms (1);                                  //Delay 1ms
      LCD_Nreset=1;
      Delayms (10);
//-----------------------------------Display Control Setting-----------------------------------------//
      delay_ms(200);
      Write(Command,0x0001);
      Write(Data,0x0100);
      Write(Command,0x0003);
      Write(Data,0x9030);
      Write(Command,0x0008);
      Write(Data,0x0808);
      Write(Command,0x0090);
      Write(Data,0x8000);
      Write(Command,0x0400);
      Write(Data,0x6200);
      Write(Command,0x0401);
      Write(Data,0x0001);
//---------------------------------End Display Control setting-------------------------------------//
//------------------------------ Power Control Registers Initial ----------------------------------//
      Write(Command,0x00ff);
      Write(Data,0x0001);
      Write(Command,0x0102);
      Write(Data,0x01b0);
      Write(Command,0x0710);
      Write(Data,0x0016);
      Write(Command,0x0712);
      Write(Data,0x000f);
      Write(Command,0x0752);
      Write(Data,0x002f);
      Write(Command,0x0759);
```

```
    Write(Data,0x0070);
    Write(Command,0x0724);
    Write(Data,0x001a);
    Write(Command,0x0754);
    Write(Data,0x0018);
//---------------------------------End Power Control Registers Initial ----------------------------//
    Delayms (100);
//---------------------------------Display Windows   240 X 400-------------------------------------//
    Write(Command,0x0210);
    Write(Data,0x0000);
    Write(Command,0x0211);
    Write(Data,0x00ef);
    Write(Command,0x0212);
    Write(Data,0x0000);
    Write(Command,0x0213);
    Write(Data,0x018f);
//---------------------------------End Display Windows 240 X 400-----------------------------------//
    delay_ms(10);
//-----------------------------------Gamma Cluster Setting-----------------------------------------//
    Write(Command,0x0380);
    Write(Data,0x0000);
    Write(Command,0x0381);
    Write(Data,0x5f10);
    Write(Command,0x0382);
    Write(Data,0x0b02);
    Write(Command,0x0383);
    Write(Data,0x0614);
    Write(Command,0x0384);
    Write(Data,0x0111);
    Write(Command,0x0385);
    Write(Data,0x0000);
    Write(Command,0x0386);
    Write(Data,0xa90b);
    Write(Command,0x0387);
    Write(Data,0x0606);
    Write(Command,0x0388);
    Write(Data,0x0612);
    Write(Command,0x0389);
    Write(Data,0x0111);
```

```
//-----------------------------------End Gamma Setting-----------------------------------------//
//-----------------------------------Vcom Setting----------------------------------------------//
      Write(Command,0x0702);
      Write(Data,0x003b);
      Write(Command,0x00ff);
      Write(Data,0x0000);
//-----------------------------------End Vcom Setting------------------------------------------//
      Write(Command,0x0007);
      Write(Data,0x0100);
      Delayms (200);                                    //Delay 200ms
      Write(Command,0x0200);
      Write(Data,0x0000);
      Write(Command,0x0201);
      Write(Data,0x0000);
}

Void ST7793_PanelEnterStandby (void)
{
      Write(Command,0x0007);
      Write(Data,0x0000);
      Delayms (50);                                     //Delay 50ms
      Write(Command, 0x0102);
      Write(Data,0x0180);
      Delayms (200);                                    //Delay 200ms
}
Void ST7793_PanelExitStandby (void)
{
      Delayms (200);
      Write(Command,0x0102);
      Write(Data,0x01b0);
      Delayms (50);                                     //Delay 50ms
      Write(Command,0x0007);
      Write(Data,0x0100);
      Delayms (200);                                    //Delay 200ms
}
```

3 LGD 3.2” Panel

- **LG 3.2”(LH320WQ1- SH01) Application FPC Circuit**



IM2	IM1	IM0	MPU Interface Mode	Data pin
0	0	0	8080 18-bit Interface	DB[17:0]
0	0	1	8080 9-bit Interface	DB[17:9]
0	1	0	8080 16-bit Interface	DB[17:10], DB[8:1]
0	1	1	8080 8-bit Interface	DB[17:10],
1	0	ID	SPI	SDI, SDO
1	1	0	MDDI	MDDI_DATA MDDI_STB

LG 3.2”(LH320WQ1- SH01)Software Reference Code

```
Void ST7793_PanelInitialCode (void)
{
//-----------------------------------ST7793 Reset Sequence-----------------------------------//
    LCD_Nreset=1;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=0;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=1;
    Delayms (10);
//-----------------------------------Display Control Setting---------------------------------------//
    delay_ms(200);
    Write(Command,0x0001);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x9030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x0090);
    Write(Data,0x8000);
    Write(Command,0x0400);
    Write(Data,0x6200);
    Write(Command,0x0401);
    Write(Data,0x0000);
//-----------------------------------End Display Control setting-----------------------------------//
//------------------------------ Power Control Registers Initial ----------------------------------//
    Write(Command,0x00ff);
    Write(Data,0x0001);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Write(Command,0x0710);
    Write(Data,0x0018);
    Write(Command,0x0712);
    Write(Data,0x000f);
    Write(Command,0x0752);
    Write(Data,0x003f);
    Write(Command,0x0754);
    Write(Data,0x002a);
```

```
    Write(Command,0x0759);
    Write(Data,0x0070);
//---------------------------------End Power Control Registers Initial ----------------------------//
    Delayms (100);
//---------------------------------Display Windows    240 X 400-------------------------------------//
    Write(Command,0x0210);
    Write(Data,0x0000);
    Write(Command,0x0211);
    Write(Data,0x00ef);
    Write(Command,0x0212);
    Write(Data,0x0000);
    Write(Command,0x0213);
    Write(Data,0x018F);
//---------------------------------End Display Windows 240 X 400---------------------------------//
    delay_ms(10);
//-----------------------------------Gamma Cluster Setting-----------------------------------------//
    Write(Command,0x0380);
    Write(Data,0x0500);
    Write(Command,0x0381);
    Write(Data,0x9b0f);
    Write(Command,0x0382);
    Write(Data,0x100d);
    Write(Command,0x0383);
    Write(Data,0x0901);
    Write(Command,0x0384);
    Write(Data,0x1032);
    Write(Command,0x0385);
    Write(Data,0x0400);
    Write(Command,0x0386);
    Write(Data,0xbc10);
    Write(Command,0x0387);
    Write(Data,0x1205);
    Write(Command,0x0388);
    Write(Data,0x0901);
    Write(Command,0x0389);
    Write(Data,0x1032);
//-----------------------------------End Gamma Setting---------------------------------------//
//-----------------------------------Vcom Setting---------------------------------------//
    Write(Command,0x0702);
```

```
    Write(Data,0x0051);
    Write(Command,0x00ff);
    Write(Data,0x0000);
//-------------------------------------End Vcom Setting-------------------------------------------//
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
    Write(Command,0x0200);
    Write(Data,0x0000);
    Write(Command,0x0201);
    Write(Data,0x0000);
}

Void ST7793_PanelEnterStandby (void)
{
    Write(Command,0x0007);
    Write(Data,0x0000);
    Delayms (50);                                   //Delay 50ms
    Write(Command, 0x0102);
    Write(Data,0x0180);
    Delayms (200);                                  //Delay 200ms
}
Void ST7793_PanelExitStandby (void)
{
    Delayms (200);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Delayms (50);                                   //Delay 50ms
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
}
```

4 CMI 3.2” Panel

● CMI 3.2” Software Reference Code

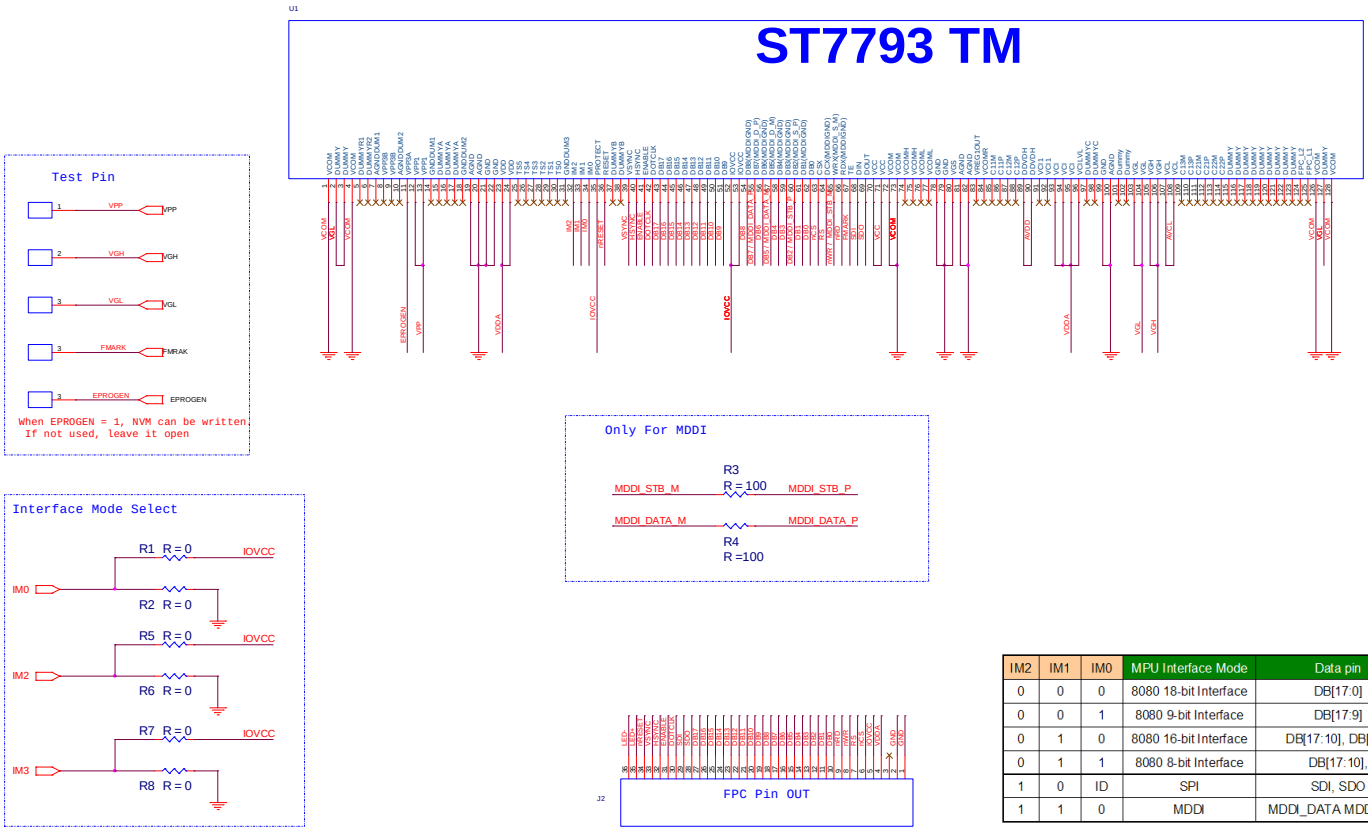
```
Void ST7793_PanelInitialCode (void)
{
//------------------------------------ST7793 Reset Sequence-------------------------------------//
      LCD_Nreset=1;
      Delayms (1);                                  //Delay 1ms
      LCD_Nreset=0;
      Delayms (1);                                  //Delay 1ms
      LCD_Nreset=1;
      Delayms (10);
//-----------------------------------Display Control Setting-----------------------------------------//
      delay_ms(200);
      Write(Command,0x0001);
      Write(Data,0x0100);
      Write(Command,0x0003);
      Write(Data,0x9030);
      Write(Command,0x0008);
      Write(Data,0x0808);
      Write(Command,0x0090);
      Write(Data,0x8000);
      Write(Command,0x0400);
      Write(Data,0x6200);
      Write(Command,0x0401);
      Write(Data,0x0001);
//----------------------------------End Display Control setting--------------------------------------//
//------------------------------ Power Control Registers Initial ----------------------------------//
      Write(Command,0x00ff);
      Write(Data,0x0001);
      Write(Command,0x0102);
      Write(Data,0x01b0);
      Write(Command,0x0710);
      Write(Data,0x0018);
      Write(Command,0x0712);
      Write(Data,0x000f);
```

```
        Write(Command,0x0713);
        Write(Data,0x00b7);
        Write(Command,0x0752);
        Write(Data,0x002f);
        Write(Command,0x0759);
        Write(Data,0x0070);
        Write(Command,0x0754);
        Write(Data,0x002a);
//---------------------------------End Power Control Registers Initial ----------------------------//
        Delayms (100);
//---------------------------------Display Windows    240 X 400-------------------------------------//
        Write(Command,0x0210);
        Write(Data,0x0000);
        Write(Command,0x0211);
        Write(Data,0x00ef);
        Write(Command,0x0212);
        Write(Data,0x0000);
        Write(Command,0x0213);
        Write(Data,0x018F);
//---------------------------------End Display Windows 240 X 400---------------------------------//
        delay_ms(10);
//-------------------------------------Gamma Cluster Setting-----------------------------------------//
        Write(Command,0x0380);
        Write(Data,0x0101);
        Write(Command,0x0381);
        Write(Data,0x471d);
        Write(Command,0x0382);
        Write(Data,0x0b03);
        Write(Command,0x0383);
        Write(Data,0x0612);
        Write(Command,0x0384);
        Write(Data,0x1230);
        Write(Command,0x0385);
        Write(Data,0x0101);
        Write(Command,0x0386);
        Write(Data,0x691d);
        Write(Command,0x0387);
        Write(Data,0x0504);
        Write(Command,0x0388);
```

```
    Write(Data,0x0611);
    Write(Command,0x0389);
    Write(Data,0x1230);
//-------------------------------------End Gamma Setting-----------------------------------------//
//-------------------------------------Vcom Setting----------------------------------------------//
    Write(Command,0x0702);
    Write(Data,0x0035);
    Write(Command,0x00ff);
    Write(Data,0x0000);
//-------------------------------------End Vcom Setting------------------------------------------//
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
    Write(Command,0x0200);
    Write(Data,0x0000);
    Write(Command,0x0201);
    Write(Data,0x0000);
}

Void ST7793_PanelEnterStandby (void)
{
    Write(Command,0x0007);
    Write(Data,0x0000);
    Delayms (50);                                   //Delay 50ms
    Write(Command, 0x0102);
    Write(Data,0x0180);
    Delayms (200);                                  //Delay 200ms
}
Void ST7793_PanelExitStandby (void)
{
    Delayms (200);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Delayms (50);                                   //Delay 50ms
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
}
```

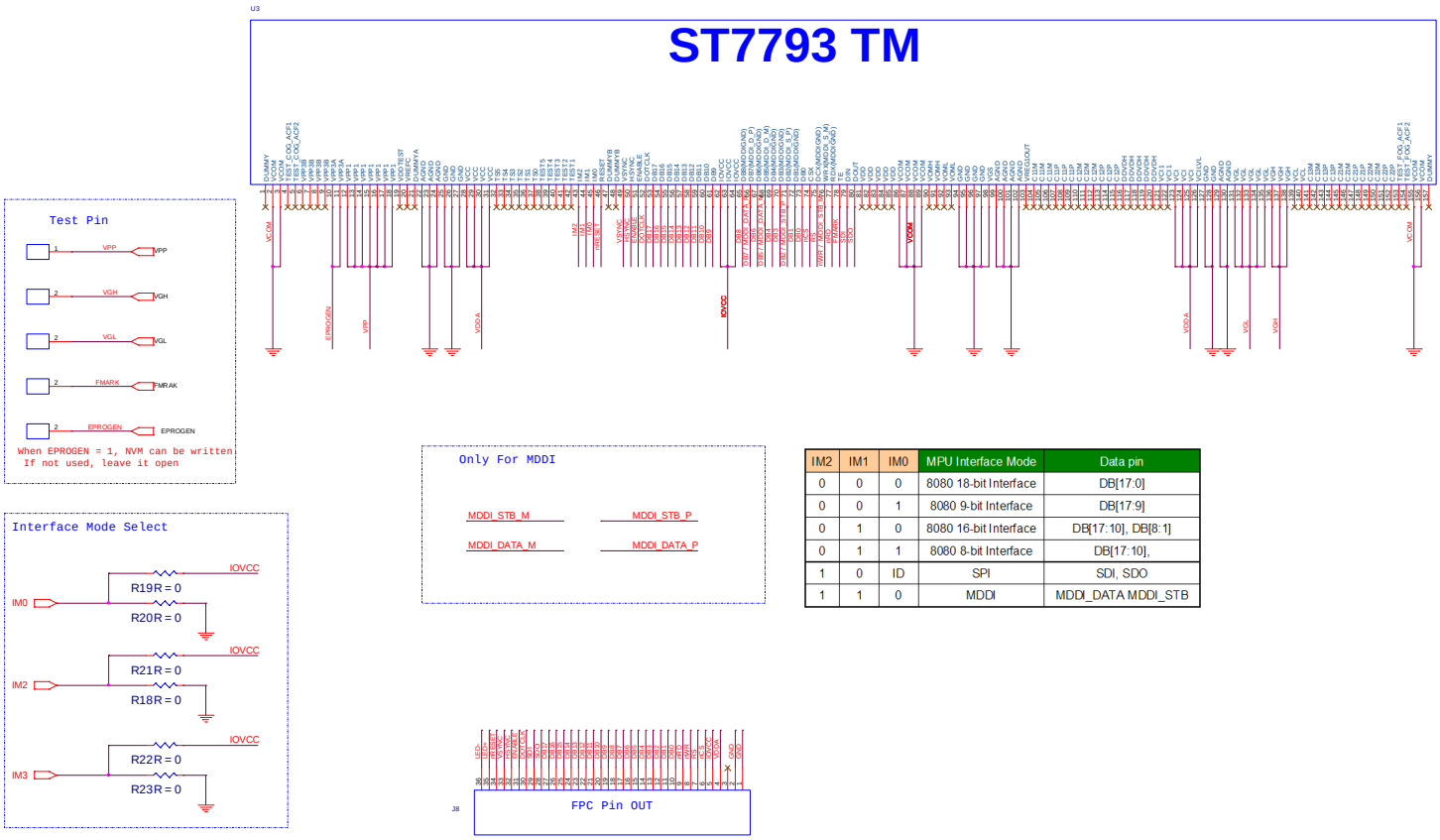
5 TM 3.2” & 3.5” & 3.6” Panel

- **TM3.2”(TM032LYS02) Panel Application FPC Circuit**



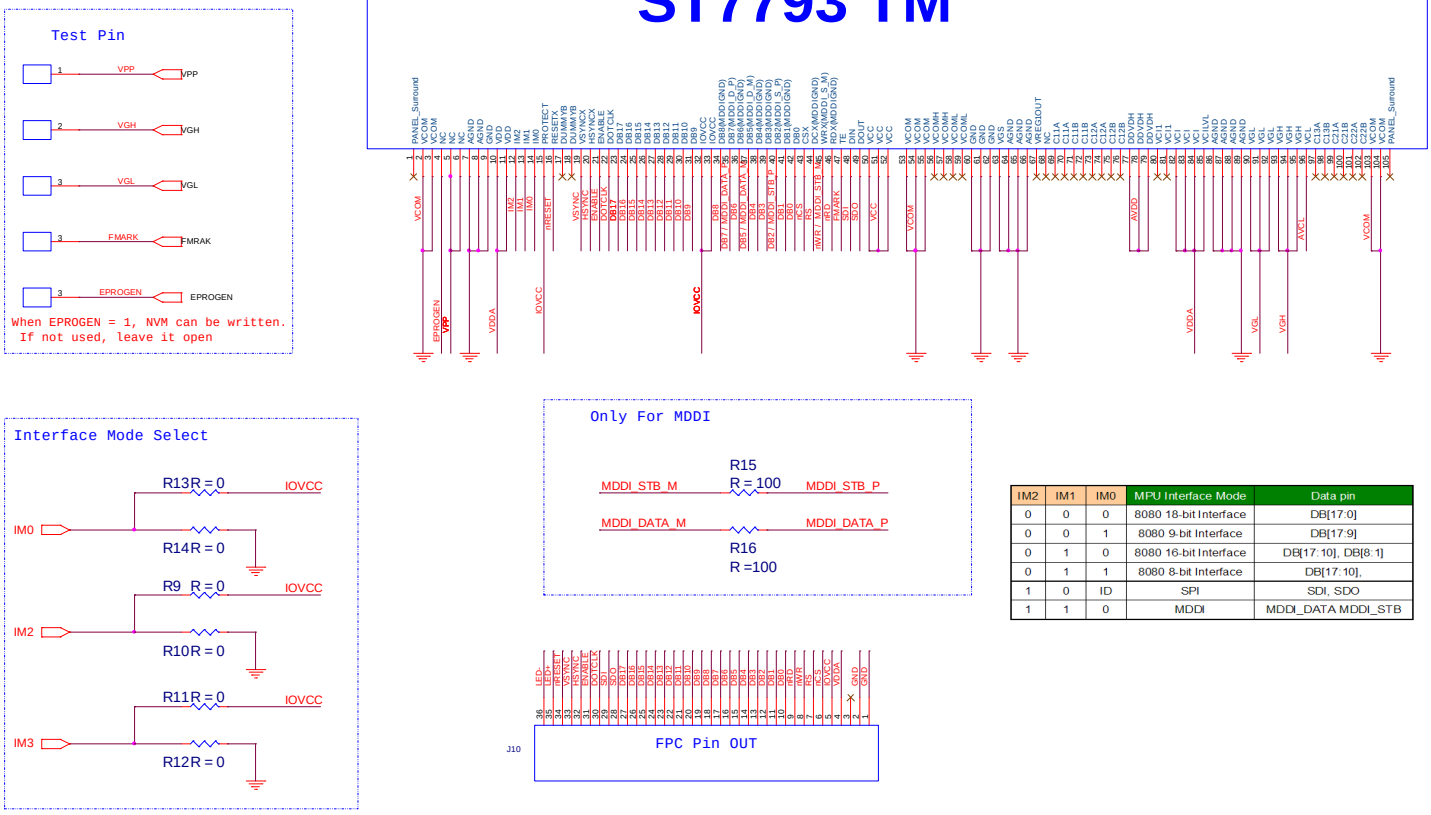
IM2	IM1	IM0	MPU Interface Mode	Data pin
0	0	0	8080 18-bit Interface	DB[17:0]
0	0	1	8080 9-bit Interface	DB[17:9]
0	1	0	8080 16-bit Interface	DB[17:10], DB[8:1]
0	1	1	8080 8-bit Interface	DB[17:10],
1	0	ID	SPI	SDI, SDO
1	1	0	MDDI	MDDI_DATA MDDI_STB

- **TM3.5”(TM035LYH01) Panel Application FPC Circuit**



IM2	IM1	IM0	MPU Interface Mode	Data pin
0	0	0	8080 18-bit Interface	DB[17:0]
0	0	1	8080 9-bit Interface	DB[17:9]
0	1	0	8080 16-bit Interface	DB[17:10], DB[8:1]
0	1	1	8080 8-bit Interface	DB[17:10],
1	0	ID	SPI	SDI, SDO
1	1	0	MDDI	MDDI_DATA MDDI_STB

- **TM3.6” (TM036LYH01) Panel Application FPC Circuit**



IM2	IM1	IM0	MPU Interface Mode	Data pin
0	0	0	8080 18-bit Interface	DB[17:0]
0	0	1	8080 9-bit Interface	DB[17:9]
0	1	0	8080 16-bit Interface	DB[17:10], DB[8:1]
0	1	1	8080 8-bit Interface	DB[17:10],
1	0	ID	SPI	SDI, SDO
1	1	0	MDDI	MDDI_DATA MDDI_STB

TM3.2”(TM032LYS02) Software Reference Code

```
Void ST7793_PanelInitialCode (void)
{
//-------------------------------------ST7793 Reset Sequence-------------------------------------//
      LCD_Nreset=1;
      Delayms (1);                                  //Delay 1ms
      LCD_Nreset=0;
      Delayms (1);                                  //Delay 1ms
      LCD_Nreset=1;
      Delayms (10);
//-----------------------------------Display Control Setting-----------------------------------------//
      delay_ms(200);
      Write(Command,0x0001);
      Write(Data,0x0100);
      Write(Command,0x0003);
      Write(Data,0x9030);
      Write(Command,0x0008);
      Write(Data,0x0808);
      Write(Command,0x0090);
      Write(Data,0x8000);
      Write(Command,0x0400);
      Write(Data,0x6200);
      Write(Command,0x0401);
      Write(Data,0x0001);
//---------------------------------End Display Control setting-------------------------------------//
//------------------------------ Power Control Registers Initial ----------------------------------//
      Write(Command,0x00ff);
      Write(Data,0x0001);
      Write(Command,0x0102);
      Write(Data,0x01b0);
      Write(Command,0x0710);
      Write(Data,0x0012);
      Write(Command,0x0712);
      Write(Data,0x000f);
      Write(Command,0x0713);
      Write(Data,0x0039);
      Write(Command,0x0752);
```

```
        Write(Data,0x002f);
        Write(Command,0x0759);
        Write(Data,0x0070);
//---------------------------------End Power Control Registers Initial ----------------------------//
        Delayms (100);
//----------------------------------Display Windows    240 X 400-------------------------------------//
        Write(Command,0x0210);
        Write(Data,0x0000);
        Write(Command,0x0211);
        Write(Data,0x00ef);
        Write(Command,0x0212);
        Write(Data,0x0000);
        Write(Command,0x0213);
        Write(Data,0x018F);
//----------------------------------End Display Windows 240 X 400---------------------------------//
        delay_ms(10);
//-----------------------------------Gamma Cluster Setting-----------------------------------------//
        Write(Command,0x0380);
        Write(Data,0x0000);
        Write(Command,0x0381);
        Write(Data,0x7b11);
        Write(Command,0x0382);
        Write(Data,0x0b04);
        Write(Command,0x0383);
        Write(Data,0x0615);
        Write(Command,0x0384);
        Write(Data,0x1211);
        Write(Command,0x0385);
        Write(Data,0x0000);
        Write(Command,0x0386);
        Write(Data,0x9c0f);
        Write(Command,0x0387);
        Write(Data,0x0804);
        Write(Command,0x0388);
        Write(Data,0x0615);
        Write(Command,0x0389);
        Write(Data,0x1211);
//-------------------------------------End Gamma Setting---------------------------------------//
//-------------------------------------Vcom Setting---------------------------------------------//
```

```
    Write(Command,0x0702);
    Write(Data,0x003c);
    Write(Command,0x00ff);
    Write(Data,0x0000);
//-------------------------------------End Vcom Setting-----------------------------------------//
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
    Write(Command,0x0200);
    Write(Data,0x0000);
    Write(Command,0x0201);
    Write(Data,0x0000);
}

Void ST7793_PanelEnterStandby (void)
{
    Write(Command,0x0007);
    Write(Data,0x0000);
    Delayms (50);                                   //Delay 50ms
    Write(Command, 0x0102);
    Write(Data,0x0180);
    Delayms (200);                                  //Delay 200ms
}
Void ST7793_PanelExitStandby (void)
{
    Delayms (200);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Delayms (50);                                   //Delay 50ms
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
}
```

TM3.5”(TM035LYH01) Software Reference Code

```
Void ST7793_PanelInitialCode (void)
{
//------------------------------------ST7793 Reset Sequence-------------------------------------//
      LCD_Nreset=1;
      Delayms (1);                                  //Delay 1ms
      LCD_Nreset=0;
      Delayms (1);                                  //Delay 1ms
      LCD_Nreset=1;
      Delayms (10);
//-----------------------------------Display Control Setting-----------------------------------------//
      delay_ms(200);
      Write(Command,0x0001);
      Write(Data,0x0100);
      Write(Command,0x0003);
      Write(Data,0x9030);
      Write(Command,0x0008);
      Write(Data,0x0808);
      Write(Command,0x0090);
      Write(Data,0x8000);
      Write(Command,0x0400);
      Write(Data,0x6200);
      Write(Command,0x0401);
      Write(Data,0x0001);
//-----------------------------------End Display Control setting--------------------------------------//
//------------------------------ Power Control Registers Initial ----------------------------------//
      Write(Command,0x00ff);
      Write(Data,0x0001);
      Write(Command,0x0102);
      Write(Data,0x01b0);
      Write(Command,0x0710);
      Write(Data,0x0018);
      Write(Command,0x0712);
      Write(Data,0x000f);
      Write(Command,0x0752);
      Write(Data,0x002f);
      Write(Command,0x0759);
      Write(Data,0x0070);
```

```
//---------------------------------End Power Control Registers Initial ----------------------------//
      Delayms (100);
//---------------------------------Display Windows    240 X 400-------------------------------------//
      Write(Command,0x0210);
      Write(Data,0x0000);
      Write(Command,0x0211);
      Write(Data,0x00ef);
      Write(Command,0x0212);
      Write(Data,0x0000);
      Write(Command,0x0213);
      Write(Data,0x018F);
//---------------------------------End Display Windows 240 X 400---------------------------------//
      delay_ms(10);
//-------------------------------------Gamma Cluster Setting-----------------------------------------//
      Write(Command,0x0380);
      Write(Data,0x0000);
      Write(Command,0x0381);
      Write(Data,0x7f12);
      Write(Command,0x0382);
      Write(Data,0x0c03);
      Write(Command,0x0383);
      Write(Data,0x0614);
      Write(Command,0x0384);
      Write(Data,0x1233);
      Write(Command,0x0385);
      Write(Data,0x0000);
      Write(Command,0x0386);
      Write(Data,0x9f12);
      Write(Command,0x0387);
      Write(Data,0x0703);
      Write(Command,0x0388);
      Write(Data,0x0613);
      Write(Command,0x0389);
      Write(Data,0x1233);
//-------------------------------------End Gamma Setting---------------------------------------//
//-------------------------------------Vcom Setting---------------------------------------//
      Write(Command,0x0702);
      Write(Data,0x0052);
      Write(Command,0x00ff);
```

```
    Write(Data,0x0000);
//-------------------------------------End Vcom Setting-----------------------------------------//
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
    Write(Command,0x0200);
    Write(Data,0x0000);
    Write(Command,0x0201);
    Write(Data,0x0000);
}

Void ST7793_PanelEnterStandby (void)
{
    Write(Command,0x0007);
    Write(Data,0x0000);
    Delayms (50);                                   //Delay 50ms
    Write(Command, 0x0102);
    Write(Data,0x0180);
    Delayms (200);                                  //Delay 200ms
}
Void ST7793_PanelExitStandby (void)
{
    Delayms (200);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Delayms (50);                                   //Delay 50ms
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
}
```

TM3.6”(TM036LYH01) Software Reference Code

```
Void ST7793_PanelInitialCode (void)
{
//------------------------------------ST7793 Reset Sequence-------------------------------------//
    LCD_Nreset=1;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=0;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=1;
    Delayms (10);
//-----------------------------------Display Control Setting-----------------------------------------//
    delay_ms(200);
    Write(Command,0x0001);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x9030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x0090);
    Write(Data,0x8000);
    Write(Command,0x0400);
    Write(Data,0x6200);
    Write(Command,0x0401);
    Write(Data,0x0001);
//-----------------------------------End Display Control setting--------------------------------------//
//------------------------------ Power Control Registers Initial ----------------------------------//
    Write(Command,0x00ff);
    Write(Data,0x0001);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Write(Command,0x0710);
    Write(Data,0x0012);
    Write(Command,0x0712);
    Write(Data,0x000f);
    Write(Command,0x0713);
    Write(Data,0x0039);
    Write(Command,0x0752);
    Write(Data,0x002f);
```

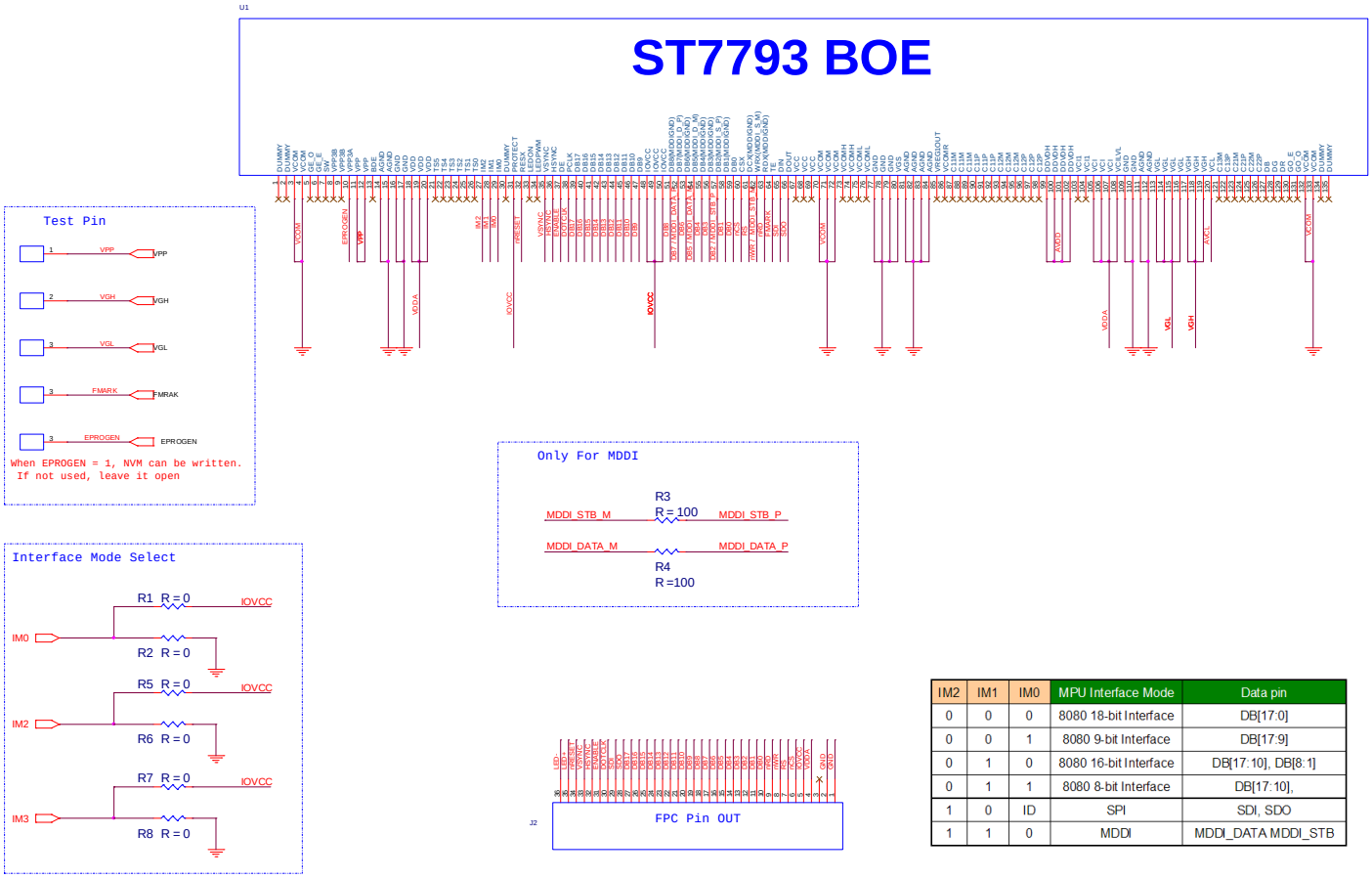
```
        Write(Command,0x0724);
        Write(Data,0x001a);
        Write(Command,0x0759);
        Write(Data,0x0070);
//--------------------------------End Power Control Registers Initial ----------------------------//
        Delayms (100);
//--------------------------------Display Windows    240 X 400-------------------------------------//
        Write(Command,0x0210);
        Write(Data,0x0000);
        Write(Command,0x0211);
        Write(Data,0x00ef);
        Write(Command,0x0212);
        Write(Data,0x0000);
        Write(Command,0x0213);
        Write(Data,0x018F);
//--------------------------------End Display Windows 240 X 400-----------------------------------//
        delay_ms(10);
//-----------------------------------Gamma Cluster Setting-----------------------------------------//
        Write(Command,0x0380);
        Write(Data,0x0000);
        Write(Command,0x0381);
        Write(Data,0x7b11);
        Write(Command,0x0382);
        Write(Data,0x0c04);
        Write(Command,0x0383);
        Write(Data,0x0616);
        Write(Command,0x0384);
        Write(Data,0x1211);
        Write(Command,0x0385);
        Write(Data,0x0000);
        Write(Command,0x0386);
        Write(Data,0xbd0f);
        Write(Command,0x0387);
        Write(Data,0x0805);
        Write(Command,0x0388);
        Write(Data,0x0615);
        Write(Command,0x0389);
        Write(Data,0x1211);
//-----------------------------------End Gamma Setting---------------------------------------------//
```

```
//-------------------------------------Vcom Setting-------------------------------------------//
      Write(Command,0x0702);
      Write(Data,0x003B);
      Write(Command,0x00ff);
      Write(Data,0x0000);
//-------------------------------------End Vcom Setting---------------------------------------//
      Write(Command,0x0007);
      Write(Data,0x0100);
      Delayms (200);                                    //Delay 200ms
      Write(Command,0x0200);
      Write(Data,0x0000);
      Write(Command,0x0201);
      Write(Data,0x0000);
}

Void ST7793_PanelEnterStandby (void)
{
      Write(Command,0x0007);
      Write(Data,0x0000);
      Delayms (50);                                     //Delay 50ms
      Write(Command, 0x0102);
      Write(Data,0x0180);
      Delayms (200);                                    //Delay 200ms
}
Void ST7793_PanelExitStandby (void)
{
      Delayms (200);
      Write(Command,0x0102);
      Write(Data,0x01b0);
      Delayms (50);                                     //Delay 50ms
      Write(Command,0x0007);
      Write(Data,0x0100);
      Delayms (200);                                    //Delay 200ms
}
```

6 BOE 2.8” & 3.0”& 3.97” Panel

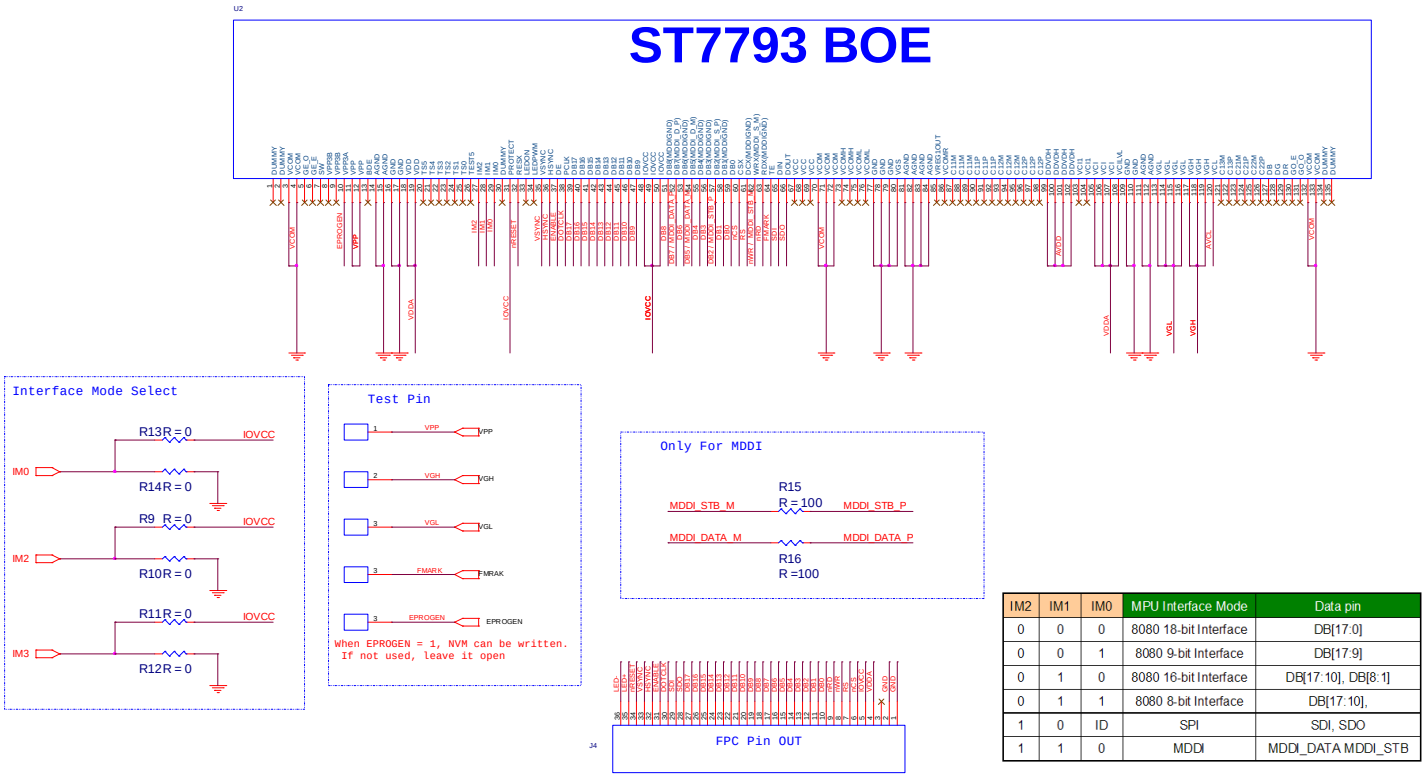
- **BOE2.8”(BT028WQME101) & 3.0”(BF030WQME601) Panel**

Application FPC Circuit



IM2	IM1	IM0	MPU Interface Mode	Data pin
0	0	0	8080 18-bit Interface	DB[17:0]
0	0	1	8080 9-bit Interface	DB[17:9]
0	1	0	8080 16-bit Interface	DB[17:10], DB[8:1]
0	1	1	8080 8-bit Interface	DB[17:10],
1	0	ID	SPI	SDI, SDO
1	1	0	MDDI	MDDI_DATA MDDI_STB

- **BOE 3.97” (BT040WQME601) Panel Application FPC Circuit**



IM2	IM1	IM0	MPU Interface Mode	Data pin
0	0	0	8080 18-bit Interface	DB[17:0]
0	0	1	8080 9-bit Interface	DB[17:9]
0	1	0	8080 16-bit Interface	DB[17:10], DB[8:1]
0	1	1	8080 8-bit Interface	DB[17:10],
1	0	ID	SPI	SDI, SDO
1	1	0	MDDI	MDDI_DATA MDDI_STB

BOE 2.8” (BT028WQME101) Software Reference Code

```
Void ST7793_PanelInitialCode (void)
{
//-------------------------------------ST7793 Reset Sequence-------------------------------------//
      LCD_Nreset=1;
      Delayms (1);                                  //Delay 1ms
      LCD_Nreset=0;
      Delayms (1);                                  //Delay 1ms
      LCD_Nreset=1;
      Delayms (10);
//-----------------------------------Display Control Setting-----------------------------------------//
      delay_ms(200);
      Write(Command,0x0001);
      Write(Data,0x0100);
      Write(Command,0x0003);
      Write(Data,0x9030);
      Write(Command,0x0008);
      Write(Data,0x0808);
      Write(Command,0x0090);
      Write(Data,0x8000);
      Write(Command,0x0400);
      Write(Data,0x6200);
      Write(Command,0x0401);
      Write(Data,0x0001);
//---------------------------------End Display Control setting-------------------------------------//
//------------------------------ Power Control Registers Initial ----------------------------------//
      Write(Command,0x00ff);
      Write(Data,0x0001);
      Write(Command,0x0102);
      Write(Data,0x01b0);
      Write(Command,0x0710);
      Write(Data,0x0018);
      Write(Command,0x0712);
      Write(Data,0x000f);
      Write(Command,0x0752);
      Write(Data,0x001f);
      Write(Command,0x0759);
```

```
        Write(Data,0x0070);
//--------------------------------End Power Control Registers Initial ----------------------------//
        Delayms (100);
//----------------------------------Display Windows    240 X 400-------------------------------------//
        Write(Command,0x0210);
        Write(Data,0x0000);
        Write(Command,0x0211);
        Write(Data,0x00ef);
        Write(Command,0x0212);
        Write(Data,0x0000);
        Write(Command,0x0213);
        Write(Data,0x018F);
//---------------------------------End Display Windows 240 X 400---------------------------------//
        delay_ms(10);
//-------------------------------------Gamma Cluster Setting-----------------------------------------//
        Write(Command,0x0380);
        Write(Data,0x0101);
        Write(Command,0x0381);
        Write(Data,0x4c1e);
        Write(Command,0x0382);
        Write(Data,0x0901);
        Write(Command,0x0383);
        Write(Data,0x0611);
        Write(Command,0x0384);
        Write(Data,0x1211);
        Write(Command,0x0385);
        Write(Data,0x0101);
        Write(Command,0x0386);
        Write(Data,0x6d1e);
        Write(Command,0x0387);
        Write(Data,0x0404);
        Write(Command,0x0388);
        Write(Data,0x0610);
        Write(Command,0x0389);
        Write(Data,0x1211);
//-------------------------------------End Gamma Setting-----------------------------------------//
//-------------------------------------Vcom Setting-----------------------------------------//
        Write(Command,0x0702);
        Write(Data,0x0045);
```

```
    Write(Command,0x00ff);
    Write(Data,0x0000);
//-------------------------------------End Vcom Setting--------------------------------------------//
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
    Write(Command,0x0200);
    Write(Data,0x0000);
    Write(Command,0x0201);
    Write(Data,0x0000);
}

Void ST7793_PanelEnterStandby (void)
{
    Write(Command,0x0007);
    Write(Data,0x0000);
    Delayms (50);                                   //Delay 50ms
    Write(Command, 0x0102);
    Write(Data,0x0180);
    Delayms (200);                                  //Delay 200ms
}
Void ST7793_PanelExitStandby (void)
{
    Delayms (200);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Delayms (50);                                   //Delay 50ms
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
}
```

BOE 3.0” (BF030WQME601) Software Reference Code

```
Void ST7793_PanelInitialCode (void)
{
//-------------------------------------ST77793 Reset Sequence-------------------------------------//
    LCD_Nreset=1;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=0;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=1;
    Delayms (10);
//-----------------------------------Display Control Setting-----------------------------------------//
    delay_ms(200);
    Write(Command,0x0001);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x9030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x0090);
    Write(Data,0x8000);
    Write(Command,0x0400);
    Write(Data,0x6200);
    Write(Command,0x0401);
    Write(Data,0x0000);
//---------------------------------End Display Control setting-------------------------------------//
//------------------------------ Power Control Registers Initial ----------------------------------//
    Write(Command,0x00ff);
    Write(Data,0x0001);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Write(Command,0x0710);
    Write(Data,0x0018);
    Write(Command,0x0712);
    Write(Data,0x000f);
    Write(Command,0x0752);
    Write(Data,0x002f);
    Write(Command,0x0759);
```

```
        Write(Data,0x0070);
//--------------------------------End Power Control Registers Initial ----------------------------//
        Delayms (100);
//----------------------------------Display Windows    240 X 400-------------------------------------//
        Write(Command,0x0210);
        Write(Data,0x0000);
        Write(Command,0x0211);
        Write(Data,0x00ef);
        Write(Command,0x0212);
        Write(Data,0x0000);
        Write(Command,0x0213);
        Write(Data,0x018F);
//---------------------------------End Display Windows 240 X 400---------------------------------//
        delay_ms(10);
//-------------------------------------Gamma Cluster Setting-----------------------------------------//
        Write(Command,0x0380);
        Write(Data,0x0600);
        Write(Command,0x0381);
        Write(Data,0xcc13);
        Write(Command,0x0382);
        Write(Data,0x0c0a);
        Write(Command,0x0383);
        Write(Data,0x0a00);
        Write(Command,0x0384);
        Write(Data,0x1022);
        Write(Command,0x0385);
        Write(Data,0x0600);
        Write(Command,0x0386);
        Write(Data,0xcd11);
        Write(Command,0x0387);
        Write(Data,0x0e07);
        Write(Command,0x0388);
        Write(Data,0x0a00);
        Write(Command,0x0389);
        Write(Data,0x1022);
//-------------------------------------End Gamma Setting-----------------------------------------//
//-------------------------------------Vcom Setting-----------------------------------------//
        Write(Command,0x0702);
        Write(Data,0x0057);
```

```
    Write(Command,0x00ff);
    Write(Data,0x0000);
//-------------------------------------End Vcom Setting--------------------------------------------//
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
    Write(Command,0x0200);
    Write(Data,0x0000);
    Write(Command,0x0201);
    Write(Data,0x0000);
}

Void ST7793_PanelEnterStandby (void)
{
    Write(Command,0x0007);
    Write(Data,0x0000);
    Delayms (50);                                   //Delay 50ms
    Write(Command, 0x0102);
    Write(Data,0x0180);
    Delayms (200);                                  //Delay 200ms
}
Void ST7793_PanelExitStandby (void)
{
    Delayms (200);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Delayms (50);                                   //Delay 50ms
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
}
```

BOE 3.97” (BT040WQME601) Software Reference Code

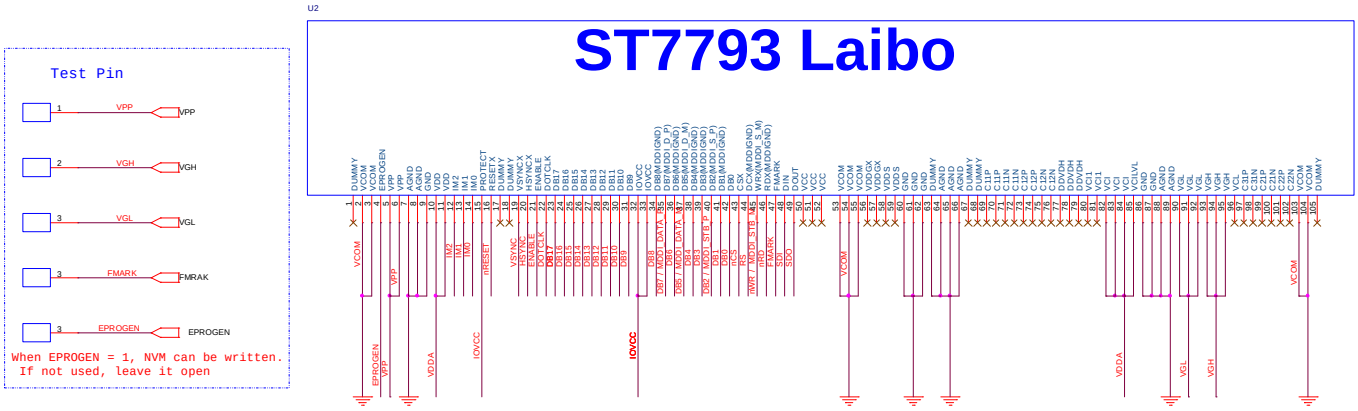
```
Void ST7793_PanelInitialCode (void)
{
//-------------------------------------ST77793 Reset Sequence-------------------------------------//
      LCD_Nreset=1;
      Delayms (1);                                  //Delay 1ms
      LCD_Nreset=0;
      Delayms (1);                                  //Delay 1ms
      LCD_Nreset=1;
      Delayms (10);
//-----------------------------------Display Control Setting-----------------------------------------//
      delay_ms(200);
      Write(Command,0x0001);
      Write(Data,0x0100);
      Write(Command,0x0003);
      Write(Data,0x1030);
      Write(Command,0x0008);
      Write(Data,0x0808);
      Write(Command,0x0090);
      Write(Data,0x8000);
      Write(Command,0x0400);
      Write(Data,0x6200);
      Write(Command,0x0401);
      Write(Data,0x0001);
//---------------------------------End Display Control setting-------------------------------------//
//------------------------------ Power Control Registers Initial ----------------------------------//
      Write(Command,0x00ff);
      Write(Data,0x0001);
      Write(Command,0x0102);
      Write(Data,0x01b0);
      Write(Command,0x0710);
      Write(Data,0x0014);
      Write(Command,0x0712);
      Write(Data,0x000f);
      Write(Command,0x0752);
      Write(Data,0x001f);
      Write(Command,0x0759);
```

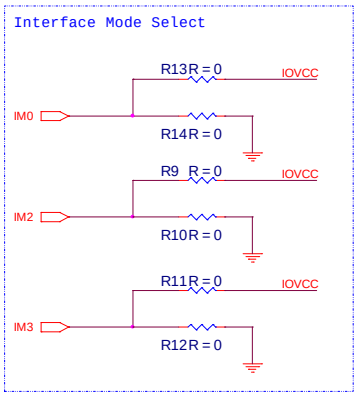
```
        Write(Data,0x0070);
//---------------------------------End Power Control Registers Initial ----------------------------//
        Delayms (100);
//----------------------------------Display Windows    240 X 400-------------------------------------//
        Write(Command,0x0210);
        Write(Data,0x0000);
        Write(Command,0x0211);
        Write(Data,0x00ef);
        Write(Command,0x0212);
        Write(Data,0x0000);
        Write(Command,0x0213);
        Write(Data,0x018F);
//----------------------------------End Display Windows 240 X 400---------------------------------//
        delay_ms(10);
//-------------------------------------Gamma Cluster Setting-----------------------------------------//
        Write(Command,0x0380);
        Write(Data, 0x0303);
        Write(Command,0x0381);
        Write(Data, 0x481f);
        Write(Command,0x0382);
        Write(Data,0x0803);
        Write(Command,0x0383);
        Write(Data, 0x030f);
        Write(Command,0x0384);
        Write(Data, 0x2230);
        Write(Command,0x0385);
        Write(Data, 0x0300);
        Write(Command,0x0386);
        Write(Data, 0x491e);
        Write(Command,0x0387);
        Write(Data, 0x0703);
        Write(Command,0x0388);
        Write(Data, 0x070f);
        Write(Command,0x0389);
        Write(Data,0x2230);
//-------------------------------------End Gamma Setting---------------------------------------//
//-------------------------------------Vcom Setting---------------------------------------//
        Write(Command,0x0702);
        Write(Data,0x0060);
```

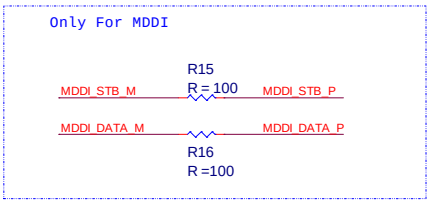
```
    Write(Command,0x00ff);
    Write(Data,0x0000);
//-------------------------------------End Vcom Setting--------------------------------------------//
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
    Write(Command,0x0200);
    Write(Data,0x0000);
    Write(Command,0x0201);
    Write(Data,0x0000);
}

Void ST7793_PanelEnterStandby (void)
{
    Write(Command,0x0007);
    Write(Data,0x0000);
    Delayms (50);                                   //Delay 50ms
    Write(Command, 0x0102);
    Write(Data,0x0180);
    Delayms (200);                                  //Delay 200ms
}
Void ST7793_PanelExitStandby (void)
{
    Delayms (200);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Delayms (50);                                   //Delay 50ms
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
}
```

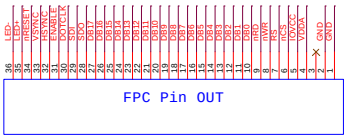
7 Laibo 3.7” Panel

- **Laibo 3.7”(S37001A106G46B1T5B3) Panel Application FPC Circuit**









IM2	IM1	IM0	MPU Interface Mode	Data pin
0	0	0	8080 18-bit Interface	DB[17:0]
0	0	1	8080 9-bit Interface	DB[17:9]
0	1	0	8080 16-bit Interface	DB[17:10], DB[8:1]
0	1	1	8080 8-bit Interface	DB[17:10],
1	0	ID	SPI	SDI, SDO
1	1	0	MDDI	MDDI_DATA MDDI_STB

Laibo 3.7” Software Reference Code

```
Void ST7793_PanelInitialCode (void)
{
//-------------------------------------ST77793 Reset Sequence-------------------------------------//
    LCD_Nreset=1;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=0;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=1;
    Delayms (10);
//-----------------------------------Display Control Setting-----------------------------------------//
    delay_ms(200);
    Write(Command,0x0001);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x9030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x0090);
    Write(Data,0x8000);
    Write(Command,0x0400);
    Write(Data,0x6200);
    Write(Command,0x0401);
    Write(Data,0x0001);
//---------------------------------End Display Control setting-------------------------------------//
//------------------------------ Power Control Registers Initial ----------------------------------//
    Write(Command,0x00ff);
    Write(Data,0x0001);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Write(Command,0x0710);
    Write(Data,0x0014);
    Write(Command,0x0712);
    Write(Data,0x000f);
    Write(Command,0x0752);
    Write(Data,0x002f);
    Write(Command,0x0759);
```

```
    Write(Data,0x0070);
    Write(Command,0x0724);
    Write(Data,0x001a);

//---------------------------------End Power Control Registers Initial ----------------------------//
    Delayms (100);
//---------------------------------Display Windows    240 X 400-------------------------------------//
    Write(Command,0x0210);
    Write(Data,0x0000);
    Write(Command,0x0211);
    Write(Data,0x00ef);
    Write(Command,0x0212);
    Write(Data,0x0000);
    Write(Command,0x0213);
    Write(Data,0x018F);
//---------------------------------End Display Windows 240 X 400---------------------------------//
    delay_ms(10);
//-------------------------------------Gamma Cluster Setting-----------------------------------------//
    Write(Command,0x0380);
    Write(Data,0x0100);
    Write(Command,0x0381);
    Write(Data,0x7c1d);
    Write(Command,0x0382);
    Write(Data,0x0808);
    Write(Command,0x0383);
    Write(Data,0x0610);
    Write(Command,0x0384);
    Write(Data,0x1222);
    Write(Command,0x0385);
    Write(Data,0x0001);
    Write(Command,0x0386);
    Write(Data,0x9c1d);
    Write(Command,0x0387);
    Write(Data,0x0702);
    Write(Command,0x0388);
    Write(Data,0x0510);
    Write(Command,0x0389);
    Write(Data,0x1223);
//-------------------------------------End Gamma Setting---------------------------------------------//
```

```
//-------------------------------------Vcom Setting-------------------------------------------//
      Write(Command,0x0702);
      Write(Data,0x003e);
      Write(Command,0x00ff);
      Write(Data,0x0000);
//-------------------------------------End Vcom Setting---------------------------------------//
      Write(Command,0x0007);
      Write(Data,0x0100);
      Delayms (200);                                    //Delay 200ms
      Write(Command,0x0200);
      Write(Data,0x0000);
      Write(Command,0x0201);
      Write(Data,0x0000);
}

Void ST7793_PanelEnterStandby (void)
{
      Write(Command,0x0007);
      Write(Data,0x0000);
      Delayms (50);                                     //Delay 50ms
      Write(Command, 0x0102);
      Write(Data,0x0180);
      Delayms (200);                                    //Delay 200ms
}
Void ST7793_PanelExitStandby (void)
{
      Delayms (200);
      Write(Command,0x0102);
      Write(Data,0x01b0);
      Delayms (50);                                     //Delay 50ms
      Write(Command,0x0007);
      Write(Data,0x0100);
      Delayms (200);                                    //Delay 200ms
}
```

8 Sharp 2.9” Panel

● Sharp 2.9” Software Reference Code

```
Void ST7793_PanelInitialCode (void)
{
//-------------------------------------ST77793 Reset Sequence-------------------------------------//
    LCD_Nreset=1;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=0;
    Delayms (1);                                    //Delay 1ms
    LCD_Nreset=1;
    Delayms (10);
//-----------------------------------Display Control Setting-----------------------------------------//
    delay_ms(200);
    Write(Command,0x0001);
    Write(Data,0x0100);
    Write(Command,0x0003);
    Write(Data,0x0030);
    Write(Command,0x0008);
    Write(Data,0x0808);
    Write(Command,0x000c);
    Write(Data,0x0110);
    Write(Command,0x0090);
    Write(Data,0x8000);
    Write(Command,0x0400);
    Write(Data,0x6a00);
    Write(Command,0x0401);
    Write(Data,0x0000);
//---------------------------------End Display Control setting-------------------------------------//
//------------------------------- Power Control Registers Initial ----------------------------------//
    Write(Command,0x00ff);
    Write(Data,0x0001);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Write(Command,0x0710);
    Write(Data,0x0016);
    Write(Command,0x0712);
```

```
        Write(Data,0x0007);
        Write(Command,0x0752);
        Write(Data,0x003f);
        Write(Command,0x0759);
        Write(Data,0x0070);
        Write(Command,0x0724);
        Write(Data,0x0018);

//----------------------------------End Power Control Registers Initial ----------------------------//
        Delayms (100);
//----------------------------------Display Windows    240 X 400-------------------------------------//
        Write(Command,0x0210);
        Write(Data,0x0000);
        Write(Command,0x0211);
        Write(Data,0x00ef);
        Write(Command,0x0212);
        Write(Data,0x0000);
        Write(Command,0x0213);
        Write(Data,0x01aF);
//----------------------------------End Display Windows 240 X 400---------------------------------//
        delay_ms(10);
//-------------------------------------Gamma Cluster Setting-----------------------------------------//
        Write(Command,0x0380);
        Write(Data,0x0100);
        Write(Command,0x0381);
        Write(Data,0x0303);
        Write(Command,0x0382);
        Write(Data,0x1903);
        Write(Command,0x0383);
        Write(Data,0x070f);
        Write(Command,0x0384);
        Write(Data,0x1311);
        Write(Command,0x0385);
        Write(Data,0x0100);
        Write(Command,0x0386);
        Write(Data,0x140b);
        Write(Command,0x0387);
        Write(Data,0x1301);
        Write(Command,0x0388);
```

```
    Write(Data,0x070f);
    Write(Command,0x0389);
    Write(Data,0x1311);
//-------------------------------------End Gamma Setting-----------------------------------------//
//-------------------------------------Vcom Setting----------------------------------------------//
    Write(Command,0x0702);
    Write(Data,0x0047);
    Write(Command,0x00ff);
    Write(Data,0x0000);
//-------------------------------------End Vcom Setting------------------------------------------//
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
    Write(Command,0x0200);
    Write(Data,0x0000);
    Write(Command,0x0201);
    Write(Data,0x0000);
    Write(Command,0x0202);
}

Void ST7793_PanelEnterStandby (void)
{
    Write(Command,0x0007);
    Write(Data,0x0000);
    Delayms (50);                                   //Delay 50ms
    Write(Command, 0x0102);
    Write(Data,0x0180);
    Delayms (200);                                  //Delay 200ms
}
Void ST7793_PanelExitStandby (void)
{
    Delayms (200);
    Write(Command,0x0102);
    Write(Data,0x01b0);
    Delayms (50);                                   //Delay 50ms
    Write(Command,0x0007);
    Write(Data,0x0100);
    Delayms (200);                                  //Delay 200ms
}
```

9 Support Panel Cell Model

No	Glass Company	Model name	Size
	CPT	CLAF030JB01A0	3.0”
	CPT	CLAF032JC01__00XA	3.2”
	CPT	CLAG036JA01AX	3.6”
	HSD	HSD030BAW1	3.0”
	HSD	HSD032BAW2-A	3.2”
	HSD	HSD036FAW1-A	3.6”
	HSD	HSD040FAW1-B	4.0”
	TM	TM032LYS02	3.2”
	TM	TM036LYH01	3.6”
	TM	TM035LYH01	3.5”
	BOE	BT028WQME601	2.8”
	BOE	BF030WQME601	3.0”
	BOE	BT040WQME601	3.97”
	LGD	LH320WQ1- SH01	3.2”
	Laibo	S37001A106G46B1T5B3	3.7”

10 History

ST77793 Application Note Revision History		
Version	Data	Description
0.0	2012/04	First Issue
0.1	2012/04	Add Application Circuit & initial code
0.2	2012/04	Add TM & CPT Application Circuit
0.3	2012/05	Add HS 3.6” & CMI 3.2” initial code Add CPT 3.2” & Modify BOE 3.97” Circuit
0.4	2012/05	Add Laibo Application circuit & initial code
0.5	2012/07	Modified IOVCC Add TM035LYH01/ TM036LYH01/TM032LYS01 initial code Add Sharp 2.9” initial code
0.6	2012/08	Modified TM036LYH01 initial code Modified TM032LYS02 initial code
0.7	2012/09	Modified BF030WQME601 initial code