



Initialisation Codes for the 4D Systems **4DLCD-24QA** Display

Command Defines:

```
#def READ_DISPLAY_PIXEL_FORMAT          0x0C
#def SLEEP_OUT                          0x11
#def GAMMA_SET                          0x26
#def DISPLAY_OFF                        0x28
#def DISPLAY_ON                         0x29
#def SET_COLUMN_ADDRESS                 0x2A
#def SET_PAGE_ADDRESS                   0x2B
#def WRITE_MEMORY                       0x2C
#def READ_MEMORY                        0x2E
#def MEMORY_ACCESS_CONTROL              0x36
#def WRITE_MEMORY_CONTINUE              0x3C
#def READ_MEMORY_CONTINUE               0x3E
#def PIXEL_FORMAT_SET                   0x3A
#def FRAME_RATE_CONTROL                 0xB1
#def DISPLAY_FUNCTION_CONTROL           0xB6
#def POWER_CONTROL_1                    0xC0
#def POWER_CONTROL_2                    0xC1
#def VCOM_CONTROL_1                     0xC5
#def VCOM_CONTROL_2                     0xC7
#def POWER_CONTROL_A                     0xCB
#def POWER_CONTROL_B                     0xCF
#def POSITIVE_GAMMA_CORRECTION          0xE0
#def NEGATIVE_GAMMA_CORRECTION         0xE1
#def DRIVER_TIMING_CONTROL_A            0xE8
#def DRIVER_TIMING_CONTROL_B            0xEA
#def POWER_ON_SEQUENCE_CONTROL          0xED
#def UNDOCUMENTED_0xEF                  0xEF
#def ENABLE_3G                          0xF2
#def INTERFACE_CONTROL                  0xF6
#def PUMP_RATIO_CONTROL                  0xF7
```

Init Code (Command, Data1, Data2... DataN)

```
INTERFACE_CONTROL, 0x01, 0x01, 0x00,
POWER_CONTROL_B, 0x00, 0xC1, 0x30,
POWER_ON_SEQUENCE_CONTROL, 0x64, 0x03, 0x12, 0x81,
DRIVER_TIMING_CONTROL_A, 0x85, 0x00, 0x7A,
POWER_CONTROL_A, 0x39, 0x2C, 0x00, 0x34, 0x02,
PUMP_RATIO_CONTROL, 0x20,
DRIVER_TIMING_CONTROL_B, 0x00, 0x00,
POWER_CONTROL_1, 0x26,
POWER_CONTROL_2, 0x11,
VCOM_CONTROL_1, 0x39, 0x37,
VCOM_CONTROL_2, 0xA6,
MEMORY_ACCESS_CONTROL, 0x08,
DISPLAY_FUNCTION_CONTROL, 0x0A, 0xA2,
FRAME_RATE_CONTROL, 0x00, 0x1B,
ENABLE_3G, 0x00,
GAMMA_SET, 0x01,
PIXEL_FORMAT_SET, 0x55,
POSITIVE_GAMMA_CORRECTION, 0x0f, 0x2D, 0x0E, 0x08, 0x12, 0x0A, 0x3D, 0x95, 0x31, 0x04, 0x10, 0x09, 0x09, 0x0D, 0x00,
NEGATIVE_GAMMA_CORRECTION, 0x00, 0x12, 0x17, 0x03, 0x0d, 0x05, 0x2c, 0x44, 0x41, 0x05, 0x0f, 0x0a, 0x30, 0x32, 0x0f,
WRITE_MEMORY,
SLEEP_OUT, 0x0006,
DelayMS(120),
DISPLAY_ON
```