Initialisation Codes for the 4D Systems **4DLCD-32QA** 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

Init Code (Command, Data1, Data2… DataN)

```
INTERFACE_CONTROL,       0x01, 0x01, 0x00,
UNDOCUMENTED_0xEF,   0x03, 0x80, 0x02,
POWER_CONTROL_B,   0x00, 0xF2, 0xA0,
POWER_ON_SEQUENCE_CONTROL, 0x64, 0x03, 0x12, 0x81,
POWER_CONTROL_A,   0x39, 0x2C, 0x00, 0x34, 0x02,
DRIVER_TIMING_CONTROL_B, 0x00, 0x00,
DRIVER_TIMING_CONTROL_A,   0x85, 0x10, 0x7A,
POWER_CONTROL_1,   0x21,
POWER_CONTROL_2,   0x11,
VCOM_CONTROL_1,   0x3F, 0x3C,
VCOM_CONTROL_2,   0xC6,
PIXEL_FORMAT_SET,   0x55,
MEMORY_ACCESS_CONTROL, 0x00,
FRAME_RATE_CONTROL,   0x00, 0x1B,
DISPLAY_FUNCTION_CONTROL, 0x0A, 0xA2,
ENABLE_3G,   0x00,
GAMMA_SET,   0x01,
POSITIVE_GAMMA_CORRECTION, 0x0f, 0x24, 0x21, 0x0F, 0x13, 0x0A, 0x52, 0xC9, 0x3B, 0x05, 0x00, 0x00, 0x00, 0x00, 0x00,
NEGATIVE_GAMMA_CORRECTION, 0x00, 0x1B, 0x1E, 0x00, 0x0C, 0x04, 0x2F, 0x36, 0x44, 0x0a, 0x1F, 0x0F, 0x3F, 0x3F, 0x0F,
WRITE_MEMORY,
SLEEP_OUT,
DelayMS 120,
DISPLAY_ON
```

Porting of this Initialisation code to your chosen hosts language will be required. Please refer to the datasheet for the Driver IC used on the display, for more information. (ILI9341)