

LASCAR electronics

Display Solutions







PanelPilot

PanelPilot ACE

PanelPilotACE

Off the shelf hardware and intuitive design software for rapid development of your next display project

Software Solution

Code-free development of advanced display applications

From background images to text elements, analog style meters, touch screen navigation, complex logic statements, serial communications, data logging, trend graphs and maths functionality, PanelPilotAce Design Software allows users to build multi-screen interfaces without writing a line of code. The PanelPilotACE Design Studio software is free and available to download from **www.panelpilot.com.**



The software includes a library of pre-defined elements such as meters, buttons and switches. Alternatively you can create your own content by combining behavior and graphical elements. The software includes support for transparency and multiple layers.

Hardware elements are dragged from the library into a function builder where associations with graphical elements (such as a needle on a meter) can be defined. Set scaling for analogue inputs, define alarm triggers and behaviors for digital I/O.

The software includes a 'Preview in Emulator' function which emulates the hardware inputs/outputs allowing you to test projects prior to upload. Projects are uploaded to the display via USB.

Hardware Solution

4.3" & 7" display with analog, digital, PWM and serial interfaces

The SGD 43-A and SGD 70-A are the first in a range of PanelPilotACE compatible displays and panel meters designed specifically to run projects created in the PanelPilotACE Design Studio. The displays feature capacitive touch screen and a wealth of hardware interfaces including four 16 bit bi-polar analog inputs, eight digital input/output pins, two alarm outputs, four PWM outputs and RS232 serial port.



SGD 43-A Specifications

Display	4.3" TFT with 262k colors
Touch screen	Capacitive touch screen
Resolution	480 x 272px
Processor	Freescale i.MX283 (454MHz, 32bit, ARM 9)
Operating temperature	32 to 104°F (0 to 40°C)
Supply	5 to 30V d.c. (300mA typical at 5V d.c.)
Outside Dimensions	119 x 80 x 20mm (4.69 x 3.14 x 0.78")

SGD 70-A Specifications

Display	7.0" TFT with 16.7M colors
Touch screen	Capacitive touch screen
Resolution	1024 x 600px
Processor	Freescale i.MX6XSolo (ARM Cortex A9 @800MHz & Cortex M4 @227MHz)
Operating temperature	32 to 104°F (0 to 40°C)
Supply	5 to 30V d.c. (500mA typical at 5V d.c.)
Outside Dimensions	186 x 122 x 21mm (7.3" x 4.3" x 0.8")



PanelPilotACE Design Software

The suite of tools available in the Design Studio and the sleek design of the displays themselves makes the PanelPilotACE platform a great choice whether you're developing an interactive public display, a control unit for an industrial application or pretty much anything in between.

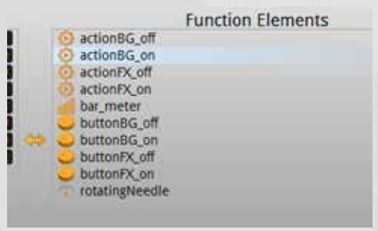


1. Design your interface



Add graphical elements to create a unique looking project with navigation, animation and images.

2. Configure your hardware



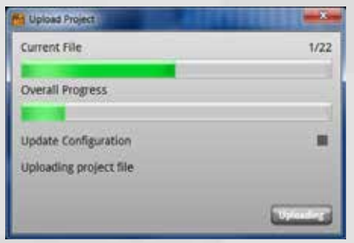
Assign behaviors to the graphical elements to interface with the hardware inputs and outputs.

3. Emulate in the software



Test your project in software to see the graphical and hardware elements working together.

4. Upload to your display



Connect your display via USB and upload your project.

5. Panel mount and connect to your application



Fix in your panel and wire to the display using screw terminals and dual-in-line pins.

6. Application complete



Your PanelPilotACE is now ready to use.

Development Kit

Get your project off the ground

The development kits, SGD 43-A-DK+ and SGD 70-A DK+ are the best choice if you are starting to develop on the PanelPilotACE platform. It includes all you need to begin: a PanelPilotACE display module, a development board, and a USB cable. The board itself provides switches, dials, LEDs and screw terminal connections for all the input and output functionality of your PanelPilotACE.



SGD 43-A-DK+

S43-TP



Four channel temperature monitoring and logging with PanelPilotACE

The S43-TP and S70-TP are accessories to the PanelPilotACE range of compatible displays and panel meters and are compatible with all PanelPilotACE display modules. The S43-TP and S70-TP mount on the rear of the PanelPilotACE and provide up to four thermistor inputs which can then be utilized within the free PanelPilotACE Design Studio software to measure, display, log and graph temperature readings.

The S43-TP and S70-TP are designed to work seamlessly with Lascar Electronics' EasyLog thermistor probes which are available in a variety of lengths and accuracy specifications as well as bottle formats for use in vaccine monitoring applications. Other thermistor types can be used by adjusting the calculation values in the Design Studio software.



Custom Design Service

If you're really under pressure to finish a design, why not make use of Lascar's Custom Design Service for PanelPilotACE to deliver your solution? Provide us with a description of your display requirements and we can complete the design for you. Forget months of coding and an enormous development bill. Lascar's unique PanelPilotAce software turns months of work into weeks, days or even hours giving you the quickest route to your new display at a fraction of the cost of typical custom design.

PanelPilot

Your Fastest Route to a Graphics Display

PanelPilot is a unique Windows-based software platform that allows users to configure and customize a range of Lascar-compatible color displays with the simple click of a mouse.

Connect the display to the computer via USB cable and select a display configuration from a choice of various analog, digital and bar graph meter styles including many touch-screen options. Then choose preferable display colors, text labels or scaling options needed. Once all selections have been made using this simple click-through software, save the custom configuration and upload it to the display.

Features

- Wizard-based software allows displays to be customized in seconds
- Choose from an ever-increasing library of configurations
- Compatible with a range of low-cost TFT display modules
- Dual-analog input, touch-screen, I²C and SPI capabilities
- 4-20 mA measurement options
- Optional thermocouple add-on board for temperature measurement
- USB connection for configuration and customization
- No programming skills required to use



Easy to Use

1 Configurations

Users choose from an ever-increasing library of configurations including analog, digital and bar graph styles with single or dual analogue inputs. Each PanelPilot user will automatically receive access to the latest configurations and updates each time they open the PanelPilot software.



2 Colours & Labels

Every element of the configuration can be individually colored. On certain configurations the 'fX' button will create a gradient fill across the elements. Text labels are also fully editable.



3 Scaling

Voltage input levels can be set using the software. This removes the need for scaling resistors on input voltages up to 40Vd.c.



4 Start Up Screen

On power-up, a PanelPilot display can be set to show an image of your choice, such as a logo.



5 Upload Configuration

Connect a PanelPilot compatible display to the PC with a USB cable and upload the configuration. Customized configurations can also be saved for future use.



6 Connect

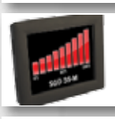
Your PanelPilot compatible display now has your configuration saved in memory and can be connected to your application. You can reconfigure your display at any time. Just connect via USB and run through the steps above.



PanelPilot Compatible Displays & Accessories



SGD 24-M
2.4" PanelPilot-Compatible Smart Graphics Display
SGD 24-M420
2.4" PanelPilot-Compatible 4-20mA Display



SGD 35-M
3.5" PanelPilot-Compatible Smart Graphics Display
SGD 35-M420
3.5" PanelPilot-Compatible 4-20mA Display



SGD ADPT-420
Dual Channel 4-20mA Isolation Module for PanelPilot-Compatible Displays



SGD 28-M
2.8" PanelPilot-Compatible Smart Graphics Display
SGD 28-M420
2.8" PanelPilot Compatible 4-20mA Display



SGD 24-M-IP
2.4" Waterproof PanelPilot-Compatible Display
SGD 24-M-IP420
2.4" Waterproof Current Loop Indicator PanelPilot-Compatible display



SGD ADPT-TC
Thermocouple Conditioning Module for PanelPilot-Compatible Displays

Selection of Available Meter Styles



SGD-24-M-IP

Waterproof PanelPilot Display

Also programmed using PanelPilot software, the SGD 24-M-IP is an IP67/NEMA 6 graphics display. Completely waterproof from the front and rear, this 2.4" display has a rugged and scratch resistant Corning® Gorilla® Glass window and IP67 12-way connector supplied on the back of the product.

4-20mA version also available.



SGD 24-M-IP & SGD 24-M-IP420

Panel Instruments

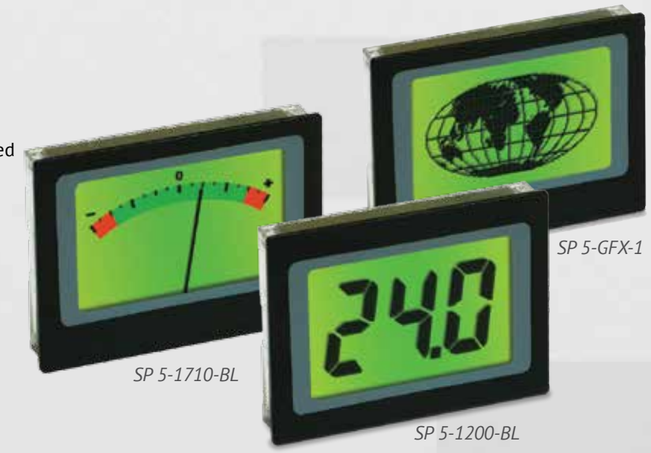


Lascar has an extensive range of LCD and LED voltmeters, 4-20mA indicators, temperature indicators, data displays and graphics modules for use in sensors, process and test & measurement applications.

Low Profile, Splashproof Displays

The larger SP5 Series includes 3-digit, 2-wire signal powered voltmeters, a 17 segment, analogue-style LCD panel meter and 128 x 64 pixel graphic dot matrix display.

The SP Series voltmeters are available in LCD and LED format with 12-pin modules allowing more modes of operation. 9-pin versions are lower cost, easier to use and more suited to new designs. All modules when fitted with the rubber seal supplied are splashproof protected from the front.



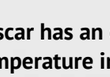
SP 5-GFX-1

SP 5-1710-BL

SP 5-1200-BL

SP 5-1710-BL
0-1Vd.c. Full Scale, Analogue Style Display, Splashproof, Screw Terminal Connection

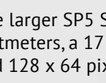
SP 5-GFX-1
128 x 64 Pixel Graphic Dot Matrix Display with Splashproof Protection



SP 300
3½ Digit 200mV LED Voltmeter, 9 Pin



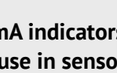
SP 200
200mVd.c. Full Scale, LED backlit, 12 Pin DIL Connection



SP 400-BLUE
3½ Digit 200mV Blue Backlit LCD Voltmeter

SP 5-1200-BL / SP 5-1200-40
3 digit 4-25V or 4-40V Signal Powered Meters with Screw Terminals and Splashproof Protection

SP 100
200mVd.c. Full Scale, Clip Mounted, 12 Pin DIL Connection



SP 300-BLUE
3½ Digit 200mV Blue LED Voltmeter

SP 400
3½ Digit 200mV Backlit LCD Voltmeter, 9 Pin

SP 300-BLUE *SP 400* *SP 400-BLUE*

Round Hole Fitting With Waterproof Option

The EM series meters are fitted with a threaded stud which allows mounting of the product through a 5.5 mm hole. A rubber seal (supplied) provides splashproof protection when fitted between the meter and mounting panel.



EMA 1710

EM32-1B



EMV 1125
200mVd.c. Full Scale, Round Hole Mounted, Wire Connections



EMC 1500
Elapsed Hour LCD Digital Panel Meter



EMT 1900
Internal NTC Thermistor LCD Thermometer with External Thermistor Option



EMV 1200 / EMV 1200-40
3 digit, 4-25V or 4-40V Signal Powered (Two Wire) LCD Digital Panel Meters



EMA 1710
Analogue Style 1V LCD Voltmeter



EMV 1025S-01
200mV Full Scale, Round Hole Mounted, Wire Connections

The waterproof, EM32 series is designed to be panel mounted with a 32.5 mm dia. cut-out. The metal bezel and rubber seal provide NEMA 4X/IP67 protection once the module is fitted into a panel and secured with the nut provided. These products are designed so no soldering is required. Connection is via screw terminals and options are selected via jumper links.



EM32-1B
Waterproof, 3½ Digit, 200mV LCD Voltmeter



EM32-1B-LED
Waterproof, 3½ Digit, 200mV LED Voltmeter



EM32-1900
Waterproof, 3½ Digit, LCD Thermometer



NTC Probe-1900
10K NTC Thermistor Probe for use with EM32-1900 and EMT 1900

Large Displays with Waterproof Options

This range of LCD and LED instruments includes 3½ digit, ±200 mVd.c. full scale reading LCD voltmeters, a 500 Va.c. voltmeter, a 4-20 mA loop powered meter and LED voltmeter. Optional NEMA 4X rated alloy bezels fit all meters.



DPM 750S-BL

DPM 950



DPM 742-BL
4-20 mA Loop Powered, LED Backlit, Bezel Mounted



DPM 942-BL
4-20 mA Loop Powered LCD, Backlit, Bezel Mounted



DPM 959B
3½ Digit LED Voltmeter



BEZ 700 IP
Optional NEMA 4X bezel for 700 Series Products



DPM 750S-BL
200mVd.c. Full Scale, LED Backlit, Annunciators, Bandgap Reference, Bezel Mounted



DPM 950 / DPM 950S
200mVd.c. Full Scale, LED Backlit, Bezel Mounted. Single Rail Option (DPM 950S).



DPM 970
500 Va.c. Full Scale, LED Backlit, Digital Hold, Bezel Mounted



BEZ 900-IP
Optional NEMA 4X bezel for 900 Series Products

Enhanced LCD Displays for Low Light Conditions

This range of 3½ digit displays features an enhanced black LCD with white LED backlighting ensuring excellent readability under low light conditions with minimal power consumption.

Available in three sizes, each unit features 200mVd.c. measurement range, auto-zero, auto-polarity, user-selectable decimal points and a negative rail generator enabling the meters to measure a signal referenced to its own power supply GND.



DPM 750S-EB-W

DPM 950S-EB Series

SP 400-EB Series



SP 400-EB-W
3½ Digit LCD Voltmeter Module with White Backlighting



DPM 750S-EB-W
Mid Size, 3½ Digit LCD Voltmeter with White Backlighting



DPM 950S-EB-W
Large, 3½ Digit, 200mV LED Voltmeter with White Backlighting

Indicators Red/ Green Status

The DPM 950S-FPSI and DPM 942-FPSI are ideal for use in go-stop applications. During standard operation the backlight is green, however as a reading moves outside the user programmable thresholds, the backlight will turn red. Both products can be fitted with optional NEMA 4X-rated bezels.



DPM 950S-FPSI & DPM 942 FPSI



DPM 942-FPSI
4-20mA Loop Meter with Programmable Backlighting



DPM 950S-FPSI
3½ Digit LCD Voltmeter with Programmable Backlighting

Low Cost Voltmeters for OEMs

The V 1, V 125 and V 600 modules are very low cost, 3½ digit LCD displays with 7-12 Vd.c. operation, a ±200 mVd.c. full scale reading and typical accuracy of 0.25% V (±3 counts). Each product is supplied with a mounting bezel and is available individually or in packs of 10 for even greater savings.



V 600



OEM 1B-LED



V 1 / V 1 PK OF TEN
200mVd.c. Full Scale, Bezel Mounted



V 600 / V 600 PK OF TEN
200mVd.c. Full Scale, Bezel Mounted



V 125 / V 125 PK OF TEN
200mVd.c. Full Scale, Bezel Mounted



OEM-1B
200mVd.c. Full Scale, LCD, Component Style

OEM 1B-LED
200mVd.c. Full Scale, LED, Component Style

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