

DISPLAY VISIONS – JOIN OUR DISPLAY WORLD

WHAT CAN WE DO FOR YOU TODAY?

In the field of displays and intelligent HMI controls, we can do just about anything, because DISPLAY VISIONS GmbH is the German manufacturer of high-quality industrial displays. For over 45 years, we have been advising and supplying customers from a wide range of sectors such as the medical sector, automation, laboratory energy and environmental technology, control and measurement technology, mechanical engineering, information technology and building services. Our technical expertise, reliable support, high quality standards, long service life and short delivery times are an integral part of our company policy. This is why our customers usually rely on the experience and recommendations of our Gilching-based development department at an early stage of development and in the design-in process. This applies both to the selection of hardware components and to software control. Especially in times of a shortage of skilled labour, this often represents a decisive advantage. With the increasing complexity of display options and control, it makes sense to work with a reliable specialist such as DISPLAY VISIONS, especially in order to obtain the best possible display or control unit. This allows our customers to concentrate on finalising their end device without having to spend development time and their own engineering effort on display integration. They can choose from over 1,000

different displays, from the simple 7-segment display or our chip-on-glass series, from OLED displays to TFT displays in IPS and intelligent HMI controls with touch panels, and receive everything from a single source. In addition to the innovative hardware advantages, we have also developed further in the software area. Our development department has developed completely new programming for our intelligent displays with the uniTFT series. TFT displays from 2" to 10.1" are now no longer controlled and programmed pixel by pixel, but simply object-orientated on the screen. This further shortens the time to market without major hardware or software expenditure. Our motto „Making things easy“ should make it as simple and flexible as possible for our customers to integrate the right TFT display into their application. All display solutions are supported by our versatile development tools and evaluation boards.

As an additional option, we also offer our customers the complete programming and integration of the display. Our software developers will be happy to advise you further on this topic. If you have any technical or commercial questions, both our sales engineers and our development engineers are available to answer them personally. Or you can simply visit us at „embedded world“ or „electronica“ in Munich, or at our office and production facility in Gilching near Munich. Here you can get an overview of our innovative display solutions in advance:

- Latest OLED displays white, yellow and green
- Chip-on-glass series from 1x8 to 240x128 pixels
- TFT displays from 0.9" to 10.1"
- Intelligent HMI solutions from 2" to 10.1"
- Standard displays with easy mounting
- Intelligent OLEDs with capacitive touch panel
- Interfaces, RS232, SPI, I²C, USB, 8/16 bit
- Development tools and design-in kits
- Software tools
- USB data logger
- Innovative PLC control unit for top-hat rail mounting with up to 50 satellite displays
- New Modbus display modules with 2.8 to 10.1 inch

Further information and data sheets can be found at www.lcd-module.com or in our shop.lcd-module.com. We hope that we can provide you with new ideas and solutions for the realisation of your product developments so that we can continue to be successful together with innovative results in the future.

Stefan Eber, Managing Director



MINI HMI 1.5" ~ 4.3" PCAP WITH INTELLIGENCE

NEW



Brilliance meets Intelligence

Only two fingers wide is the smallest variant from DISPLAY VISIONS's new uniTFTs series. Nevertheless, this capacitive touch display has a resolution of 240 x 240 pixels on its 1.5 inch screen diagonal. In addition, this series is currently also available in 2.0 and 2.8 inch (320 x 240), 3.5 inch (480 x 320) and 4.3 inch (480 x 272) diagonals.

The brilliant color displays are using improved IPS-Panels with AACs technology (All Angle Color Stability). Contrast and colors are retained even at extreme viewing angles. Unlike commonly used TN-Panels these displays do not have an inverse tilt effect. With typ. 1,000 cd/m² and more brightness, the displays are rich in contrast and clearly readable even in direct sunlight. All screens are equipped with an optically bonded, capacitive touch surface. This allows direct and intuitive interaction even with multiple gestures.

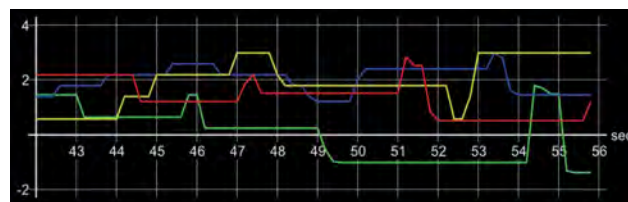
Stand-alone usage

Thanks to the integrated I/O and fast graphics controller, they can also be used to implement stand-alone applications without additional hardware. Extensive graphic functions support the programming of impressive touch and display functions as well as animations with the included Windows tool uniTFTDesigner (available f.o.c.). All displayed objects can be animated and can be changed in form,

colour and content during runtime. The built-in flash memory acts as a storage for images, fonts, menus and log files. The built-in speaker ensures acoustic tone attention.

With USB, RS-232, SPI and I²C the uniTFTs have all common serial interfaces. Four analog inputs as well as eight freely definable I/O interfaces are used to acquire data and issue control commands. The I/Os are expandable up to 136.

The miniature touch panels are ideally suited as a replacement for mechanical switches and controllers in home automation, as operating panels in mobile homes or for



installation in high-quality kitchen as well as wellness or fitness equipment.

Designed for control panel for industrial usage in analyzing equipment, paper-feeding machines and intelligent measuring devices DISPLAY VISIONS guarantees comprehensive service directly from Germany as well as long-term availability. With the programming tool „uniTFTDesigner“, which is f.o.c., it is quite easy to build individual screens. All objects like text and graphics or touch areas will be put by drag'n'drop in to WYSIWYG editor.

Ordering Information (Selection)

2" mini HMI, PCAP	EA uniTFTs020-ATC
2.8" mini HMI, PCAP	EA uniTFTs028-ATC
3.5" mini HMI, PCAP	EA uniTFTs035-ATC
4.3" mini HMI, PCAP	EA uniTFTs043-ATC
Demo-App incl. 2.8" PCP	EA DEMOPACK-RGBANA



- *Sunlight readable
- *Extreme bright >1,000cd/m²
- *IPS Technology, optically bedonded
- *Non-reached contrast
- *Clear white optic
- *Single-Supply 3.3V
- *Control function

EA UNITFT SERIES

HIGH-END HMI

5" / 7" / 10.1"

SUCCESSFUL WITH INNOVATIVE DISPLAYS.



Juggle with objects playfully

TFT displays are indispensable in industrial and medical technology as well as in the private sector. Color displays simplify the operation and therefore revalue every device.



What is important, however, is an appealing screen layout and a clear and modern design.

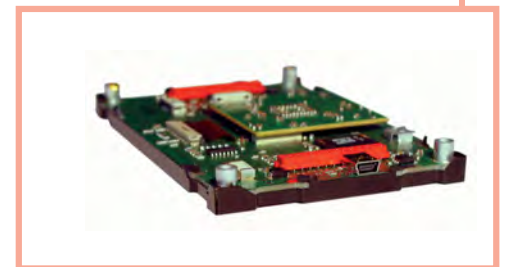
This is where the new concept of the uniTFT displays from DISPLAY VISIONS is set. A number of graphically sophisticated objects are available, which can be adapted to the individual requirements by the simplest means. The graphical editor makes it easy to drag and drop elements to create nice screen pages.

Objects, Variables, Calculation

Any object can be placed, moved and deleted at any time. Fonts can be zoomed and rotated without loss. Chosen Windows character sets are stored directly in the display. Thanks to automatic ASCII and Unicode switching, all systems are flexibly supported; Chinese characters included. Elegant effects for fading in and out or flying in are already integrated. Stylesheets can be used to create uniform designs. Images can be embedded as JPEG, PNG or SVG (also transparent), sound can be played in the form of MP3. Together with the integrated and battery-buffered time base, events can be documented together with the help of a time stamp or also a processes can be controlled completely autonomously.

USB and other Interfaces

The new EA uniTFT provides various interfaces to the outside world. An USB interface is available for flashing



the onboard memory, debugging and also for normal operation. To run the display there are also a SPI, RS-232 and I²C bus interface available. If some external devices or actuators need to be operated, three additional interfaces SPI, RS-232 and I²C bus can be used for that; they are declared as master.

4 analogue inputs and one PWM output enable processing of analog signals. 16 digital I/O (expandable up to 125) take over a wide range of control tasks. A video input directly delivers images, which can be displayed on the screen or stored on the integrated micro SD card.

Resistive or Multitouch-PCAP

Thanks to the high integration, it is easy to create an in-

tuitive and simple to use interface. A variety of functions support the use. The PCAP version performs even behind a 4 mm thick glass or with thin gloves and is multitouch-capable.

IPS Technology up to 1,000 cd/m²

Be inspired of the brilliance and brightness of our 5", 7" and 10.1" displays. They do provide great colors, brilliant and stable at all viewing angles. With up to 1,000 cd/m² these displays are well prepared for all applications. Brightness may be reduced at any time by software command.

Ordering Information

TFT 5" with resistive Touch	EA uniTFT050-ATP
TFT 5" with PCAP Touch	EA uniTFT050-ATC
TFT 7" with PCAP Touch	EA uniTFTm070-ATC
TFT 10.1" with PCAP	EA uniTFT101-ATC
Quickstart w. 7" and PCAP	EA QUICKuniTFT070C

- *Modifay all objects even afterwards
- *Animations
- *IPS technology for wide viewing angle
- *In-/ and Outputs for control functions
- *PCAP Touch
- *USB + SPI + I²C Bus + RS232
- *Character set ASCII & UNICODE
- *Single Supply +3.3V
- *Industrial approved solution

FREE OF CHARGE TOOL FOR UNITFT

DEMOPACK

THE QUICK START



Unpack and off you go!

Brilliant, bright displays for measured values and as a status display. EA DEMOPACK-CLIMA: an external temperature/humidity/CO2 sensor on the display's I²C bus provides the measured values. Crisp colours thanks to IPS technology and optically bonded touch. Refined with an extremely bright illumination of typ. 780 cd/m².

The viewing angle covers 340° and more. Despite the compact design (84x58 mm), inputs are possible by light touches on the surface. The surface itself is made of scratch-resistant glass and is easy to clean.

The display is connected directly to the PC or a USB power supply via the USB cable supplied. Together with the small application board, it is immediately ready to run and measures the current CO2 value as well as the temperature and humidity in the room. For installation, simply peel off the protective film of the double-sided adhesive and glue the display into a housing cut-out from the front. Done. Waterproof.

Other fix&fertig applications are:

- EA DEMOPACK-RGBANA: LED control and voltmeter
- EA DEMOPACK-RELAY: 24V inputs, relay output
- EA DEMOPACK-CONNI: RS-485 interface and level converter
- EA DEMOPACK-WiFiBT: WiFi and Bluetooth interface



- * Create screens via Drag and Drop
- * Integrated Simulator
- * Group Objects
- * USB Download
- * Edit Text- and Paintstyle
- * Use Windows Character
- * Write Macros
- * Design Touch Keys
- * Debugger built-in

START IMMEDIATELY

EA QUICKUNITFT070C



The starter pack

Everything in it, everything to it: here you can start immediately. You will get a display with PCAP (capacitive touch-panel) and a testboard with loudspeaker and connection clamp for 3.3V. The display is immediately running and shows a detailed demo.

After installing unitFTDesigner on a Windows computer, you connect the USB cable and have access to many examples and more demos. Or you can start your own project right away!

USB + SPI, I²C, RS-232

On the breakout board all interfaces can be reached directly via solder pads. Also the analog inputs and two of the digital inputs and outputs. The USB connector is installed directly on the display.

Disconnect the display and...

...put it into the application: 4 sockets with M3 female thread fix the display stable in the housing. The electrically contact is made via 2 red sockets directly on a circuit board behind it or via an IDC cable.

Even if the display is already installed in the application, it can be reprogrammed at any time without removal via the USB interface.

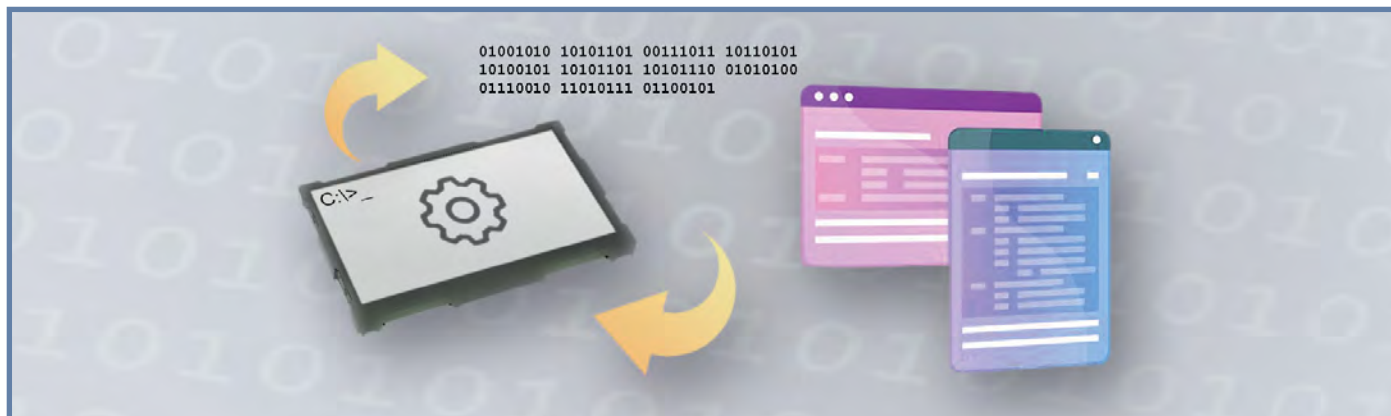
Alternatively, you can copy your project on a micro-SD card and exchange the SD-card. This is how you easily transfer your new functions to the display.

Ordering Information

Quick Start 5" with PCAP	EA QUICKuniTFT050C
Quick Start 7" with PCAP	EA QUICKuniTFT070C
Quick Start 10.1" with PCAP	EA QUICKuniTFT101C

SOFTWARE SERVICE FOR HMI DISPLAYS

NEW

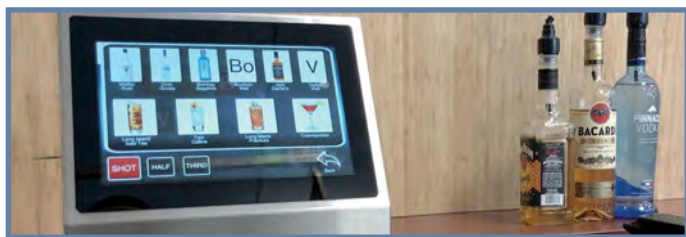


From the idea to the product

We advise and accompany you from the selection of the right display technology to individual screen pages or fully customised applications with housing. We create a small test application for you free of charge and you can fully concentrate on your core competence. As soon as you have a specification, we will also be happy to prepare a quotation for the complete implementation. In series production, we deliver our displays pre-installed with your individual software „onboard“ ex works on request. The smaller the number of units of your products, the greater the advantage. Here is a small selection of projects we have already implemented:

Automated cocktail dispensing via uniTFT101

What sounds trivial at first glance turns out to be a sophisticated software solution on closer inspection - perfect for our high-end EA uniTFT101 operating unit.



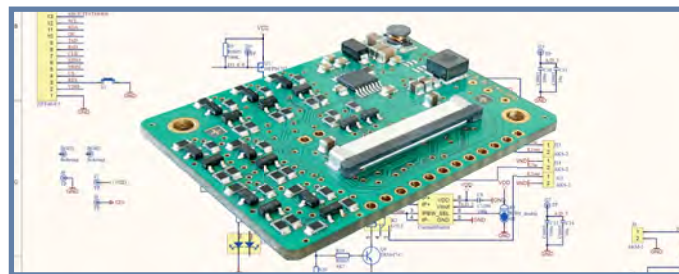
We supported the US manufacturer EasyBar in optimising the programme runtimes and a simple, flexible adaptation for future extensions.

Customer quote: „This display fit seamlessly into our overall concept and design and created a flawless interaction with servers in a real world environment.“

- * Product consulting
- * Feasibility analysis
- * Rapid prototyping
- * Outsourcing
- * Software development
- * Hardware development

Interface board with inputs and outputs

For another customer we developed a small interface board for a 2.8" HMI display. It takes over the PLC connection with 24V power supply including RS-232 interface to the display.



Control of a mass spectrometer

The best inventions are of no use if they are not implemented in devices that can be used in research and production without expert knowledge.

In the control unit we were allowed to help TRACE MATTERS to implement a menu structure defined by the customer in the EA uniTFTs035.



Send us your specification or the requirement specification. If you do not yet have one, we will be happy to discuss the right solution with you and contribute our experience in the field of displays and control. Because not every display is equally suitable for every application.

GUI

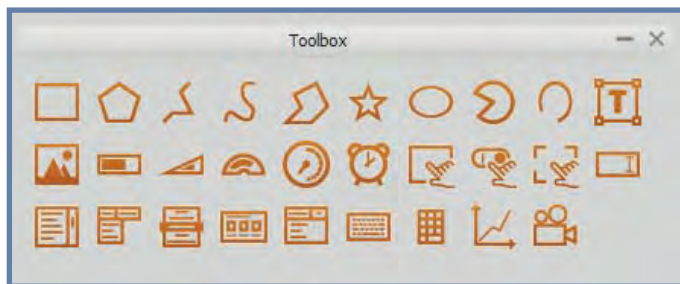
uniTFTDESIGNER and uniTFTacademy FOR HMI DISPLAYS



WE
HAVE THE
SOLUTION.

Intuitively create screen pages

With a graphics tool specially adapted to the possibilities of this display, the uniTFTDesigner, screen layouts and user



interfaces are created in no time at all. Objects are dragged and dropped into the virtual screen, where their size, angle of rotation and position can be easily adjusted with the mouse.

The other properties of an object can be adjusted down to the pixel via a menu at any time. Standardised style sheets help to create a consistent layout. Grouping functions, alignment tools and grids help to maintain symmetry. Images, sounds and Windows fonts in any size are quickly selected and integrated.

Macros are created via a text editor with syntax help. Since each object has an individual ID, it can therefore also be comprehensively manipulated later.

Getting started is easy thanks to the many examples provided.

Simulator & Debugger

With the help of the integrated simulator, the content of all created pages and objects as well as their function (e.g. touch keys) can be tested immediately - even without a display.

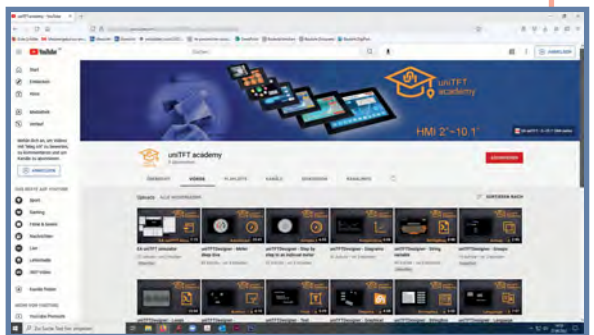
Even the inputs and outputs or the PWM can be simulated immediately on the Windows PC. This is the way to go for quick solutions.

Downloading to the display is just a mouse click away: no need to replace the SD card!

In addition, a terminal is integrated, an instrument editor, a hardcopy tool and an editor for multilingualism in order to store the labels and texts directly, elegant alignment functions, etc.

Want a software update? Available at any time, free of charge, automatically or on request.

NEW



Many video tutorials

In addition to our personal, telephone and email service, we have also made a series of videos - from the introduction to the so-called „deep dive“. In the uniTFTAcademy, each step is explained in short videos in order to create appealing screen pages for user guidance. It also explains how to

offers for the first time the possibility to design modern, tablet-like user interfaces with movements and transparencies. The WYSIWYG programming tool uniTFTDesigner seamlessly supports all functions of the displays. Both products were developed 100% in-house. You can feel this not only in their use but also in their support. Fast, competent and professional.



turn a uniTFT display into a stand-alone controller with a measuring interface. You will experience how to design an input page with the display, how to integrate a keyboard, which setting options the touch panel offers and how you can feed in analogue signals and create virtual measuring instruments on the screen.

The revolutionary TFT display from DISPLAY VISIONS

- * Create screens via Drag&Drop
- * MeterEditor, KeyboardEditor
- * Create diagrams
- * USB download with Smart-Deploy
- * Alignment tools
- * Windows fonts
- * Create macros, edit tabs
- * Touch keys and sliders
- * Integrated simulator and debugger

EA PLC SERIES

COMPACT PLC REINVENTED

1 CORE - MULTIPLE SATELLITES

BETTER
THINK
NEW.



Control and visualize

The new PLC series extends the classic compact controller in the control cabinet with an integrated color display inclusive touch. This solution also enables visualization on up to 50 satellite displays. Measured values can be displayed there and settings can be made by touch. Thanks to edge computing, even complex and visually appealing screen layouts are easy to implement.

Program your control tasks via USB and connect the desired satellite displays via RS-485 or wirelessly via WiFi/WLAN.

The basic version of the PLC core for DIN rail mounting offers 8 digital inputs, 4 relay outputs, 4 analog inputs (0-10V and 4-20mA) and an RS-232, including real-time clock. The supply voltage is 12-24V.

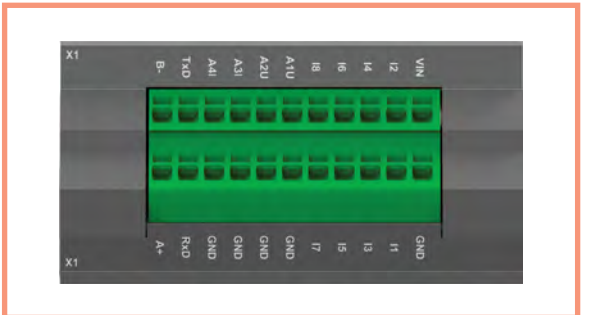
The control unit (core) already contains a high-quality TFT display with touch panel to monitor the most important parameters.

Individually networked

All process parameters are automatically synchronized with the satellite displays. This means that detailed representations with current values can be flexibly implemented on one display, as well as individual interventions in the process parameters at another location. Each display follows its individual purpose: for service, work preparation, monitoring or management. Satellite displays are available in different sizes and designs.

The Windows Quick Programmer tool

All touch and display functions as well as animations are



freely programmable using the free Windows tool „uniTFT-Designer“. Individual pages can be created using a graphic WYSIWYG editor: a background here, a logo and text there, a measured value, a slider, etc. The tool also includes a simulator with which the result is immediately visible on the PC; including functionality via touch and the inputs and outputs on the core.

Wall mounting, top-hat rail, flush-mounted

Different locations require different housings. DISPLAY VISIONS therefore offers all sizes as a built-in solution for seamless integration into your device. Alternatively, solutions with a housing for surface mounting are also planned. The front is always made of scratch-resistant glass. Thanks to the touch-sensitive surface, direct and intuitive interac-

Ordering Information (Selection)

Core 2.8" for top hat rail	EA PLCC28-D8I4R4AR
4.3" Satellite for wall mount	EA PLCS43-DS
4.3" Satellite for integration	EA uniTFTs043-ATC
7" Satellite for wall mount	EA PLCS70-DS

tions are possible. The following formats are planned: 1.5", 2", 2.8", 3.5", 4.3", 5", 7", 10.1". All brilliant displays with 1,000 cd/m² in outstanding IPS technology for an all-round viewing angle and stable colors.

Combine typical PLC control tasks with outstanding displays in different locations. Give your application a face. Ideal for use in vertical farming and vending machines, environmental measurement technology, final inspection in battery production, traffic guidance systems and much more.

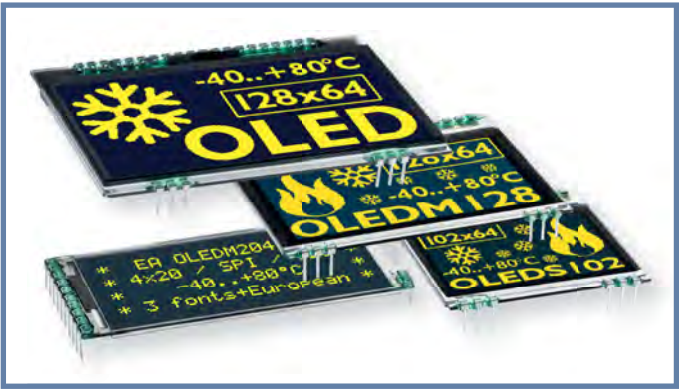
- *2.8" Core w. in- and output function
- *Excellent contrast
- *8 input, 4 analogue, 4 relay, RS-232
- *Tool screen design
- *Wall mount or integration in equipment
- *IPS technology for brilliant colors
- *add 2.8" to 10.1" satellite displays

EA OLED SERIES

OLEDs FOR INDUSTRIAL APPLICATIONS

T_{OP.} -40...+80°C

SUCCESSFUL
WITH
INNOVATIVE
DISPLAYS.



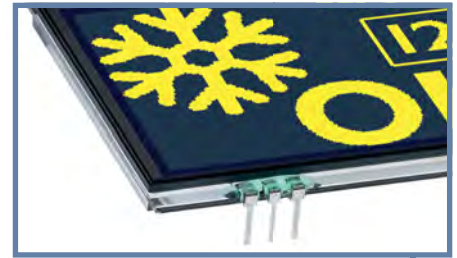
Because of their valued brilliant optic in smartphones OLED displays have become indispensable. These displays are based on organic materials. The display manufacturer DISPLAY VISIONS brings this technology in the field of industrial applications now.

Contrast 2000:1

With an extreme high contrast ratio of 2000:1, the OLED models from DISPLAY VISIONS are real eye-catchers. The high contrast ratio is achieved by using a genuinely black background and an active display technology. A new,

patented system eliminates the relatively short service life of previous OLED displays. OLED displays from DISPLAY VISIONS can be operated 100,000 hours and more at room temperature. Even when used at maximum operating temperature (80°C), they retain 50 percent or their original brightness after 14,000 hours. Especially the new OLED display family EA OLEDxxx can

OLED Displays				
Ordering Code	Diagonale	Resolution	Dimension	Connector
EA OLEDS102-6	1,59"	102x64	39x39mm	Pins
EA OLEDM128-6	2,18"	128x64	55x44mm	Pins
EA OLEDL128-6	2,9"	128x64	68x49mm	Pins
EA OLEDM204-A	2,1"	4x20	61x26mm	Pins
EA W064048-XALG	0,66"	46x48	19x18mm	Direct
EA W096016-XALB	0,84"	96x16	29x9mm	Direct
EA W096016-XBLW	0,84"	96x16	29x9mm	ZIF
EA W128128-XRLG	1,18" round	128x128	37x41mm	ZIF
EA W128128-XALG	1,5"	128x128	34x37mm	ZIF
EA W128032-XALG	2,2"	132x32	62x24mm	ZIF
EA W128064-XALG	2,42"	128x64	61x37mm	ZIF
EA W256064-XALG	3,12"	256x64	88x28mm	ZIF
EA W256064-XGLG	5,5"	256x64	146x45mm	ZIF



be integrated easily because of its built-in pins with 2.54mm (1/10") pitch. So there's no longer any need to think about mechanical mounting stuff with this construction.

Wide Temperature Range -40..+80°C

The OLED displays also provide full contrast at the complete operating temperature range, even down to -40°C! No contrast adjustment is required for this. Their response time of 10 microseconds gives the displays an extremely fast response time as well, regardless whether they are used at high or low temperatures. In addition, information shown on the OLED displays is easy to read, no matter what the viewing angle. The interface to any microcontroller is done via standard SPI or I²C bus. Power

supply for logic is 3.3V plus sometimes +12V for contrast. Current consumption ranges between 15 and 200 mA, depending on the size of the display.

DISPLAY VISIONS provides all support to interface design with a µC. Various application examples and code snippets are available for free.

USB test board EA 9781-2USB

For a quick test without investing lots of time or any hardware or software effort we do provide a small board EA 9781-2USB. Simply plug in the display.

Ordering Information (Selection)

128x64 yellow with pins	EA OLEDL128-6GGA
128x128 white, round, ZIF	EA W128128-XRLW
96x16 white, 29x9mm	EA W096016-XBLW
USB test board	EA 9781-2USB

- *Excellent Contrast
- *Superfast also at -40°C ($t_r/t_f = 10\mu s$)
- *SPI / I²C bus
- *Graphic ability
- *Perfect for wearables
- *Micro display from 0.66" off
- *USB test board



7" INTELLIGENT DISPLAY WITH ACOUSTIC FEEDBACK



The 7-inch EA eDIPTFT70-ATP made by DISPLAY VISIONS sets new design standards for interactive operator control systems. Brilliant display quality, 800 x 480 pixel resolution, built-in intelligence and innovative, user-friendly features provide the ideal platform for development of interactive controls. For example, a virtual keyboard can be embedded directly into the graphic display, and the display is also capable of providing acoustic feedback to the user.

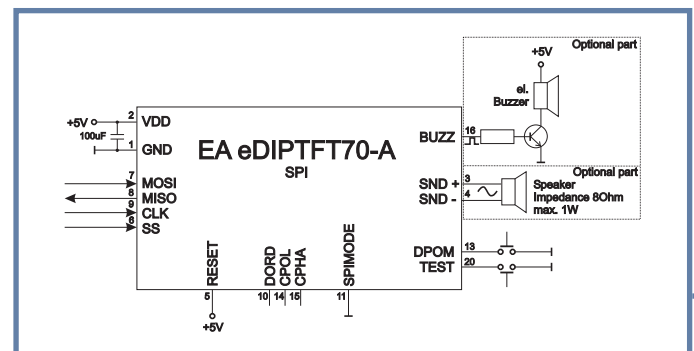
Capacitive PCAP or resistive Touch Panel

These features make it much easier to program an interactive user interface. As a standard all displays can be shipped with or without touch panel, the 4.3" and the 7" alternatively with a capacitive (PCAP) or resistive one. A virtual keyboard can be generated on the touch panel screen with just a few instructions which resemble high level language programming code. The keyboard functionality includes an Edit Box which enables users to view what they have entered and make any necessary corrections prior to submitting the data to host.

RS-232, I²C, SPI

Programming is very simple and straightforward. Powerful instructions which resemble high level language code enhance productivity during solution development and reduce time to market. Lines, areas and bar graphs can be defined and displayed with a single instruction. Defining the appearance, size, placement and function of keys and buttons is equally fast and easy.

The EA eDIPTFT70-ATP offers a number of other features which support user-friendly programming and sophisticated image design including a flash memory to store fonts, images, animation and macros. Eight pre-defined fonts are provided. TrueType fonts can also be imported. Input data can be displayed on pre-defined virtual analogue instruments which can be tailored to suit the needs of the user. Built-in macro pages and string tables are provided to support multiple languages, an important consideration for equipment and systems which are destined for export markets.



Development Support

An evaluation kit is available to help you get your development project started. A USB port provides connectivity to a PC where software development takes place. Three different ports are available for communication with the system. Only one supply voltage is needed. A mounting bezel is available as an option.

Ordering Information (Selection)

TFT 3.2" with Touchpanel	EA eDIPTFT32-ATP
TFT 4.3" with Touchpanel	EA eDIPTFT43-ATP
TFT 5.7" with Touchpanel	EA eDIPTFT57-ATP
TFT 7" with PCAP-Touch	EA eDIPTFT70-ATC
USB Evaluation Kit incl. Touchpanel Display 7"	EA EVALeDIPTFT70
Mounting panel for 7"	EA 0FP801-70SW

*3,2" - 4,3" - 7"

*No Controller Board required !

*SPI + I²C Bus + RS232

*Character Set & Graphic Functions

*Single Supply +5V (3.2" also +3.3V)

*Incl. Touch Panel Controller

*T_{Op.} -20...+70°C

COMPACT DATA LOGGER WITH USB AND WIFI



DISPLAY VISIONS offers different data logger for monitoring and recording ambient temperature. The EA SYLOG-USB-1 is especially well suited to applications in the pharmaceutical, food, transportation and logistics industries. Data logger with the code EA WLAN-xxx are to become installed in the range of a WiFi network. So supervising becomes easy directly from the workplace. Therefore all readings are available immediately.

USB Interface - EA SYLOG

The EA SYLOG-U-2LCD e.g. measures temperature and humidity. It save up to 16,382 readings. Users can set the time lapse between measurements from 10 seconds to 12 hours to customize the monitoring period, which can span as little as 5 hours or as much as 1 year. The time at which measurements are to be taken is also programmable. The software provided graphically depicts the measurements on the computer screen and formats the graphics for printing. Data can also be converted and exported in different standard formats to be processed externally.

EA WLAN series with WiFi

The EA WLAN-T+ measures temperature and humidity in the range of -20..+60°C. The large display makes the measurement readable from far away together with any alert and min/max. All readings of the data logger will be distributed to a pc in network via WiFi. If the WiFi isn't available, the data will be stored on a SD card on logger side until the network will become available again.

As an accessory a WiFi alert module with loud sound and LED flash is available to supervise one or more WiFi logger without the use of any pc.



PDF Solution

A small solution are our „EA SYPDF“ data logger series with start function on site. They are factory preset for easy and error-free usage, for example suitable to watch the cooling chain for chilled goods. Reading out is same easy while plugging to the USB connector and reading out an instand readable *.pdf file.



- *USB or WiFi connection
- *Temperature
- *Humidity
- *Voltage, Current
- *with or without large LCD
- *Battery / Akku Powered
- *pdf and xls output
- *Cloud solution

Ordering Information (Selection)

Temp. -35..+80°C with LCD	EA SYLOG-U-1LCD
Voltage 0..30V	EA SYLOG-USB-3
Loop 4..20mA	EA SYLOG-USB-4
WiFi Temp. and Humidity	EA WLAN-TH
PDF Data logger Pharma, 8..25°C	EA SYPDF-1-004

EA DOG SERIES

SIMPLY INGENIOUS.

3.3V - SPI - DIFFERENT COLORS

LOW POWER TEXT GRAPHIC



Ingeniously simple! DOG. An extremely versatile series with text and graphic displays. Designed for use in industrial and medical applications. The high-contrast LCD display modules of the EA DOG family, which are very easy to read even in sunlight, require only an operating voltage of 3.3 V or 5 V - even with 3.3-Volt systems, no negative auxiliary voltage is required.

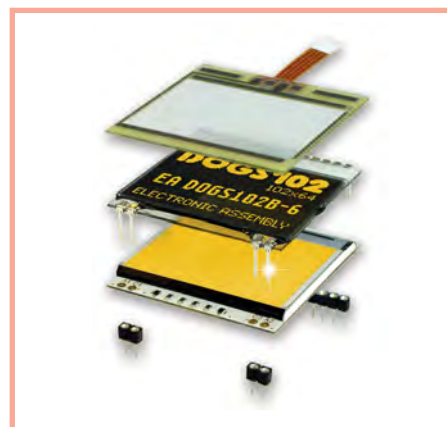
3.3V and 5V operation

Another clever idea: display unit and backlight need to be ordered separately. This allows a wide range of design variants in a variety of sizes and colours to be implemented. The customer can choose from a range of 13 different display sizes, each with at least 3 display technologies such as STN, FSTN, positive and negative, and between 3 to 6 LED backlights in different colours.

Among them are also full-colour backlights, which cover the entire RGB spectrum. All in all, this results in hundreds of possible combinations of display type, font size and backlighting. Two or three separate LED paths are available for the single-colour lighting, which can be connected in series or parallel. The lighting unit can thus be operated with either 3.3 V or 5 V or higher voltages.

Display and backlight separate

The separation of lighting and display also allows for a super-flat configuration: without the lighting unit, the display is only 2.0 mm thick, and even with the lighting unit attached, a height of only 5.8 mm allows a fairly flat configuration. The display can be mounted without a frame - it is simply soldered onto the board. This allows device designers to create exceptionally compact solutions.



Despite the small size, the display units include already a display controller (e.g. ST7565). For connection to the outside world, an SPI interface or, in the case of some text displays, a 4-/8-bit bus or I²C bus interface is available. The displays can be operated at temperatures between -20°C and +70°C without any problems. Most of them are super low-power from 150µA current consumption off. And there are many with best readability even at direct sunlight.

- * Super flat: 2.0~6.5mm
- * Graphic 102x64, 132x32, 128x64, 160x104, 240x64, 240x128
- * Character 2x16, 3x16, 4x10, 4x16, 4x20, 1x8
- * Real 3.3V operation
- * SPI interface, low power: 150 / 250 µA
- * Display and backlight separate
- * White LED B/L runs from 3 mA
- * Standard displays

All variants are available in quantities from 1 piece. Usually ex stock. And for many, many years as these displays are designed-in all over the world in thousands of applications.

USB-Testboard EA 9780-4USB

In addition to a free simulator tool for Windows, which shows all displays in all variants and colours, DISPLAY VISIONS offers a test board with USB interface: for quick commissioning of the DOG displays and their backlights without any hardware or software effort.

Ordering Information (Selection)

240x128 blue/white	EA DOGXL240B-7
102x64 black&white negative	EA DOGS102S-6
3x16 / 3.65mm black&white	EA DOGM163W-A
LED backlight unit full color	EA LED55x31-RGB
LED backlight unit white	EA LED55x31-W
USB test board	EA 9780-4USB

TOUCHPANEL WITH MODBUS 2.8" TO 10.1"

NEW



Bright and Brilliant

For the first time, brilliant colour displays in various sizes are available for Modbus. And they are amazingly affordable! Thanks to the integrated touch panel for inputs and compact wall-mounted housing, they are ideal for visualising process parameters. With a brightness of approx. 1,000 cd/m², the displays are always easy to read in all conditions, even outdoors.

Modbus RTU / TCP

Communication takes place via RS-485, Ethernet (LAN) or WiFi. The displays are each configured as remote. They can easily handle all addresses. The Modbus data registers can be displayed as numbers in a wide variety of sizes and colours. Bar graphs, instruments and even texts can also be controlled via registers. If any register is updated, also display content will be updated automatically.



Touch Sensitive Surface

The front of the displays is equipped with a stable glass surface, which also supports the high-quality impression and brilliance of the displays. Inputs can also be made via this if required. A gentle touch is enough to change the screen page or trigger an action, for example. You also may change parameters using sliders or you may „wake up“ the display with a light touch....

- * Brilliant and bright display
- * RS-485, RS-232, WiFi, LAN
- * Freely definable screens
- * Modbus RTU / TCP
- * High resolution
- * Touch-sensitive glass front
- * Extremely wide viewing angle
- * Animations
- * 2.8" - 4.3" - 7" - 10.1"

Quick-release clamps

The displays are designed for a wide operating voltage range from 6V to 30V. They are connected via screwless quick-release terminals. The black housing can be fixed directly to the wall. Alternatively, the displays can also be integrated in a front panel up to 6 mm thick. Suitable mounting corners are available as accessories.

WYSIWYG Editor

A free Windows tool, the so-called *HMI designer*, is supplied. You can use it to create individual screens. You are completely free in the design and placement of the elements in the display. The definition of the background, the placement of a company logo and the corresponding display values can be done effortlessly using the drag-and-drop function on the Windows PC. Even animations and other automatic processes are possible without Modbus



communication. The transfer of values, touch controls or the display of texts is carried out via freely definable Modbus registers. Floating point numbers can also be displayed directly. Even multilingualism is supported. Many other tools are also integrated into the *HMI designer*, such as a debugger, a Modbus terminal, a tool for hardcopy, project encryption, a documentation tool and much more.

Connectivity

The displays support communication with over 20 different PLC models, including Siemens Logo! (TCP), S7-200, S7-1200/1500, S7-300/400, Allen Bradley, Mitsubishi FX, Beckhoff, easyE4 and many more.

Ordering Information

2.8" Modbus RTU/TCP RS-485 and WiFi	EA HMI028WM-32ATCS
4.3" Modbus RTU/TCP RS-485, LAN and WiFi	EA HMI043LM-42ATCS
Mounting clips (2 pcs.)	EA 00C1-1KNS
USB-RS485 Adapter	EA 9790-USB485

FOR INDUSTRIAL APPLICATIONS

TFT-DISPLAYS 0.9" TO 10.1"



Extreme bright and contrasty

Are you looking for a high-quality display with or without a touch panel? DISPLAY VISIONS offers a wide range of sizes in various designs. IPS technology, for example, offers an extremely wide viewing angle without color shifts and without the typical inverse effect. Our displays offer brightness levels of over 1,000cd/m² which make them definitely suitable for outdoor use, even in direct sunlight. The displays have been specially developed for industrial applications and are available on a long-term basis. Bright, high-quality LEDs are used for the backlighting. A suitable ZIFF connector and adapter boards are available as accessories.

24-Bit RGB, DPI, SPI, LVDS, HDMI ?

In addition to the classic RGB interface, we also offer other interfaces as additional options. The supply voltage is 3.3V.

Touchpanel

The displays are optionally available with an integrated

touch panel. There are two different versions here: The resistive touch panel is absolutely safe to use as it reacts to pressure. Any pressure applied to the surface, whether with a finger, glove or pen, triggers an action. This technology is insensitive to interference, dirt and water. The capacitive version recognizes fingers and is multi-touch capable - even the lightest touches are recognized and passed on.

IPS Displays (selection)				
Ordering Code	Size	Resolution	Dimensions	Optional
EA TFT009-81AINN	0,96"	80x160	13.5 x 27.9 x 1.5	IPS, PCAP
EA TFT015-22-AINN	1,5"	240x240	32.0 x 35.0 x 3.1	IPS, PCAP
EA TFT020-23AINN	2,0"	240x320	36.0 x 52.0 x 2.2	IPS, PCAP
EA TFT028-23AINN	2,8"	240x320	48.0 x 68.0 x 2.2	IPS, PCAP
EA TFT035-32ANN	3,5"	320x240	76.9 x 63.9 x 3.26	Res.Touch, PCAP
EA TFT035-34ANN	3,5"	320x480	54.7 x 82.9 x 2.2	IPS, PCAP
EA TFT040-77AINN	4,0"	720x720	79.0 x 74.8 x 2.1	IPS, PCAP
EA TFT043-42ANN	4,3"	480x272	105.5 x 67.2 x 3.0	IPS, Res., PCAP
EA TFT050-84ANN	5,0"	800x480	120.7 x 75.8 x 2.8	IPS, Res., PCAP
EA TFT052-41ANN	5,2"	480x128	140.4 x 49.9 x 3.0	PCAP
EA TFT057-32ANN	5,7"	320x240	141.1 x 101.6 x 6.5	Res.Touch, PCAP
EA R1024X-70ALW	7,0"	1024x600	164.9 x 100 x 7.6	IPS, Res., PCAP
EA W1280X-101ALW	10,1"	1280x1024	235.0x161.0x13.1	IPS, PCAP

Ordering Information (Selection)	
TFT 2.0" w/o. touchpanel	EA TFT020-23AINN
TFT 7" with PCAP	EA R1024X-70BLWTS
ZIFF connector, bottom cont.	EA WF050-40S
Interfaceboard	EA 9980-TFT
Support, special requirement	Just ask

- * 0.96" ~ 10.1" RGB / SPI / LVDS / HDMI
- * with and without touch panel
- * IPS, sunlight readable
- * PCAP and resistive
- * industrial quality
- * Tools and demo board

Special adaptations

Depending on the quantity, the size of the touch panel, the FPC cable or the brightness of the backlight can be customized. A logo and company-specific printing are also possible. Do you need an impact-resistant front in accordance with IK09? Or an additional push-button? Talk to us, you will receive perfect support from our experienced engineers.





2,8" Core



4,3" Satellit



EA UNITFTS SERIES
MINI HMI 1.5" TO 4.3" PCAP WITH INTELLIGENCE

EA UNITFT SERIES
HIGH-END HMI 5" / 7" / 10.1"

HMI 2" TO 4.3"
DEMOPACK THE QUICK START

HMI 5" TO 10.1"
EA QUICKUNITFT070C

EA UNITFT SERIE
SOFTWARE SERVICE FOR HMI DISPLAYS

GUI
UNITFTDESIGNER AND UNITFTACADEMY FOR HMI DISPLAYS

EA PLC SERIES
SMALL CONTROLLER NEWLY DISCOVERED 1 CORE - MANY SATELLITES

EA OLED SERIES
OLED GRAPHICS FOR INDUSTRY TOP. -40..+80°C

EA EDIPTFT SERIES
INTELLIGENT 7" DISPLAY PROVIDES ACOUSTIC FEEDBACK

EA SYLOG AND EA WLAN SERIES
HANDY DATA LOGGERS WITH USB AND WIFI

EA DOG SERIES
SIMPLY INGENIOUS. 3,3V - SPI - DIFFERENT COLORS

EA HMI SERIES
TOUCHPANEL WITH MODBUS 2.8" TO 10.1"

FOR INDUSTRIAL APPLICATIONS
BRILLIANT IPS DISPLAYS 0.9" TO 10.1"



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