ELECTRONIC ASSEMBLY
new display design

MMS-e

Ad-hoc running TFT
SPI, I²C, RS-232

- 3.2" - 4.3" - 5.7" - 7"
- No Controller Board required !
- SPI + I²C Bus + RS-232
- Character Set & Graphic Functions
- Single Supply +5V (3.2" also +3.3V)
- Incl. Touch Panel Controller
- $T_{Op.}$ -20..+70°C

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BRILLIANT AND BRAINY
Touch and Operate your System

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In recent years TFT displays came to the top for mobile phones, PDA and digital cameras. It stands to reason that more and more industrial applications like to be equipped with a coloured display, too. Thanks to the colours, process parameters or limit exceeds can be highlighted very easy. Simultanously a coloured TFT display point up the valence and the product image of your equipment. Last but not least the non-reached brillance and the excellent contrast satisfy even sophisticated guys immediately.

Complex Driving ? No !

After the engineer had taken a closer look at the standard TFT panels on market, decision is
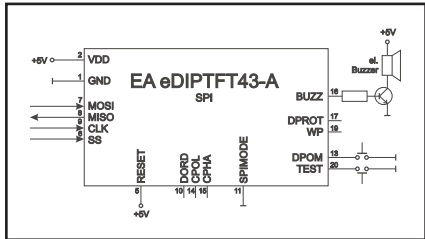
often against those beautyful coloured TFT panels. The reason is, that the effort for driving such a display is tremendous and requires something like a PC board. Cost for those are easy a multiple of price then for the display alone. Also the high current consumption for those boards and the long delay for power-up and boot sequence make these systems unhandy. In addition to that the required development effort for hard- and software is considerable. This is no longer profitable for a quantity of 100 or 1,000 pcs. The time consumption for such a development and the expense are clearly to high.

The solution

But there is an alternative: using an intelligent display. This is quiet easy to integrate into a typical microcontroller system; because it's ready for operation immediately. Power supply is wide range +3.3V~5V for the 3.2" version and +5V for the 4.3", 5.7" and the 7" version. One of 3 interface RS-232, I²C and SPI can be used for communication. A lot of different character sets and graphic functions are already built-in and can be used immediately. The internal FLASH provides the possibility to store pictures up to 65,536 colours (JPEG, BMP , PNG, TGA and GIF incl. animation).Individual company logos are created with ease. Alterable character sets (Cyrillic, Hebrew, Arabic..) which are created easily by a free-of-charge Windows tool, make it near to join international markets.
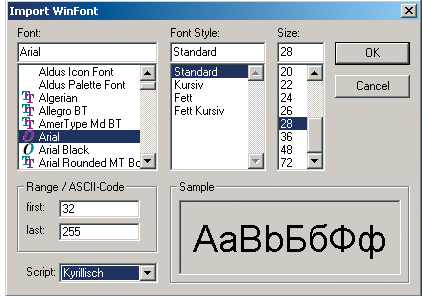
The Touch Panel

Thanks to the touch panel and FLASH technology it is easy to create a simple and clear user guidance. This is because only those keys and functions are visible, that are needed in current mode of operation; double key strokes and deep menu structures are no longer necessary. This will prevent mal-functions from the beginning. A large number of functions do support the touch panel. Individual key size and key position are possible; even adjustments can be done by a quick de ned slide bar. The large functionality gain this display to a complete HMI which is on the other hand very compact.

The operating temperature range is good for the wide range of -20..+70°C.

Characteristics						
Value	Condition	eDIPTFT32	eDIPTFT43	eDIPTFT57	eDIPTFT70	Unit
Resolution		320x240x3	480x272x3	640x480x3	800x480x3	dots
Dimension		82x61	107x71	145x107	170x112	mm
Size		3.2	4.3	5.7	7.0	inch
Temp. Range		-20..+70				°C
Op. Voltage		3.3~5V	5	5	5	V
Brightness	w./o. Touch	700	500	400	500	cd/m²
	with Touch	550	410	320	400	cd/m²
Power Supply	Backlight 100%	160~120	180	680	690	mA
	Backlight off	37~25	80	190	200	mA

A long term availability and the high quality makes this display perfect for industrial, automotive and medicine applications. As an accessory there is a black anodized mounting bezel made of aluminium available. With that the display can be easily mounted directly to front panel.

Also available is an Evaluation kit for a smooth work with the display-internal FLASH memory. The included test board provides some push buttons to emulate the digital inputs and some LED to test the output lines. There are also lots of interfaces supported like RS-232 (5V), RS-232 (±12V), RS-485, SPI, I²C and USB.