Displays & Embedded Computing

Highlights

GLYN
High-Tech Distribution

Our partners – your benefit:

With CMEL, 4D SYSTEMS, AUO, TOSHIBA MATSUSHITA, HITACHI DISPLAY GROUP, eTURBO TOUCH, FUJITSU, AAEON and AVALUE we have focused on the leading TFT display manufacturers and can therefore offer the right display and system solution for almost every application, together with appropriate touch sensors and embedded PCs.

CMEL is a spin-off company from CMO and belongs to the CHI MEI GROUP based in Tainan (South Taiwan). CMO established R&D by focusing on OLED based technologies in 2000. After successfuly research activities, CMEL was founded in 2004, solely devoted to the creation of OLED products. After starting with PM-OLED panels, CMEL turned to producing just AM-OLED panels, seeing this technology as the only one for the future. CMEL currently has sizes from 2.0" to 4.3" in mass production and showed the largest AM-OLED display with 25" at the FPD in Yokohama 2006.
The future of OLED displays is definitly going to be bright ...

4D Systems, based in Australia, is a research & development team in the field of microelectronics providing all types of electronic solutions (hardware/software), from simple, cost-effective interface modules adaptable to existing embedded or PC based circuitry, to more complex solutions complete from design concept to totally operational saleable end-user products. 4D Systems' core-focused approach to conceptualise any task is through research to provide the most advanced technology with design simplicity and reliable quality. Especially their OLED and display graphic modules complement GLYN's range of CMEL AM-OLEDs, especially for customers looking for a quick, reliable and complete solution who do not have the time or capability for long self-developments.

AUO is the result of a merger of the Taiwanese firms Unipac and Acer Display Technology that took place in 2001. This cooperation has resulted in one of the globally leading manufacturers of A/V and large-surface TFTs.
AUO primarily produces displays in the standard of a-Si and p-Si technology. With regard to the reproduction of fast, moving pictures, a response time of less than 8ms (grey to grey) is achieved.. A few years ago AUO also discovered the industrial market and established the new „General Displays" division. The displays designed in this area, the so-called „G" types, are especially tailored to the industrial market. The latest product from this division is the 5,7" VGA TFT with a wide temperature range.
PROMATE is AUO´s strongest partner and is capable of modifying and enhancing some special features of AUO TFTs e.g. a high bright 15" TFT with LED BLU. Apart from this modification PROMATE is producing controller board kits for AUO panels.
You can find an extensive selection of AUO/Promate products at GLYN.

To be able to keep up with new developments and product requirements, the two Japanese firms TOSHIBA and MATSUSHITA (Panasonic) merged their activities in the display sector in 2002. This created one of the leading manufacturers of LTPS displays. Thanks to this „Low Temperature Poly Silicon" technology, among other things pixel structures of > 200ppi and greater brightness can be achieved with the same power consumption. In addition, „driver" structures can be put directly onto the glass substrate, resulting in considerably greater reliability. The p-Si TFTs are primarily used in consumer products such as mobile phones, notebooks and beamers, and this technology is also increasingly gaining significance in the industrial sector. Of course, TMDisplay also manufactures TFTs in „conventional" a-Si technology from 3.5" VGA to 15" XGA.
See for yourself...

HITACHI
Inspire the Next

The HITACHI DISPLAY success story began over 30 years ago. In 1975 HITACHI began producing LCD modules and in the mid Eighties, started developing and manufacturing of TFTs. By getting in early, HITACHI is and always has been forefront in the development and production of displays, such as the 5.7" QVGA display, still standard in many industrial applications today. While in 1987 the display was still monochrome and „passive", today it is available as a mechanically compatible TFT with 600 cd/m^2.
Take a look.....

FUJITSU

In this new digital era where media, leisure and workspace are digitizing and the use of touch panels is becoming more common. FUJITSU touch panels generally have high transparency and low reflection and they are known for their high quality standard. The FUJITSU 7-wire series achieve an outstanding performance thanks to our unique proven technology of measuring the input on two layers. The 4-wire series consists of a family of industry-standard products that are ideal for small mobile applications such as PDAs and mobile phones. The latest development from FUJITSU is to achieve a highly durable and reliable touch panel called ORGANIC CONDUCTIVE PANEL on which the ITO is replaced by conductive polymer.

eTurboTouch

The firm was established in Taiwan in the year 2000 and, despite its short history, is already one of the most well-known touch manufacturers in Taiwan. Reputable firms such as CISCO Systems have taken advantage of the unbeatable cost-performance ratio and the flexibility of eTT. In addition to the classic 4-wire resistive touch sensor, eTurbo Touch also manufactures 5.6-wire and capacitive touch sensors. eTT also offers the so-called 2- in 1-solution. This provides the mechanical compatibility of the resistive and the capacitive touch sensor. Furthermore, the same utility and driver software can be used.
Ask us...

avalue
Technology Inc.

Avalue Technology Inc. was established in the year 2000 and is one of the most innovative firms in the field of embedded computing. The name AVALUE stands for Advanced Vision Accuracy Learning Unique Excellence. AVALUE is a member of the „Intel Communication Alliance" and thus always represents the state of the art in processor development. AVALUE now has developments and products ranging from SBC to ETXexpress CPU modules. Support in the design of baseboards for ETX CPU modules and manufacturing assistance with complex systems are a matter of course. The recent acquisition of BCM in the USA gives an idea of the significance of AVALUE. AVALUE is a member of the Intel(r) Communications Alliance (ICA).
But test it yourself..... the GLYN team is glad to support you and provide test equipment incl. WinXPe Image!

AAEON
Computing Platform Service Partner

AAEON was established in 1992. The company develops and is focused on single board computers, compact boards, half-size CPU cards and full-size CPU cards. AAEON aimed to be an OEM/ODM manufacturer specialist.
In 2000, AAEON acquired Astech Inc., a leading panel PC manufacturer. With this merger, AAEON extended its product range to industrial workstations, panel PCs, display monitors and LCD PCs. Contact our specialists to learn more about the possibilities.
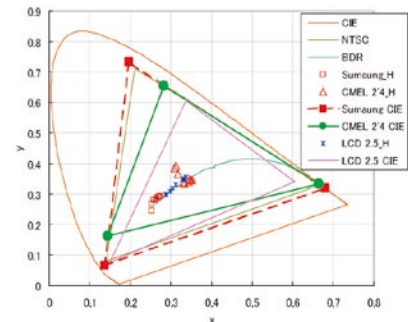
Highlights: AM-OLED Displays

CMEL
CHI MEI EL CORPORATION

2.0"- AM-OLED Displays

- 176x220 (QCIF)
- Slim design 1.3mm thickness
- Brightness 150 cd/m^2
- Contrast ratio 10.000:1
- Viewing angle 170° (L/R; U/D)
- Fast response time 50µS
- Low power consumption
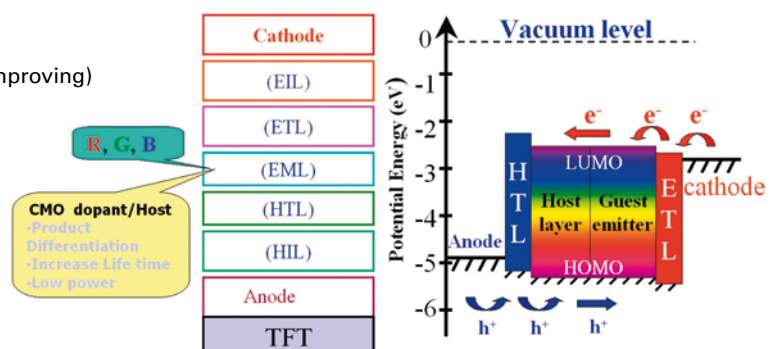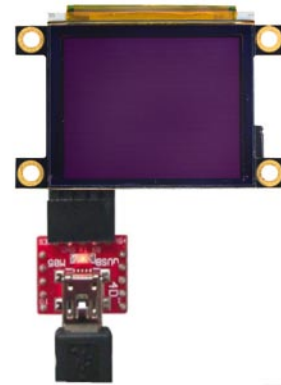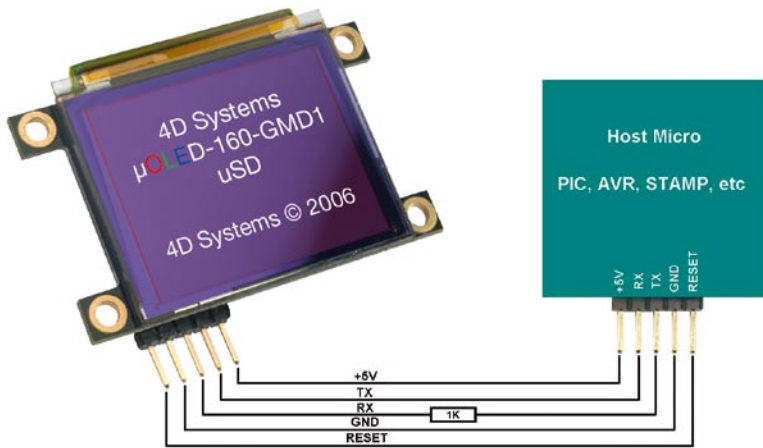- Lifetime (LTop) min 10.000hrs (ever-improving)

2.4"-2.8" AM-OLED Displays

- 320x240 (QVGA)
- **Slim design 1.3mm thickness**
- Brightness 200 cd/m^2
- Contrast ratio 10.000:1
- Viewing angle 170° (L/R; U/D)
- Fast response time 50µS
- **Low power consumption**
- Lifetime (LTop) min 20.000hrs (ever-improving)

4.3" AM-OLED Displays

- 480x272
- **Slim design 1.3mm thickness**
- Brightness 350 cd/m^2
- **Contrast ratio 10.000:1**
- Viewing angle 170° (L/R; U/D)
- Fast response time 50µS
- Low power consumption
- Lifetime (LTop) min 20.000hrs (ever-improving)

7.6" AM-OLED Displays (Available 4Q2008)

- 800x480 (WVGA)
- Slim design 1.3mm thickness
- Brightness tbd cd/m^2
- Contrast ratio 10.000:1
- **Viewing angle 170° (L/R; U/D)**
- Fast response time 50µS
- Low power consumption
- Lifetime (LTop) min 10.000hrs (ever-improving)

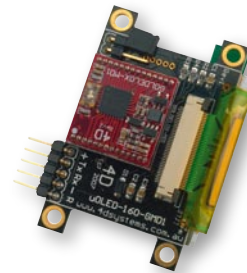## High Efficiency OLED Device

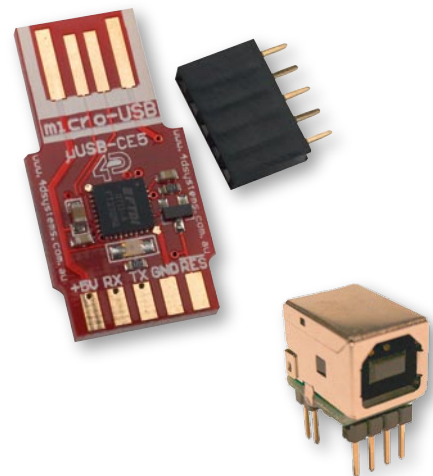# Highlights: Display Graphic Modules Solutions

µOLED – OLED Display Graphics Modules

- Compact & cost effective
- **With embedded graphic controller**
- Stand alone functionality
- Voltage supply from 3.6V to 6V
- Onboard micro-SD memory card adapter for storing icons, images etc
- **Built in graphics commands**
- Optional USB to serial interface via 4D µUSB modules

µUSB – USB to Serial Converter Modules

- USB to RS-232 bridge converter
- **Very small and easy to use**
- Plug into a USB A-type cable or directly into a USB hub port
- The design is based on the **FT232RQ** and the **CP2102** bridge
- USB 2.0 compliant full speed 12MBps maximum speed
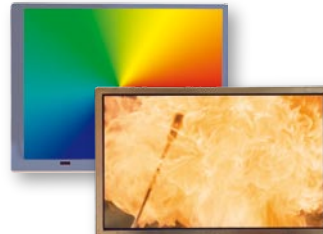- TX and RX signal levels are between 0.0 Volts and 3.3 Volts

HITACHI
Inspire the Next

● display
● products
● group

AUO
PROMATE

Display
TM
Toshiba Matsushita

Highlights: Active Matrix Displays
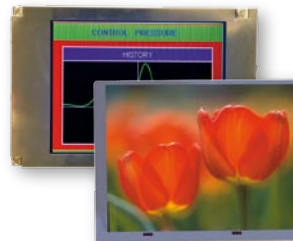
Small & Medium-Sized TFT Displays

3.5" TFT Displays

- ■ QVGA
- ■ LED B/L
- ■ Up to 450 cd/m^2
- ■ Wide temperature range (Top: -20°C to +70°C)
- ■ **Replaceable B/L**

5.7" TFT Display

- ■ QVGA/VGA
- ■ **CCFL or LED B/L**
- ■ Replaceable B/L
- ■ Up to 600 cd/m^2
- ■ **Wide temperature range (Top: -30°C to + 85°C)**
- ■ Optional with pre-mounted touch panel
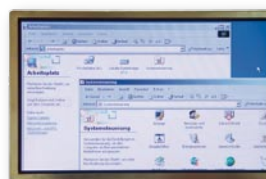- ■ Optional similar STN signal

6.5" TFT Displays

- ■ VGA
- ■ LVDS or TTL interface
- ■ CCFL or LED B/L
- ■ Up to 500 cd/m^2
- ■ Wide temperature range (Top: -20°C to +70°C)
- ■ Optional anti-reflection polarizer (sunlight readable)

7" TFT Displays

- ■ WVGA (800x480)
- ■ TTL or specific interface
- ■ LED or CCFL B/L
- ■ **Up to 600 cd/m^2**
- ■ Wide temperature range (Top: -30°C to +85°C)
- ■ Optional with pre-mounted touch panel

8" TFT Displays

- ■ WVGA
- ■ TTL interface
- ■ 600 cd/m^2
- ■ Wide temperature range (Top: -20°C to +70°C)
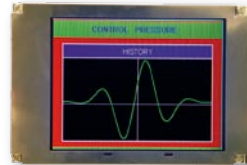- ■ Optional with pre-mounted touch panel

8.4" TFT Displays

- ■ SVGA (XGA available in 4Q08)
- ■ **LVDS or TTL interface**
- ■ **CCFL B/L (LED available 4Q08)**
- ■ Up to 450 cd/m^2
- ■ Wide temperature range available in 3Q 08
- ■ Optional with pre-mounted touch panel

Highlights: Active Matrix Displays

10.4" TFT Displays

- ■ VGA/SVGA/XGA
- ■ LVDS or TTL interface
- ■ **CCFL B/L (LED available in 4Q08)**
- ■ Up to 400 cd/m²
- ■ **Wide temperature range (Top: -20°C to +70°C)**
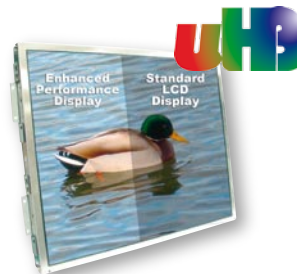- ■ Optional with pre-mounted touch panel

12.1" TFT Displays

- ■ SVGA/XGA
- ■ LVDS or TTL interface
- ■ **Eco transflective (sunlight readable)**
- ■ Up to 900 cd/m²
- ■ Optional with pre-mounted touch panel
- ■ Optional anti-reflection polarizer (sunlight readable)

Large Size TFT Displays

15" TFT Displays

- ■ XGA
- ■ CCFL B/L (LED B/L as open frame)
- ■ **Up to 1.000 cd/m² (LED)**
- ■ Wide temperature range (-20°C to +60°C)
- ■ **Optional as open frame solution**
- ■ Optional with pre-mounted touch panel

17" TFT Displays

- ■ SXGA
- ■ LVDS (2ch) interface
- ■ Up to 300 cd/m²
- ■ **Up to 6ms response time**
- ■ Optional as open frame solution

19" TFT Displays

- ■ SXGA
- ■ CCFL B/L (LED B/L as open frame)
- ■ **Up to 1.000 cd/m² (LED)**
- ■ Up to 8ms response time
- ■ Wide temperature range (-20°C to +50°C)

Highlights: Touch Panel Products

4-Wire Analogue Resistive Technology

- Product range 2.1" to 15"
- **High transmittance up to 83%**
- Input flexibility
- For mobile products
- Cost competitive

5-Wire Analogue Resistive Technology

- Product range 6.4" to 19"
- High transmittance up to 83%
- **Stable and drift free operation**
- Temperature range (-10°C to +60°C)
- Cost competitive

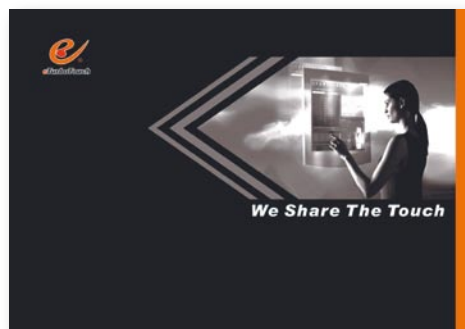### 6-Wire Analogue Resistive Technology

- Product range 6.4" to 19"
- High transmittance up to 83%
- Long touch life
- **Temperature range (-10°C to +60°C)**
- Cost competitive

Capacitive Touch

- Product range 10.4" to 19"
- High transmittance up to 88%
- Long touch life
- **Temperature range (-20°C to +70°C)**
- **Optional strengthen glass for added impact resistance**
- Cost competitive

TP Controller

- **Low power consumption**
- Supports USB & RS232
- Resolution 2048 x 2048
- Supports several OS like LINUX, WinXP, WinCE, Mac

Highlights: Touch Panel Products

FUJITSU

4-Wire Analogue Resistive Technology

- Product range 3.8" to 15"
- **Micro dot spacer (nearly invisible)**
- High transmittance up to 82% (customize 92°C)
- High reliability due to **organic conductive polymer** technology (10.000.000 touches)
- Customization 2" to 17"
- **Optional wide temperature range (-30°C to +85°C)**

7-Wire Analogue Resistive Technology

- Product range 8.4" to 17"
- **Micro dot spacer (nearly invisible)**
- High transmittance up to 82% (customize 92°C)
- High reliability (10.00.000 touches)
- **Compensation of temperature and aging drift**
- Customization 2" to 17"

TP Controller

- Small footprint PCB
- Supports USB & RS232
- **Switch for selectable set up orientation**
- Supports several OS, such as LINUX, WinXP, WinCE

Highlights: Embedded Computing

Boxed Computer

AEC-6710 Waterproof

- **IP-67 certified Boxed PC**
- VIA Mark CPU 533MHz
- 3x RS-232, 1x RS-232/422/485
- Mini-PCI, LAN
- Power supply: DC 12V ~ 48V

AEC-6920 Fanless

- High End Boxed PC
- Core Duo 1.6 or **Core 2 Duo 2.0**
- 3x RS-232, 1x RS-232/422/485
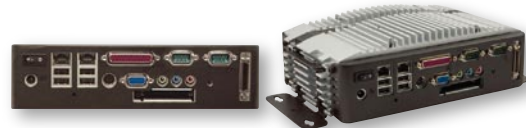- 1x PCI, 1x PCI-E, 4x USB
- Power supply: DC 9V ~ 30V

EPC-3711 Fanless

- Small Size Boxed PC
- CPU VIA Eden V4 1GHz
- 1x RS-232, 1x RS-232/422/485
- Mini-PCI, 3x USB, Dual-LAN
- Power supply: +5Vdc (40W)

EES-3723 Fanless

- Modular Box Computer
- CPU: Celeron M 600MHz
- 1x RS-232/422/485, 4x USB
- Dual-LAN, parallel port
- Power supply: +12Vdc (50W)

Panel PC

AOP-8070 Fanless

- **IP-65 certified** 7" Panel PC
- Marvell PXA270 CPU 312MHz
- Touch screen, 4x USB 1.1
- 1x RS-232, 1x RS-232/422/485
- Windows CE pre-installed
- Power supply: 12V/24V DC-DC

AOP-8150HT Fanless

- **IP-65 certified** 15" Panel PC
- CPU: Intel Celeron ULV 650MHz
- 4x RS-232, 1x RS-232/422/485
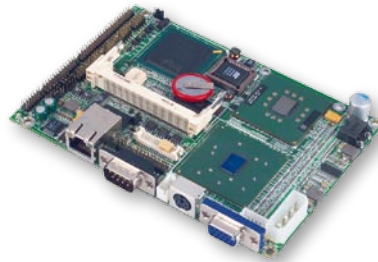- Mini-PCI, 4x USB, Parallel-Port
- Touch screen
- Power supply: AC 75W

Highlights: Embedded Computing

Board Level

GENE-8310 Fanless

- 3.5" board
- Intel Celeron M 600MHz ~ 1.3GHz
- Dual channel LVDS interface
- 1x RS-232, 1x RS-232/422/485
- 4x USB, Mini-PCI
- Power supply: AT / ATX

GENE-5315 Fanless

- 3.5" LX800 board
- 500 MHz CPU
- TTL / LVDS interface
- Mini-PCI, PC/104, 4x USB
- 1x RS-232, 1x RS-232/422/485
- Power supply: AT / ATX

ECM-3711 Fanless

- 3.5" VIA based SBC
- CPU: VIA Eden V4 1GHz
- 1x RS-232, 1x RS-232/422/485
- Mini-PCI, 4x USB, Dual-LAN
- LVDS interface
- Power supply: AT/ATX

ECM-LX800 Fanless

- 3.5" LX800 board
- 500 MHz CPU
- TTL / LVDS interface
- 3x RS-232, 1x RS-232/422/485
- PC/104
- Power supply: AT/ATX

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