

Large Industrial TFT Displays

- Sizes 21.5 to 24"
- SmartLED Converter
- **VACUBOND**[®] Optical Bonding Service
- Embedded





21.5" TFT Displays

Panel	G215HVN01.0	P215HAN02.0	LM215WF3-SLC1	G215HVN01(S03)-V559
Manufacturer	AUO	AUO	LG	DDG
Type	AMVA	AHVA	IPS	AMVA
Viewing angle (v/h)	178°/178°	178°/178°	178°/178°	178°/178°
Resolution	FHD 1920x1080	FHD 1920x1080	FHD 1920x1080	FHD 1920x1080
Input	LVDS	LVDS	LVDS	LVDS
BLU/Converter integrated	LED/YES	LED/NO*	LED/NO*	LED/NO*
Brightness (cd/m²)	300	1500	250	850
Temperature operating (°C)	0...+60	0...+50	0...+50	0...+60
		<i>* SmartLED Converter available</i>		
	Touch Screen			
Analog Resistive Touch Sensor	✓	✓	✓	✓
Projected Capacitive Touch Sensor	✓	✓	✓	✓
	Industrial TFT-Controller			
Serial stand alone GUI TFT-Controller				
USB-Client to LVDS TFT-Controller	✓	✓	✓	✓
RGB/DVI to LVDS TFT-Controller	✓	✓	✓	✓
Options: HDMI, DP, Video, Audio	✓	✓	✓	✓

Large Industrial TFTs

your specialist for flat screen solutions



23 & 24" TFT Displays

Panel	LM230WF3-SLD1	G240HW01V0 (S03)	G240UAN01.1	AL240FHL01-N
Manufacturer	LG	AUO	AUO	AMOLED
Type / size	IPS / 23"	AHVA / 24"	AHVA / 24"	VA / 24"
Viewing angle (v/h)	178°/178°	178°/178°	178°/178°	178°/178°
Resolution	FHD 1920x1080	FHD 1920x1080	WUXGA 1920x1200	FHD 1920x1080
Input	LVDS	LVDS	LVDS	LVDS
BLU/Converter integrated	LED/NO*	LED/NO*	LED/YES	LED/NO*
Brightness (cd/m²)	350	300	750	1000
Temperature operating (°C)	0...+50	-20...+70	0...+40	-20...+70
	<i>* SmartLED Converter available</i>			
	Touch Screen			
Analog Resistive Touch Sensor	✓	✓	✓	✓
Projected Capacitive Touch Sensor	✓	✓	✓	✓
	Industrial TFT-Controller			
Serial stand alone GUI TFT-Controller				
USB-Client to LVDS TFT-Controller	✓	✓	✓	✓
RGB/DVI to LVDS TFT-Controller	✓	✓	✓	✓
Options: HDMI, DP, Video, Audio	✓	✓	✓	✓

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SmartLED Converters

Our R&D department has developed the SmartLED converter series for an optimized control of modern LED backlights. Of course we can also customize the SmartLED converters to fit your project requirements concerning mechanics, additional features, cost-efficient hardware etc

General Features

- Control via analog voltage (0..3.3V or 0..5V) or PWM (100 .. 1000Hz)
- Output PWM synchronized to input, sync signal or free-running with programmable frequency
- I²C for ambient light sensor and temperature sensor(s)
- Additional GPIOs for local control (pushbuttons, sensor pads or potentiometer) of brightness
- Capability to connect multiple boards in a master-slave setup for high-power applications
- Control input for NVIS mode
- Error flag to detect failure of power stage or LED rail
- Flexible Microcontroller Control
 - On-Board microcontroller handles all input and control signal
 - Features are defined by firmware
- LED brightness control by PWM dimming for stable color temperature;
- optionally, use current control or combined dimming for brightness control
- Control characteristic curve can be adapted upon customer request

Some features require specific firmware support or are mutually exclusive to other features.

Please contact your sales partner to discuss possible options or combinations.

Special Features

SmartLED-II

- 11 - 16V input range
- Output: 7 – 10V, 200mA – 2A per channel (rail)
- Max. 2.3A output current (depending on actual rail configuration due to total power limit)
- Efficiency \geq 92%



SmartLED-III

- 10 - 14.5V input range
- Output: 9 – 40V, 30mA – 260mA per channel (rail), total power limited to approx. 17W+
- Wide dimming range up to 1:15000 (depends on PWM frequency)
- Efficiency \geq ca. 90%



SmartLED-IV

- 8 - 28V input range
- Output: 30 – 60V, 30mA – 500mA per channel (rail), total power limited to approx. 45W
- Efficiency \geq ca. 92%





Optical Bonding Service

Cover Glass

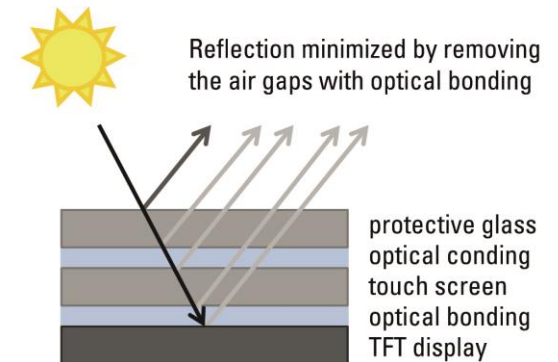
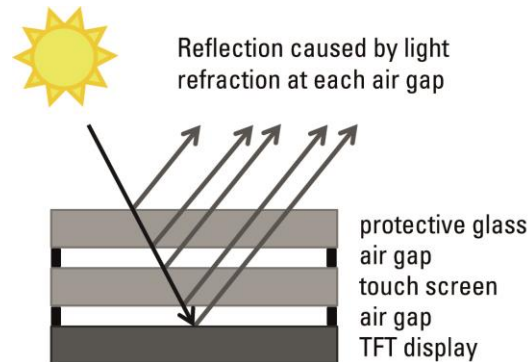
- Schott Xensation (thin & high hardness)
- Toughened Safety Glass
Ceramic or Organic Silkscreen

Touch Screen

- Projected Capacitive Touch
- Resistive Touch Glass/Glass
- Resistive Touch Film/Glass
- Analog Matrix Resistive MultiTouch

Professional Bonding
VACUBOND[®]

Economy Bonding
VACUBOND[®]





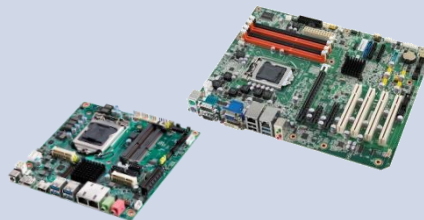
Embedded

Embedded Boards



2,5" Pico-ITX™
3,5" Single Board Computer
PC/104
Slot SBC

Industrial Mainboards



Mini-ITX™
Micro-ATX
Flex-ATX
ATX

Embedded Systems



Embedded Box PCs
Embedded Panel PCs
Embedded Server
Embedded Desktop PCs
Digital Signage Player
Industrial Monitors

Accessories & IoT



Gateways
Switches
Router
Memory, CPUs
Cables
Power Supplies

Available Features & Options:

Designed for Industrial Applications
Extended Temperature -40°C...+85°C
Design-in Support
Kits (Board with OS, Display & Cables)

Long-term Availability
Custom Design
Fixed Bill of Material
EOL / PCN Handling



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