

## **PRODUCTS AND APPLICATIONS**

2016

## A component-solutions partner to count on.

<p style="text-align: center;"><b>Engineering Competence</b></p> <p>A century long foundation in German precision engineering of components: customer solutions and operational excellence at the core of engineering, sales and distribution strategies.</p>	<p style="text-align: center;"><b>Diversified Product Portfolio</b></p> <p>Diversified and competitive product lines, providing component solutions across multiple industries and applications.</p>
<p style="text-align: center;"><b>Global Scale</b></p> <p>Global and vertically integrated infrastructure: engineering → manufacturing → sales → distribution, supporting a worldwide customer base.</p>	<p style="text-align: center;"><b>Experience &amp; Agility</b></p> <p>Entrepreneurial business culture with experienced regional management teams - highly responsive to customer needs.</p>

## Serving Multiple Industries and many Global Top Brands.

ZETTLER GROUP's diversified product lines are designed to provide complete solutions for component applications across a broad spectrum of industries.



SOLAR



AUTOMOTIVE



APPLIANCES



SECURITY



LIGHTING



HVAC/R



TELECOM



ELECTRICAL VEHICLES



MEDICAL



INSTRUMENTS



INDUSTRIAL



ENERGY MANAGEMENT

Select **ZETTLER product lines** for your consideration:

- **Transformers/Magnetics**
- **Electromechanical Relays**
- **LCD/TFT Displays**

# Transformers

[www.zettlermagnetics.com](http://www.zettlermagnetics.com)

**Zettler Magnetics Inc.** manufactures and distributes a wide range of PCB and chassis- mounted transformers, toroids, chokes and inductors, offering exceptional design and manufacturing capabilities for the most specialized applications.

## Why Zettler Magnetics?

1. **Proven innovation in transformer design.**
2. **Zettler encapsulated power solutions have unique design options – few competitors.**
3. **Wholly owned, vertically integrated engineering and manufacturing.**
4. **Highly competitive pricing due to high degree of automation.**
5. **Outstanding design support.**

## Transformers

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### Encapsulated linear power transformers

#### Key Benefits

- Less expensive than traditional open frame design
- Significant reduction in physical footprint compared to traditional open frame formats
- Can be modified to withstand 14kV surge
- Superior thermal characteristics and minimized EMI noise due to our assembly methods

#### Key Features:

- Input 115V OR 230V / Single and Dual Output
- Dielectric Strength 4200Vrms Inherently Energy Limited
- Conforms to EN 61558 AND EN 60950
- 100% Production Tested



Click image for  
product details

## Transformers

[www.zettlermagnetics.com](http://www.zettlermagnetics.com)

### Encapsulated switch-mode modules

#### Key Benefits:

- Cost Effective
- Plug & Play solution for low power applications
- Encapsulated for protection against dust and moisture
- Custom input & output available

#### Key Features:

- Universal 90-264VAC Input Range
- Self-Extinguishing Plastic 94V-0
- Low standby power <0.3W, high efficiency
- Dielectric Strength 3600 VAC
- Low Ripple and Noise
- Integrated EMC Network



Click image for  
product details

## Transformers

[www.zettlermagnetics.com](http://www.zettlermagnetics.com)

### ACST Series of PCB Mountable Current Sense Transformers



Click image for  
product details

#### Key Benefits:

- Through-hole PCB mountable
- Low profile design
- Seven turns ratio options
- Cost effective plug & play option

#### Key Features:

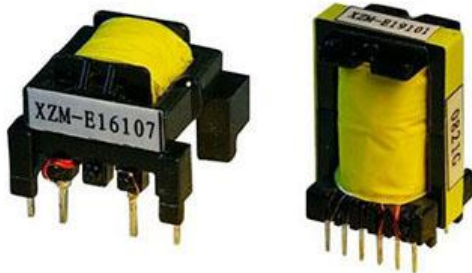
- Primary current range 0.4 to 30 Amps
- Dielectric strength 4000 Vrms
- UL class B materials
- Split-bobbin design



## Transformers

[www.zettlermagnetics.com](http://www.zettlermagnetics.com)

### Ferrite Switching Transformers



Click image for  
product details

#### Key Benefits:

- Rapid prototyping
- Easily customizable.
- Standard bobbin and core sizing for quick turnaround
- Vertical and horizontal layout options

#### Key Features:

- Universal 85-264VAC input range
- 4kV primary-secondary insulation
- Conforms to EN 61558 and EN 60950
- Creepage distance primary / secondary  $\geq 6\text{mm}$
- Highly efficient, automated wire insulation process
- 100% production tested

# Transformers

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## Sample Applications

### Hot Tub Controls

**AHI style 115/230V-10V 20VA**

This custom designed AHI series is UL Class 2 certified with double Insulation for hot tub controls.



### Electric Smart Meters

**BV302S09020-235 240V-9V 2VA**

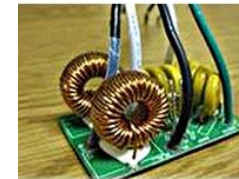
Unique bobbin designed allows the BV302S09020-235 to withstand repeated 14kV surge and the only transformer to meet UL 2735.



### Surge protection in street and parking lot lighting

**Custom Inductors**

Zettler's efficient production lines provide high volume toroidal inductors at competitive prices to OEM and CM customers around the globe.



### Oxygen Concentrators

**BV302S12020 230V-12V 2VA**

Compact design, good heat dissipation and UL class 2 recognition make the BV302S12030 a perfect fit for snug enclosures.



## Transformers

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### Sample Applications

**Soda dispensers / Industrial Microwaves / Deep fryers**

**Custom Transformer 115/230V-10V 10VA**

Dual input capability and Class B insulation system make the AH101024 popular for international markets.



**Bathroom lighting**

**AH20016 115V-16V 1.1VA**

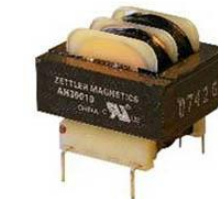
Reliable and cost effective the AH20016 helps designers bring innovative lighting solutions to market.



**AC cycling switch**

**ADH30010 115/230V-10V 2.4VA**

Efficient and dependable the ADH30010 is relied on by Utility companies.



**Medical Lighting**

**BV302S10015 230V-10V 1.5VA**

Compact packaged with UL class 2, VDE and CE certification make the BV302S10015 an easy solution for critical applications.



## Transformers

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### Sample Applications

#### Smoke Alarms

##### Custom Transformer 120/240V-24V 1VA

A Custom design, the AMXC-214 met our customers requirements of small footprint while maintaining UL and CE creepage requirements.



#### Refrigerator Controls

##### Custom 20 Watt Ferrite Transformer

With a universal 90-264VAC input capability this high frequency AC-DC switching transformer is constructed with UL Class B Materials.



#### Air Conditioning

##### AHRV-40318FMW 40VA

Efficient, inherently limited, UL Class 2 transformer is a safe and reliably used in HVAC markets around the globe.



#### Washing Machines

##### ZP10S0500W AC-DC 10 Watt Power Module

Universal 90-280VAC input with 5 VDC outputs.

A cost effective power supply solution for appliance manufactures.



## Transformer Manufacturing

- ❑ Automated and cost-efficient production lines - high performance, competitive pricing.
- ❑ Xiamen ZETTLER Magnetics production lines feature fully automated winders with pre-twisting technology, precise tension controls, auto argon arc welding, PLC controlled potting, and advanced FIFO drying.
- ❑ All ZETTLER Magnetics products are subject to stringent quality assurance and process controls, including ISO 9001.



(Click on picture for VIDEO link)

<http://www.zettlermagnetics.com/zettler-magnetic-production-video/>

## Electromechanical Relays

[www.azettler.com](http://www.azettler.com)

**American Zettler, Inc.** offers a broad product range of electromechanical relays to meet many specific requirements of diverse commercial and industrial applications.

### Why American Zettler?

#### 1. Strong, well established brand

- High brand-recognition in electromechanical relays, attractive to many brand-loyal engineers.
- Long-standing “German quality engineering” reputation.
- Wide product program for multiple applications/industries.

#### 2. Innovation in relay design

Examples:

- Ultra-low power consumption parts for energy management and intelligent lighting/ building controls.
- General purpose relay with unmatched UL ratings for amperage and temperature: 20A @ 277VAC, 30K cycles at 85 degrees C.



Click images for product details



## Electromechanical Relays

[www.azettler.com](http://www.azettler.com)

### Innovation in relay design – Examples (cont'd)

- Market leading 'new energy' solutions: complete line of Solar inverter and EV charging relays.



Click on image for product PDF

### 3. Ready replacement crosses for several industry standard relays going EOL :

- TE T7C/Omron G5LA [AZ942/AZ943](#)
- Omron G8P [AZ2150](#)
- Panasonic DS2 [AZ822/AZ826](#)
- Panasonic TX [AZ8462](#)



### 4. Scale -> Highly competitive pricing.



## Electromechanical Relays

[www.azettler.com](http://www.azettler.com)

### Sample Applications

#### Pool pumps & controls

[AZ2100](#), [AZ2150](#) & [AZ21501 series](#)

Common footprint, class F insulation and rated up to 50A



#### Electric Vehicle Chargers Level 2

[AZ2800](#) & [AZ2850 series](#)

Rated to 40A @ 277VAC, PCB & QC option



#### Lighting Controls

[AZ7555](#)

20A rated relay, low coil power option & common footprint





## Electromechanical Relays

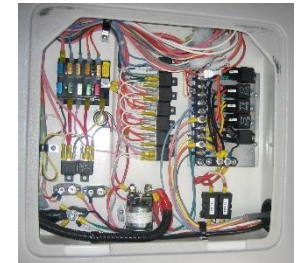
[www.azettler.com](http://www.azettler.com)

### Sample Applications

#### Automotive wiring harnesses

[AZ9731](#), [AZ988](#), [AZ980](#)

Plug-in ISO footprint relays from 25A-80A



#### Appliance controls

[AZ7709](#), [AZ576](#), [AZ9405](#), [AZ9375](#)

Industry standard footprints from 3A to 40A



#### Solar inverters

[AZSR235](#), [AZSR250](#), [AZSR180](#)

Cutting edge design, wide gap, switching to 120A



## Electromechanical Relays

[www.azettler.com](http://www.azettler.com)

### Sample Applications

#### Zone controls

[AZ943](#)

Industry standard footprint, 15A rating



#### Smart home/office controls

[AZ2505](#), [AZ762P](#)

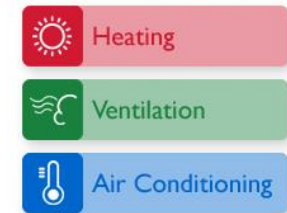
Latching relays to 120A



#### HVAC

[XMC0 definite purpose contactor](#)

Up to 4 poles, 25A – 90A



## Electromechanical Relays

[www.azettler.com](http://www.azettler.com)

### Sample Applications

#### Security panels

[AZ822](#), [AZ826](#), [AZ8222](#), [AZ850](#)

Single or bifurcated contacts, gold plating



#### Foodservice equipment

[AZ1641](#), [AZ1651](#), [AZ1661](#)

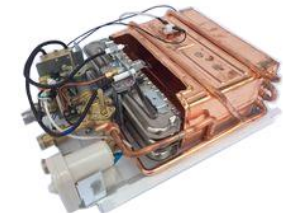
PCB and plug in, 1-4 poles, 3A-20A



#### Bi-metal thermostats

Food service equipment, HVAC, appliance, tankless water heater

Panel mount and wire harness, 1/2" and 3/4" snap discs



## Relay Manufacturing

- ❑ Proven quality assurance programs are incorporated in the initial design and development of new relay models, and into highly automated production lines and manufacturing processes.
- ❑ Statistical Process Controls (SPC) and ISO 9001 and ISO 14001 certification standards.
- ❑ ZETTLER Relays continuously assure highest product quality, safety and reliability.



(Click on picture for VIDEO link)

<http://www.azettler.com/zettler-relay-production-line/>

## LCD/TFT Solutions

[www.azdisplays.com](http://www.azdisplays.com)



**AZ Displays, Inc.** manufactures and markets a broad line of TFT panels and LCD modules, with an established reputation as a provider of top quality display solutions in a wide range of **industry applications** - combining sophisticated design and engineering capabilities, in standard and customized versions, and at very competitive pricing.

## Why AZ Displays ?

- 1. Established manufacturer of industrial display products:**  
TFT's with integrated resistive/PCAP touch 7 inch and under, wide range of character and graphic LCD modules.
- 2. Fully owned China assembly manufacturing** (clean room facilities, state-of-art process and quality controls) – **vertically integrated with global sales and distribution.**
- 3. High automation level drives ability for very competitive pricing at lower volumes.**
- 4. Sophisticated design capabilities and strong engineering support focus:**
  - North America and China engineering and development support.
  - Designer-friendly website support with **comprehensive engineering resources** including 3D CAD, datasheets, dimensional drawings, quick-scan parameter, easy to navigate digital catalog.
  - Advanced development tools include universal development AND production board.

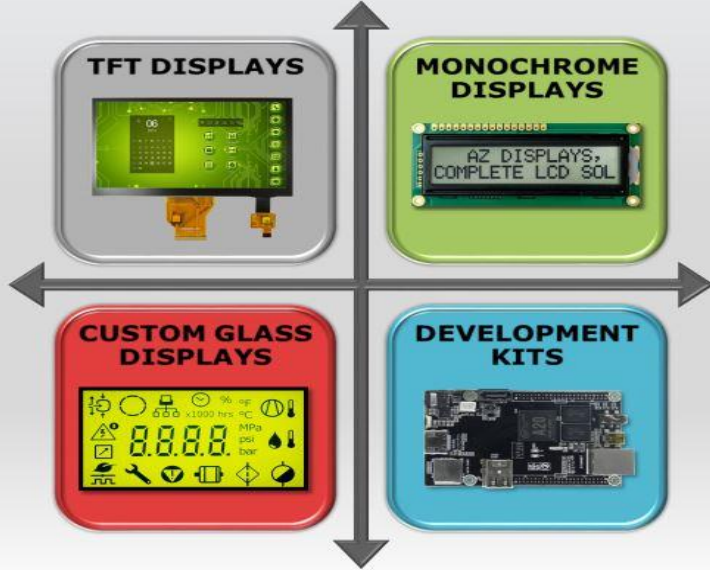
## LCD/TFT Solutions

[www.azdisplays.com](http://www.azdisplays.com)

Engineering-friendly e-catalog/product selection tool

**AZ DISPLAYS, Inc.**  
A ZETTLER GROUP COMPANY *Complete LCD Solutions*

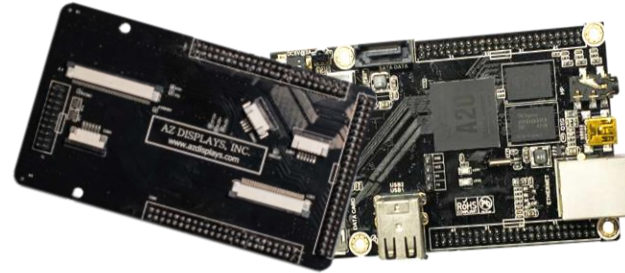
## E-CATALOG



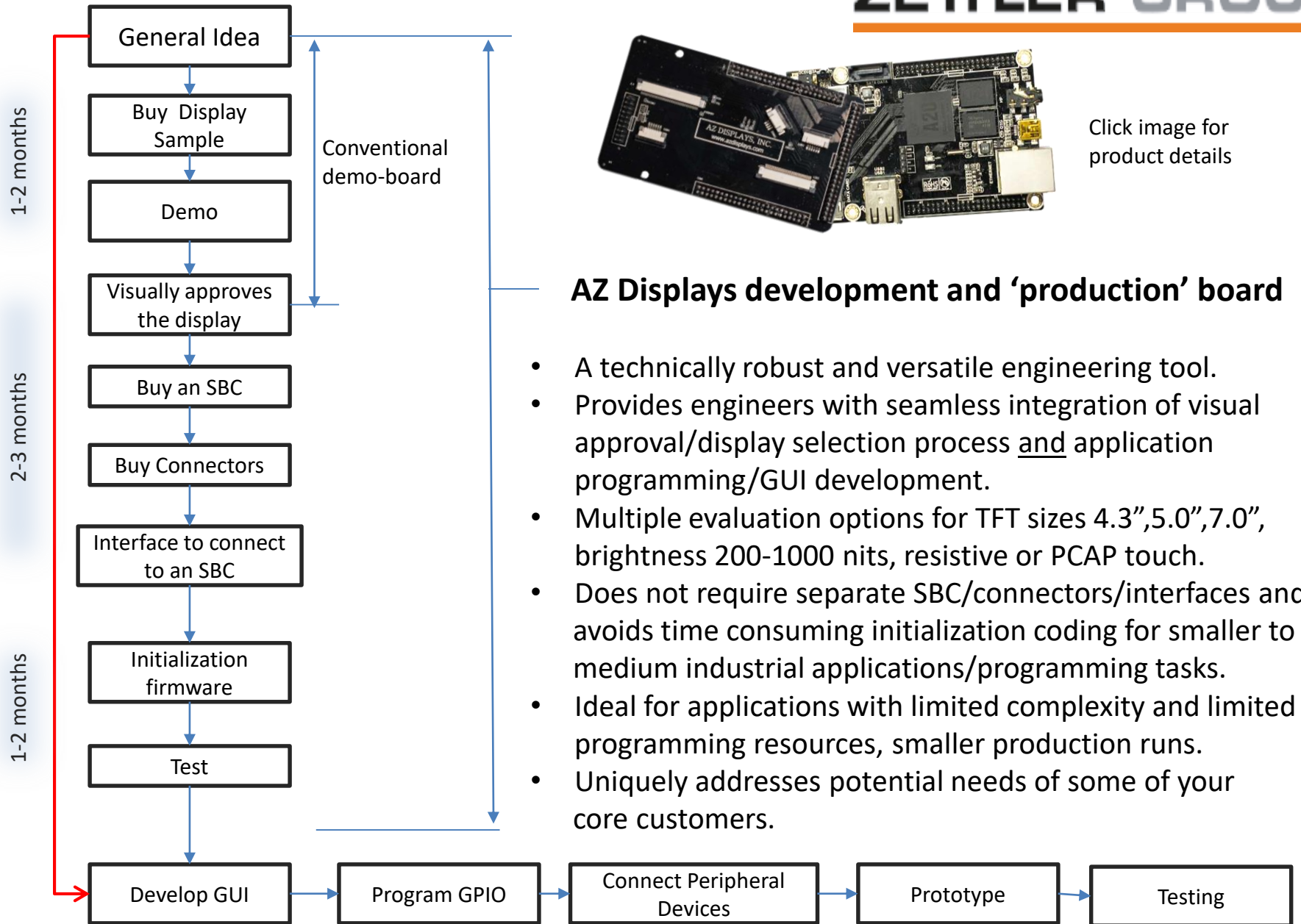
The diagram features a central cross with four arrows pointing outwards. Each arrow points to a colored rounded square containing a product image and a title. The top-left square is grey and labeled 'TFT DISPLAYS', showing a green TFT display on a circuit board. The top-right square is green and labeled 'MONOCHROME DISPLAYS', showing a monochrome display with the text 'AZ DISPLAYS, COMPLETE LCD SOL'. The bottom-left square is red and labeled 'CUSTOM GLASS DISPLAYS', showing a custom glass display with various icons and a digital readout. The bottom-right square is blue and labeled 'DEVELOPMENT KITS', showing a development kit board with various components.

[www.azdisplays.com](http://www.azdisplays.com)

Click on image for link  
<http://www.azdisplays.com/e-catalog/>



Click image for product details



## LCD/TFT Solutions

[www.azdisplays.com](http://www.azdisplays.com)

### Sample Applications

#### Security Monitoring Systems

[ATM0500D12-T](#)



#### Electronic Test Equipment

[ATM0700D6C-T](#)



#### Climate Controls

[Custom Glass](#)





## LCD/TFT Solutions

[www.azdisplays.com](http://www.azdisplays.com)

### Sample Applications

#### Fitness Equipment

[ATM0700D6B](#)



#### Automotive/Engine Controls

[ATM0700D6J-CT](#), [ATM0700L6L-CT](#)



#### Credit Card Reader

[ATM0430D12-CT](#)



**LCD/TFT Solutions** AZ Displays, Inc.

[www.azdisplays.com](http://www.azdisplays.com)

## Sample Applications

**Irrigation Controls**

[ATM0430D19A](#)



**Modular HMI control/visualization systems**

[ATM0700L6L-CT](#)



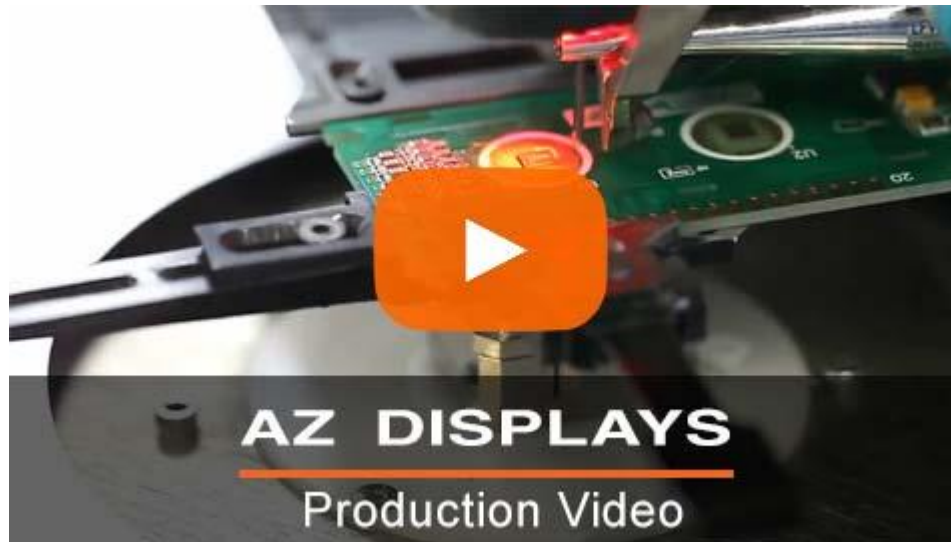
**Remote Alarm Monitoring System**

[ACM1602K-FL-YBS](#)



## Display Manufacturing

- ❑ ZETTLER Displays manufacturing division in Xiamen, China has implemented sophisticated process and quality standards including ISO 9001:2008.
- ❑ Key quality tools include APQP / DFMEA & PFMEA / SPC / MSA / PPAP, and testing on a 100% basis. Our production processes are lead free and RoHS compliant and feature clean room facilities (class 1,000 and 10,000 rooms).



(Click image for VIDEO link)

<http://www.azdisplays.com/az-displays-production-video/>

Contact us with your engineering requirements/component needs:

## **Contacts**

<http://www.zettler-group.com/contacts/>

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