



EMBEDDED & DISPLAY SOLUTIONS

WPGA Embedded Display Solutions Group focuses on the design, value-add and integration of products to support the embedded display market. We are proud to partner with the world's leading companies in display technologies and peripheral products.



TOUCH SCREENS

WPG Americas offers a broad array of touch screen solutions and we are happy to design a custom solution to meet your needs. WPGA supports the following touch technologies:

Resistive (4-, 5-, 7- and 8-wire)
Capacitive & Projective Capacitive



FILTERS

Anti-Reflective (AR) Coated Glass

The Multi-Layer Vapor Deposition Coating on Anti-Reflective Coated Glass is designed to minimize reflectance and maximize transmittance.

Anti-Glare (AG) Glass Matte Finish

AG Glass with Matte Finish is chemically etched glass that has a slightly textured finish, either on one side or both sides, reducing reflection by scattering light directed on its surface. This softens the image of direct light sources visible in the reflection of the viewing area.

EMI/RFI Shielding

This ITO conductive coated glass has conductivity levels ranging from 5 Ohms/sq to 350 Ohms/sq. A typical EMI/RFI shielding value for LCD display is approximately 9-15 Ohms/sq at 89% visible light transmission. Transmission is reduced as the Ohms/sq level drops.

Thermal Overloading

IR blocking filters are designed to reduce the thermal loading on LCDs used in direct sunlight, such as in marine, military, outdoor signage applications, etc. By significantly reducing the transmission of near-infrared and infrared radiation, IR filters reduce electronic display temperatures when exposed to direct sunlight and elevated thermal loading. This also minimizes display "brown out".

Protective Filters

Optical grad substrates used to manufacture filters include polycarbonate Lexan®, acrylic, Plexiglas®, glass and other transparent materials. Substrates are selected based on their optical and mechanical properties, their cost and the intended application where the filter will be used.

Vandal Shield

Can either be a film applied to the LCD glass, touch screen, or a sheet of protective polycarbonate taped to the surface of the LCD. Vandal Shield applications help to protect LCD panels in environments where the display is unprotected or unsupervised.

OPTICAL BONDING

Optical bonding is an adhesion process to bond two or more optical components. The key benefits of optical bonding include improved viewing angle, brightness and contrast, no condensation and moisture between LCD and overlay, and improved durability and ruggedness (shock and vibrate). Typical overlays include touch screens, contrast enhancement filters, EMI/RFI filters, vandal shields and thermal heaters.

TRANSPARENT HEATERS

Transparent heaters are transparent substrates with electrically conductive coatings. They can be integrated internally or externally depending on your application.

EXTERNAL FILMS

Anti-Reflective (AR) Film

AR Film reduces surface reflection on the front of the LCD panel, which increased the effective brightness and contrast of the display by two to three times without actually making the display any brighter.

Anti-Reflective/Anti-Glare (AR/AG) Film

The AR/AG Film offers the same effect as the AR film (above), but the AG softens the direct light source images in reflection.

Hydrophobic

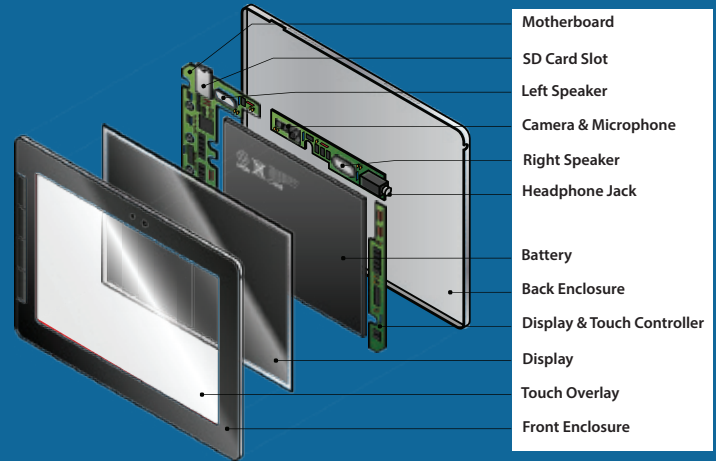
The hydrophobic coating is water repellant and bonds with the glass to create a barrier against dirt, dust, grease, liquid, salt spray, etc. In other words, it is an “easy clean” solution. The hydrophobic coating can be applied as a stand-alone solution or in combination with other enhancements, such as touch screens, AG coatings, privacy filters, etc. The hydrophobic coating will not optically change the LCD panel.

IR / Heat Reduction

The IR/Heat Reduction films are designed to reduce heat loading on the display surface for outdoor display applications.

Privacy Films

As their name states, Privacy Films are view control films designed to keep sensitive information private.



Blur

This film blurs the image when viewed 30 degrees from left or right.

Louver

The Louver Film causes the image goes black when viewed 30 degrees from left or right. It also reduces light directed in non-viewing angles to reduce reflections and lighting of surrounding areas, such as cockpit or darkened rooms.

Circular Polarizer

The Circular Polarizer is a linear polarizer with a 1/4 wave retarder laminated to the rear surface, which improved contrast of the display. Any light entering the filter from the front has the reflection internally “twisted” so there is no returned light, eliminating back surface reflections.

CUSTOM ELECTRONICS

WPG Americas Inc. is proud to design and develop the necessary electronics required to drive your display project per your requirements.

ENCLOSURES

WPG Americas, Inc. can assist you in developing your display solution with any type of enclosure that is deemed appropriate for the application.

GET IN TOUCH



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www.wpgamericas.com



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Scottsdale AZ 85260



888.WPG.8881

Embedded Computing Solutions From WPG Americas - Smarter, Smaller, Stronger

WPG Americas proudly partners with leading embedded electronics suppliers such as Advantech, Aaeon, and IEC to deliver cutting-edge solutions tailored for industrial, medical, and IoT applications. These manufacturers offer a robust portfolio of embedded boards, edge AI platforms, and fanless systems designed to meet the demands of modern automation and intelligent computing. Whether you're building smart factories, deploying AI at the edge, or upgrading legacy systems, WPG Americas provides the technical expertise and supply chain support to accelerate your innovation with reliable, scalable embedded technologies.

WHY CHOOSE WPGA EMBEDDED SOLUTIONS?

Broad Portfolio

From single-board computers to system-on-modules (SoMs), we offer a wide range of embedded platforms.

Trusted Partners

We work with industry-leading manufacturers to ensure quality and long-term availability.

Design Support

Our team helps you accelerate time-to-market with expert guidance and integration support.

Scalable Solutions

From prototypes to full-scale production, we scale with your business.

TARGET MARKETS

Industrial Automation

Rugged, reliable platforms for factory control, robotics, and edge computing.

Medical & Healthcare

Compact, high-performance systems for diagnostics, imaging, and patient monitoring.

Transportation & Automotive

Embedded solutions for fleet management, infotainment, and ADAS systems.

Smart Cities & Infrastructure

Powering intelligent traffic systems, surveillance, and environmental monitoring.

Retail & Digital Signage

Interactive kiosks, POS systems, and immersive customer experiences.



At WPG Americas, we deliver cutting-edge embedded computing solutions that power the next generation of intelligent systems. Whether you're building industrial automation, medical devices, or smart transportation systems, our embedded platforms are designed to meet your performance, reliability, and scalability needs.

DISPLAY SOLUTIONS FORM

CONTACT / PROGRAM INFORMATION

Date _____	Contacts	Name	Email	Program Name _____
Customer _____	Engineering	_____	_____	RFQ QTY's _____
Website _____	Purchasing	_____	_____	Sample Date _____
_____	_____	_____	_____	Prototype Date _____
Current Competition _____	WPGA Sales	_____	_____	Production Date _____ Qty _____

DISPLAY SPECIFICATIONS

1. What type of LCD is required? TFT _____ OLED _____ Passive _____ Graphic Module _____ Character Module _____
2. Type of Display? Transmissive _____ Transflective _____ Reflective _____
3. Resolution (e.g. 1024x768 XGA)? _____
4. Diagonal size of the display (e.g. 3.5", 7.0", 10.1")
 - a. Viewing angle requirement _____
5. Brightness requirement (e.g. 350 Nits, 1200 Nits)? _____
 - a. Display will be primarily used Indoors _____ Outdoors _____ Both _____
6. What interface? ARGB (standard PC input) _____ NTSC/PAL video _____ DVI _____ TTL _____ LVDS _____ HDMI _____ SPI _____ MCU _____ Display Port _____ SDI _____
7. Contrast ratio requirement (e.g. :500:1)? _____
8. Any low power requirements (Battery)? Y ☐ N ☐
9. Does AR tempered glass need to be bonded to the front of the display? Y ☐ N ☐
10. Do you need any value-integration for your project or design? Y ☐ N ☐

DISPLAY VALUE ADD

TOUCH SCREEN SPECIFICATIONS

1. Touchscreen Resistive 4-wire _____ 5-wire _____ 8-wire _____ IR/Other _____
2. Touch screen Capacitive: Single Touch _____ Multi Touch _____
3. Touch controller 3 V input _____ 5 V input _____ or 12V input _____ USB _____ or Serial _____
4. Integrate touch screen onto LCD? Y ☐ N ☐
 - a. Does the touch screen need to be fully bonded to the display? Y ☐ N ☐
 - b. Special touch? Finger ☐ Pen ☐ Tool ☐ Glove ☐
5. Is a front gasket required? Y ☐ N ☐
 - a. Any special material specification? Y ☐ N ☐

TOTAL SOLUTIONS

1. Is a single board computer required to drive the display? Y ☐ N ☐
2. Is an open frame or rack mount enclosure required? Y ☐ N ☐
3. Is a waterproof front seal or enclosure required? Y ☐ N ☐
4. Is High Bright (Daylight viewable) LED backlighting required? Y ☐ N ☐
5. Are there any other size/package/dimension requirements? Y ☐ N ☐
6. Do you need anti-reflective film (AR), EMI filtering, vandal protection? Y ☐ N ☐

DISPLAY CONNECTION KITS

1. Control circuit for LED's required? Y ☐ N ☐
2. Is a display data interface cable required? Y ☐ N ☐
3. Is an Analog to Digital controller card required? Y ☐ N ☐
4. Do parts need to be kitted or labeled with their part number? Y ☐ N ☐

WPG Americas can work closely with you to develop a custom solution that meets your needs. Demo units may be available for evaluation.

Inquire today!



WPGA TOTAL SOLUTIONS | BY PRODUCT

ANTENNAS

Johanson
Spark Microsystems
Vitramon / Vishay

CAPACITORS

BCcomponents / Vishay
Johanson
KEMET
Pilkor/World Products Inc.
Roederstein/Vishay
Sprague/ Vishay
Vitramon / Vishay
World Products Inc.

CIRCUIT PROTECTION

Amazing Micro
BCcomponents / Vishay
KEMET
ProTek Devices
Taiwan Semi
Vishay Semiconductors
World Products Inc.

COMPUTER HARDWARE & PERIPHERALS

Advantech
Aaeon
iEi
Supermicro*

CONNECTORS

Credo
Vishay

DIODES, MOSFETs & TRANSISTORS

General Semiconductors
/Vishay
Micro Commercial
Components / MCC
MPS
ProTek Devices
Siliconix / Vishay
Taiwan Semi
World Products Inc.

DISPLAY PRODUCTS

Aaeon
EDT*
FEMA
Innolux*
Newhaven Display
Sharp Microelectronics
Tianma America, Inc.
Vishay
WiseChip*

EMBEDDED BOARDS

Aaeon
Advantech
Beacon
iEi

ENCODERS

MCB/Vishay
TOCOS

ESD

Amazing Micro
Taiwan Semi
Vishay

FREQUENCY

NDK

INDUCTORS, MAGNETICS & TRANSFORMERS

Dale / Vishay
Johanson
KEMET
Vishay

LIGHTING CONTROLS/ LED DRIVERS/MODULES

AC Electronics / ACE LEDS
Cree LED
eldoLED
ENEDO
ERP
indie Semiconductor
IOTA
Kinetic
McWong
MPS
Powerland
Samsung LED
SensorSwitch
Taiwan Semi

LINEAR, ANALOG & MIXED SIGNAL

indie Semiconductor
Kinetic
Micro Commercial
Components / MCC
MPS
Siliconix / Vishay
Taiwan Semi
Vishay

MCU/MPU/ PERIPHERALS

EdgeCortex
indie Semiconductor
MemryX
Sima.ai

MEMORY / STORAGE

Alliance Memory
DapuStor
Giantec
Kingston
Micron
Samsung Semiconductor
Winbond
Wintec

NETWORKING

Credo

OPTICAL SOLUTIONS - LIGHTING

Bright View
Gaggione
LEDiL
Polymer Optics
Vishay

OPTO/LEDs/MODULES

AC Electronics / ACE LEDS
Bolb, Inc.
CREE LED
eldoLED
Kingbright America LLC
Samsung LED
Vishay
World Products Inc.

POTENTIOMETERS

BCcomponents / Vishay
MCB / Vishay
Sfernice / Vishay
Spectrol / Vishay
TOCOS
Vishay

POWER SUPPLIES & ADAPTORS

AC Electronics/ACE LEDS
COSELSYNC.
COSEL USA
eldoLED
ERP
indie Semiconductor
IOTA
LITEON
McWong
Powerbox
Powerland
Power Partners/TT
Electronics

RELAYS

KEMET
NEC TOKIN / World
Products Inc.
Vishay
World Products Inc.

RESISTIVE DEVICES

Angstrohm / Vishay
Beyschlag / Vishay
BCcomponents / Vishay
Dale / Vishay
MCB / Vishay
Sfernice / Vishay
Thin Film / Vishay
TOCOS

RF & MICROWAVE

RichWave

SENSORS

Advantech
indie Semiconductor
KEMET
Pixart
RichWave
Taiwan Semi
TOCOS
Vishay

SWITCHES

TOCOS

TELECOM

Credo
Vishay

THERMAL

ATS

TIMING DEVICES

NDK

TOUCH SCREENS

Dale/Vishay
EDT
Fujitsu*
Newhaven Display
Tianma America, Inc.
WiseChip

WIRELESS

Advantech
Jorjin
RichWave
Spark Electronics

| BY SUPPLIER

A

Aaeon
AC Electronics / ACE LEDS
Advantech
Alliance Memory
Amazing Micro
Angstrohm / Vishay
ATS

B

BCcomponents / Vishay
Beacon
Beyschlag / Vishay
Bolb, Inc.
BrightView

C

COSELSYNC.
COSEL USA
Credo
Cree LED

D

Dale / Vishay
DapuStor

E

EDT*
EdgeCortex
Efinix
eldoLED
ENEDO
ERP

F

FCL Components / Fujitsu
FEMA

G

Gaggione
General Semiconductors /
Vishay
Giantec

I

iEi
indie Semiconductor
Innolux
IOTA

J

Johanson
Jorjin

K

KEMET
Kinetic
Kingbright America LLC
Kingston

L

LEDiL
LITEON

M

MCB / Vishay
MemryX
Micro Communal
Components / MCC
McWong
Micron
Monothic Power Systems
/ MPS

N

NDK
Newhaven Display

P

Pixart
Polymer Optics
Powerbox
Powerland
Power Partners / TT
Electronics
Protek Devices

R

RichWave
Roederstein / Vishay

S

Samsung LED
Samsung Semiconductor
SensorSwitch
Sfernice / Vishay
Sharp Microelectronics
Spectrol/Vishay
Sprague/Vishay
Supermicro*

T

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