KRUT LED LLC

Outdoor LED Signs, Digital Billboards & Score Boards

PRO
SERIES

PRO SERIES

The PRO SERIES is developed according to the highest quality standards in manufacturing

Rugged **Aluminium** Frame, Weather Proof Powder Coating

Clear, Vivid Images and Videos, 3,840Hz Refresh Rate

Thermostatically Controlled Cooling Fans

Same Size Modules, **Easy to Upgrade**

High Resolution

Safety Cable Attached to prevent damage from falling

Backup Power & Signal ports Integrated

Ultra **BRIGHT** wide viewing angle

Impeccable Soldering & Silver Contained Solder

UL48 & CUL 48 Certified. **FCC** compliant

Power & Signal Cables with **Quick Release** Connectors

SMD and DIP Specs Covered

Easy and **Fast Install** for various Applications

IP65 rated High Stability in All Climates

Gold Wire Bonding LEDS

Sectional In-Row Cabinet Architecture

Quick Module Removal (20 Seconds)

Module without Output, **Easy Troubleshooting**

Silicone Gel **Sealed on Both Sides**

Switch Power Supply Unit with **≥90% Efficiency**

High Consistency Louver Made from Durable GE Plastics

1.6mm 4 Copper layer PCB

Brilliant Reliable Simplicity

Multiple configurations can be used for various installations, large and small.

Ultra-Bright.

With 7,000+ Nits (SMD) and 10,000 + Nits (DIP) brightness, the screen is clearly visible,even under direct sunlight.
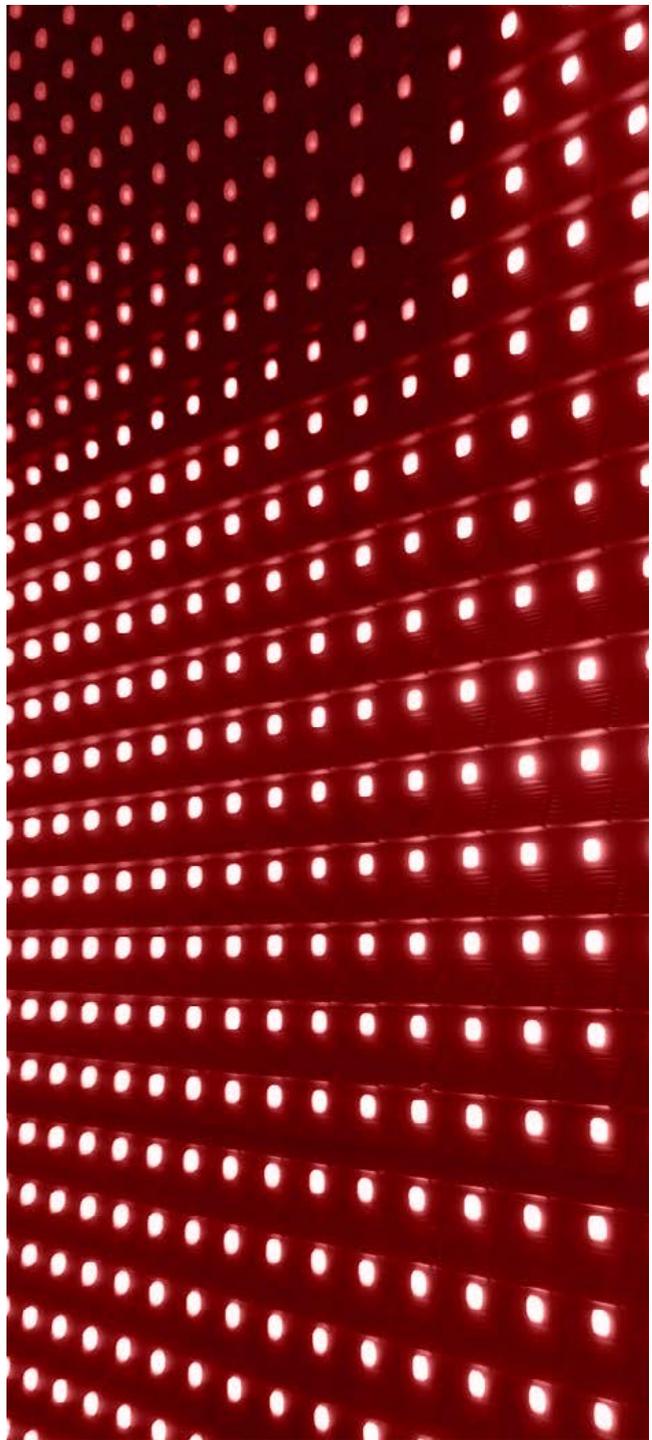
Vibrant.

Tight pixel pitch starting with 6.67mm, 281 trillion colors and 3,840 Hz refresh rate, deliver bright,vibrant colors producing clear, vivid images and videos.

Reachable.

Wide viewing angle of 160° horizontal and 120° vertical ensures your branding & advertising information reach the target audience at any distance.

Simply Best Quality

Performance

The LED modules of the Pro Series are engineered by a stringent R&D process in design architecture, and material selection using state of the art manufacturing equipment. All combined with an effective quality control process to deliver peak performance with the utmost in reliability.

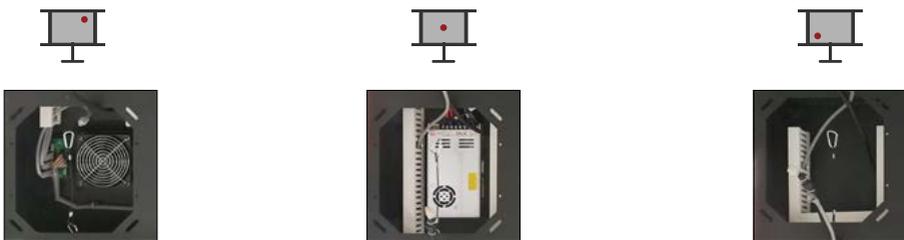*Silicone Gel sealed on both sides: Prevents oxidation of components and solder joints etc.*

Optically – Optimized Mask with high quality GE plastics

Gold wire bonding LEDs

Fastener

Safety cable bolt

Power & Signal connector (Integrated redundant connectors)

Handle

Alignment Pin

Rubber Seal

High Performance Solid Components. Impeccable Soldering & Silver Contained Solder

1.6mm 4 copper layer PCB (1 oz copper per sq.f)
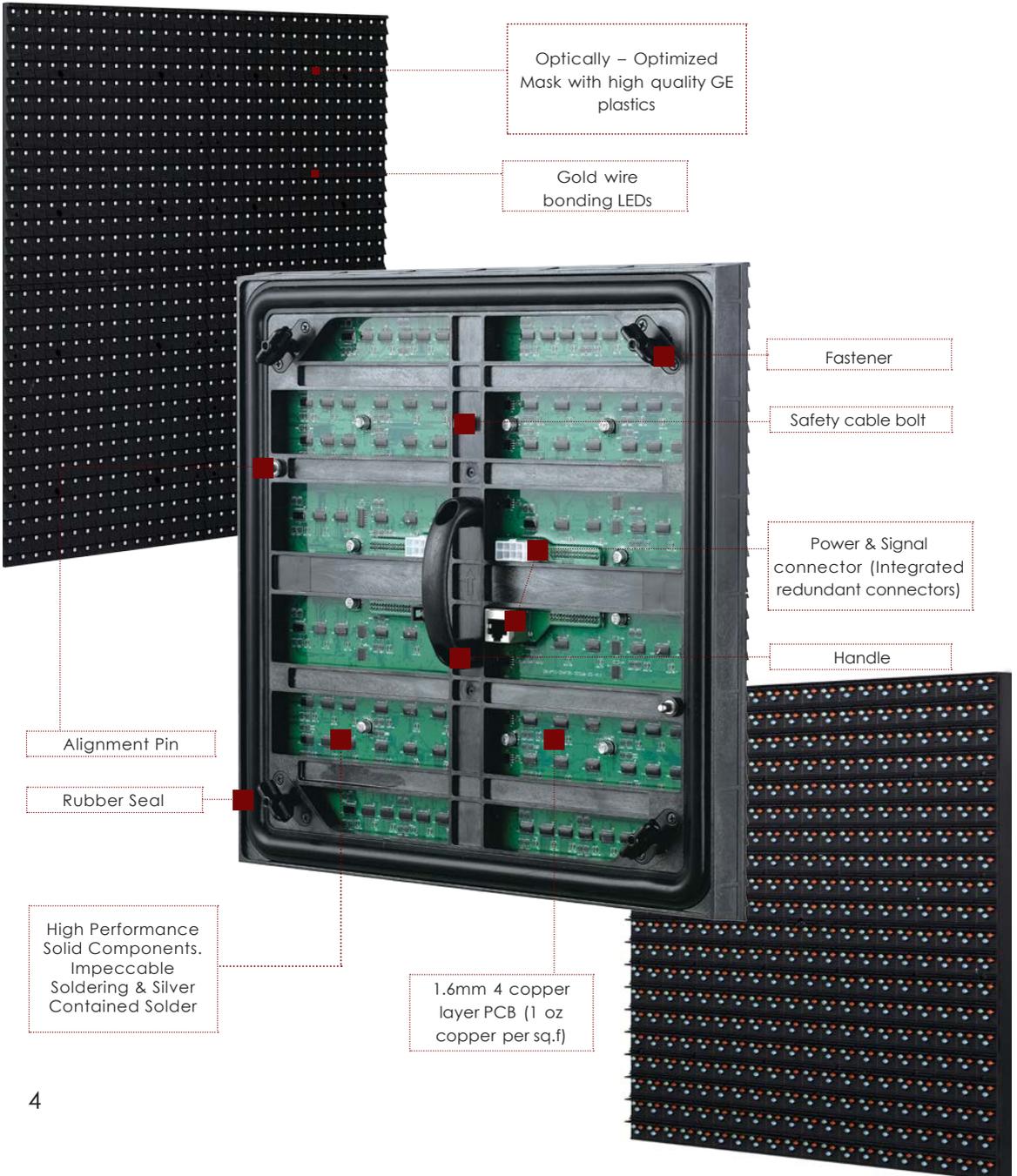
Reliable

The Aluminum cabinet of the Pro Series is IP65 rated, ensuring the product is electrically functional and stable in all climates, including harsh weather conditions and extreme temperatures. The effective heat dissipation of the Pro Series design ensures long lasting, and dependable performance.

Alignment pins(Lifting eyes)

Power entry: Antenna & Sensors exit (if applicable)

Water & Weather Proof Conduit Sealed Between Cabinets.

Inner wiring conduit

Exhaust

Intake

Handle

Angle Bracket

Sectional In-Row Cabinet Architecture

Receiving Card & Cooling Fans Section

Thermostatic control will enable and cycle fans at 100°F

DC Power Source Section

Power supplies efficiency ≥ 90%; Fan-less type units are optional for excessively humid environments.

Wiring Section

Power entry; Inner wiring between cabinets, antenna, and temperature sensor exit points (if applicable)

MODULE OPTIONS
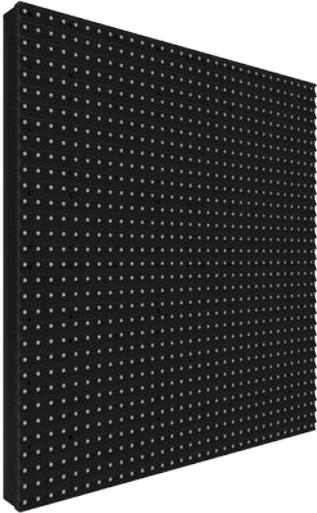
SMD 10mm
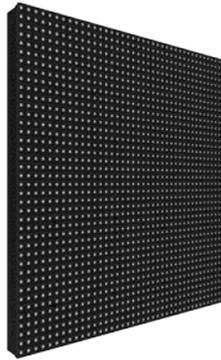
SMD 8mm
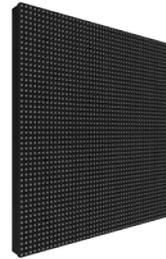
SMD 6.67mm

DIP 16mm
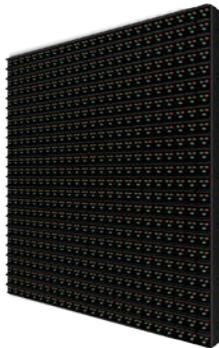
DIP 13.3mm

DIP 10mm

All Models Share The Same Plastic Housing - Retrofit & Upgrade Your Signs In Future With Less Time, Less Cost.

Specification - SMD Type

Pixel Pitch (Resolution)	6.67 mm	8 mm	10 mm
LED Package Type	SMD	SMD	SMD
Pixels Per Sq. Foot (Density)	2,090	1,452	929
Module Dimensions	12.6"x12.6" (320mm x 320mm)	12.6"x12.6" (320mmx320mm)	12.6"x12.6" (320mmx320mm)
Module Matrix	48x48	40x40	32x32
Module Weight	3 LB (1.4 KG)	3 LB (1.4 KG)	3 LB (1.4 KG)
Driving Method	1/6 constant current	1/4 constant current	1/2 constant current
Refresh Rate	≥3,840 Hz	≥3,840 Hz	≥3,840 Hz
Video Frame Rate	60 frames/second	60 frames/second	60 frames/second
Grayscale	65,536 (281 trillion colors)	65,536 (281 trillion colors)	65,536 (281 trillion colors)
Color Depth	16 bit	16 bit	16 bit
Contrast Ratio	3,000 : 1	3,000 : 1	3,000 : 1
Brightness	≥6,500 NITS	≥6,500 NITS	≥7,000 NITS
Brightness Control	256 levels	256 levels	256 levels
Ideal Viewing Range	18' or greater	22' or greater	28' or greater
Ideal Viewing Angle	160°(H) / 120°(V)	160°(H) / 120°(V)	160°(H) / 120°(V)
Max. Power Consumption	70W/f2 (750W/m²)	70W/f2 (750W/m²)	70W/f2 (750W/m²)
Avg. Power consumption	23W/f2 (250W/m²)	23W/f2 (250W/m²)	23W/f2 (250W/m²)
Input Voltage	88 ~ 264VAC	88 ~ 264VAC	88 ~ 264VAC
Ingress Protection	IP67 front / IP55 rear	IP67 front / IP55 rear	IP67 front / IP55 rear
Operating Temperature	-40 °F - +140°F (-40 °C - +60 °C)	-40 °F - +140°F (-40 °C - +60 °C)	-40 °F - +140°F (-40 °C - +60 °C)
MTBF	>5,000 hours	>5,000 hours	>5,000 hours
LED Life - Span	100,000 hours	100,000 hours	100,000 hours
Cabinet Size	Custom	Custom	Custom
Cabinet Material	Aluminum	Aluminum	Aluminum
Cabinet Weight	7.78 LB/f2 (38 KG/m²)	7.78 LB/f2 (38 KG/m²)	7.78 LB/f2 (38 KG/m²)

Specification - DIP Type

Pixel Pitch (Resolution)	10 mm	13.3 mm	16 mm
LED Package Type	DIP	DIP	DIP
Pixels Per Sq. Foot (Density)	929	522	363
Module Dimensions	12.6"x12.6" (320mm x 320mm)	12.6"x12.6" (320mmx320mm)	12.6"x12.6" (320mmx320mm)
Module Matrix	32x32	24x24	20x20
Module Weight	4.5 LB (2 KG)	4.5 LB (2 KG)	4.5 LB (2 KG)
Driving Method	1/4 constant current	1/2 constant current	Static
Refresh Rate	≥3,840 Hz	≥3,840 Hz	≥3,840 Hz
Video Frame Rate	60 frames/second	60 frames/second	60 frames/second
Grayscale	65,536 (281 trillion colors)	65,536 (281 trillion colors)	65,536 (281 trillion colors)
Color Depth	16 bit	16 bit	16 bit
Contrast Ratio	3,000 : 1	3,000 : 1	3,000 : 1
Brightness	≥10,000 NITS	≥10,000 NITS	≥10,000 NITS
Brightness Control	256 levels	256 levels	256 levels
Ideal Viewing Range	28' or greater	42' or greater	52' or greater
Ideal Viewing Angle	120°(H) / 60°(V)	120°(H) / 60°(V)	120°(H) / 60°(V)
Max. Power Consumption	35W/f2 (380W/m²)	35W/f2 (380W/m²)	35W/f2 (380W/m²)
Avg. Power consumption	11W/f2 (120W/m²)	11W/f2 (120W/m²)	11W/f2 (120W/m²)
Input Voltage	88 ~ 264VAC	88 ~ 264VAC	88 ~ 264VAC
Ingress Protection	IP67 front / IP55 rear	IP67 front / IP55 rear	IP67 front / IP55 rear
Operating Temperature	-40 °F - +140°F (-40 °C - +60 °C)	-40 °F - +140°F (-40 °C - +60 °C)	-40 °F - +140°F (-40 °C - +60 °C)
MTBF	>5,000 hours	>5,000 hours	>5,000 hours
LED Life - Span	100,000 hours	100,000 hours	100,000 hours
Cabinet Size	Custom	Custom	Custom
Cabinet Material	Aluminum	Aluminum	Aluminum
Cabinet Weight	9 LB/f2 (45 KG/m²)	9 LB/f2 (45 KG/m²)	9 LB/f2 (45 KG/m²)

▶ Precise Low Knee Voltage Tech Adopted

Simplicity

The internal components of the display can be accessed easily from the front, with a ¼ turn of 4 spring loaded hex fasteners located at the corners of each module. It will take only 20 seconds to disassemble and remove one module.

Safety cable is attached between the module and cabinet to prevent damage from falling during service.
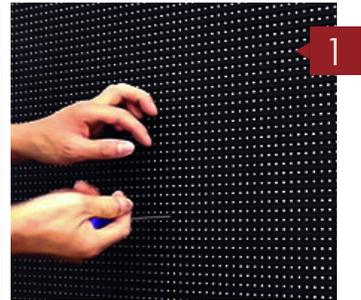
▶ Signal transmission to each individual module is separate, improving screen's visual perfor-mance and simplifying the trouleshooting process.

FCC INTERFERENCE STATEMENT

Federal Communications Commission Interference Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

MULTI-SPORT VIRTUAL SCORE BOARDS

CAN BE USED FOR
Football
Baseball/Softball
Basketball
Tennis
Volleyball
And others

We also offer tournament management (With use of Ultra Event)*

Event Scheduling
Events data management, scheduling settings, field settings and event item settings.
Group the athletes and arrange the schedule automatically.

Result Management
Generate the ranking for all athletes automatically with simply input results.
Register the athletes automatically according to their rank.

Information Bulletin
Bulletin the information of athletes, event result and ranking automatically.
All information can be searched and printed Online.

Also offer Sports Stats System
Professional Sports stats and report

Controlling computer can be tied to existing sporting stadium, no need for external buzzers or horns. Advertisements can be made digital, save costs by not having to print banners for sponsors

VIDEO ARBITRATION SYSTEM*

* Signifies add-on feature (not included)

Record and playback video during match

The Video Arbitration System (as known as Video Judgement System, Video Assistant Referee (VAR), or Instant Replay System), can record high definition (HD) videos during the match, and play them back in slow-motion. It can also be used to arbitrate the dispute during the match.

Multi-Angle Video Record*
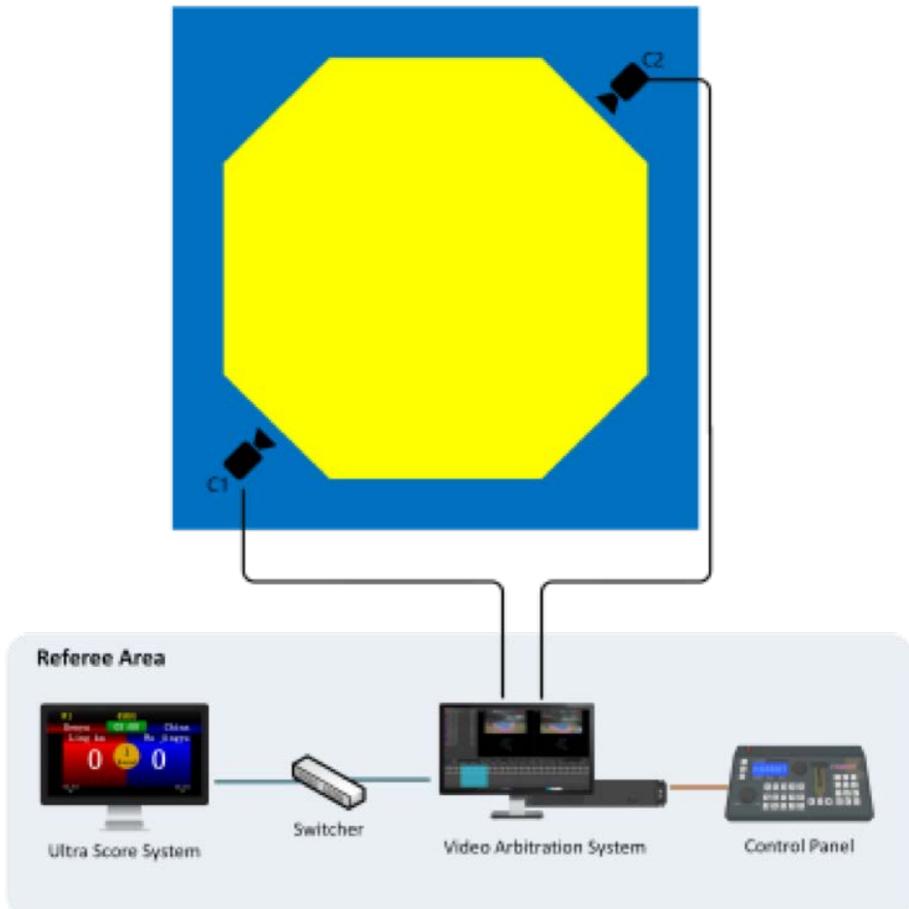
4 channels synchronize video record. Track back or slow-motion playback each channel even during the recording.

Specification

Channels: 2-8
Resolution: 1080p
Storage: 10+ Hours

Replay in Slow-motion

LIVE VIDEO SYSTEM*

Real-time score display and replay of the best moments

Overlapping display of scores
Overlapping display of player information
Replay of high-definition slow motions
Overlapping display with sports messages

Krut LED LLC
www.krut-led.com

SHIPPING All displays ship from our Anderson warehouse within 72 hour after placing order.

864-401-8156

111 Preamble Court
Anderson, SC 29621

Sales@krut-led.com