M-Series

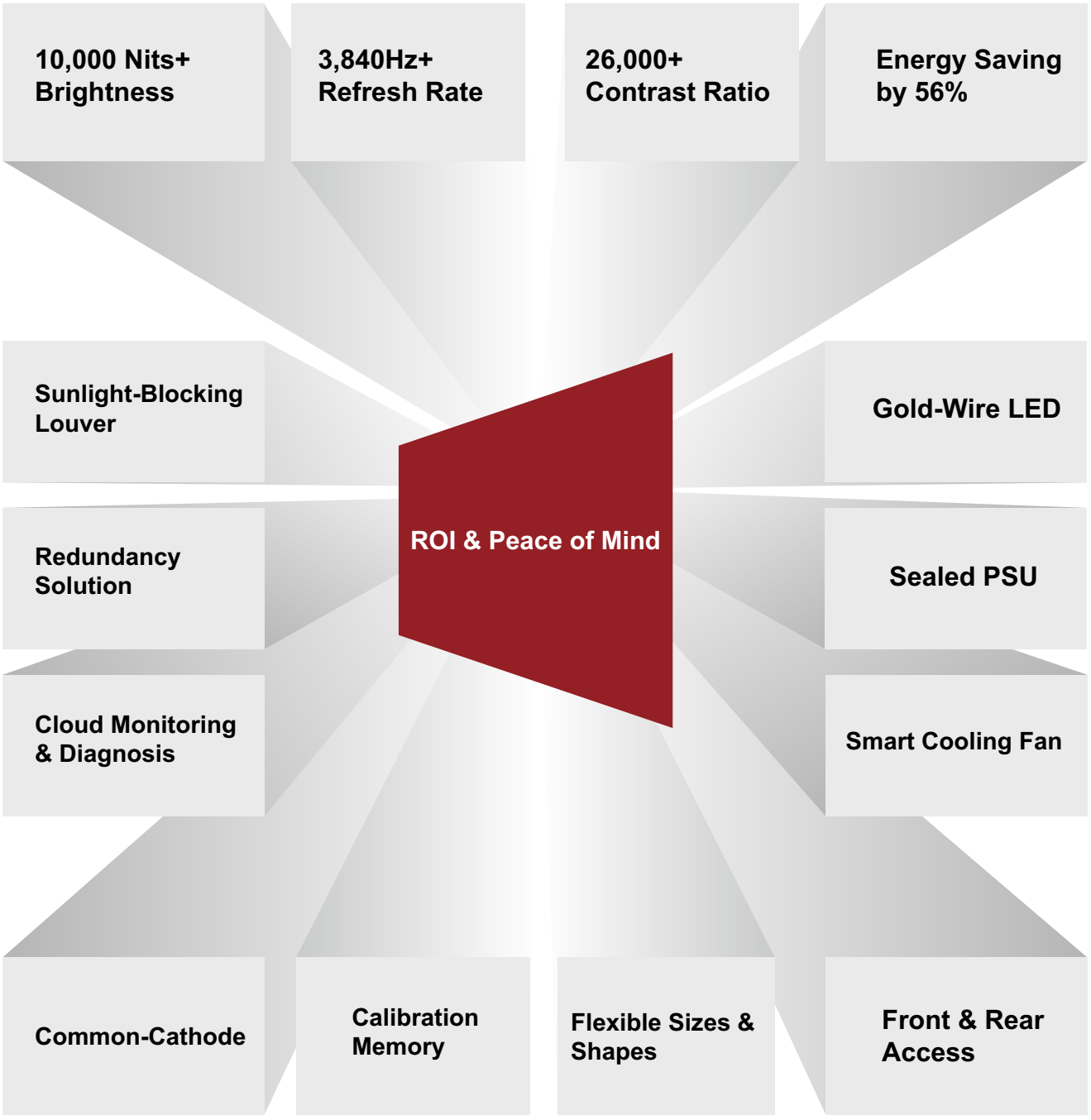
M-Series is designed to meet the evolving needs of the global large-format outdoor LED display market. It delivers vivid, crystal-clear visuals—even under direct sunlight. Its quick-assembly structure, energy-saving technology, built-in redundancy systems, and cloud-based monitoring and diagnostics are all engineered to reduce total cost of ownership across the product's lifecycle. From roadside digital billboards to building-mounted displays and stadium screens, M-Series is the smart, reliable choice for any outdoor application.

10,000+ Nits Brightness with Just **100–200** W/m² Average Power Consumption

ENVOLTAGE

LARGE FORMAT OUTDOOR LED DISPLAY

M-Series



Visual Excellence

M-Series combines ultra-bright LEDs, high-refresh driver ICs, and a precision-engineered mask with extended louvers and a matte black anti-glare finish. This synergy ensures peak performance across three essential visual dimensions:

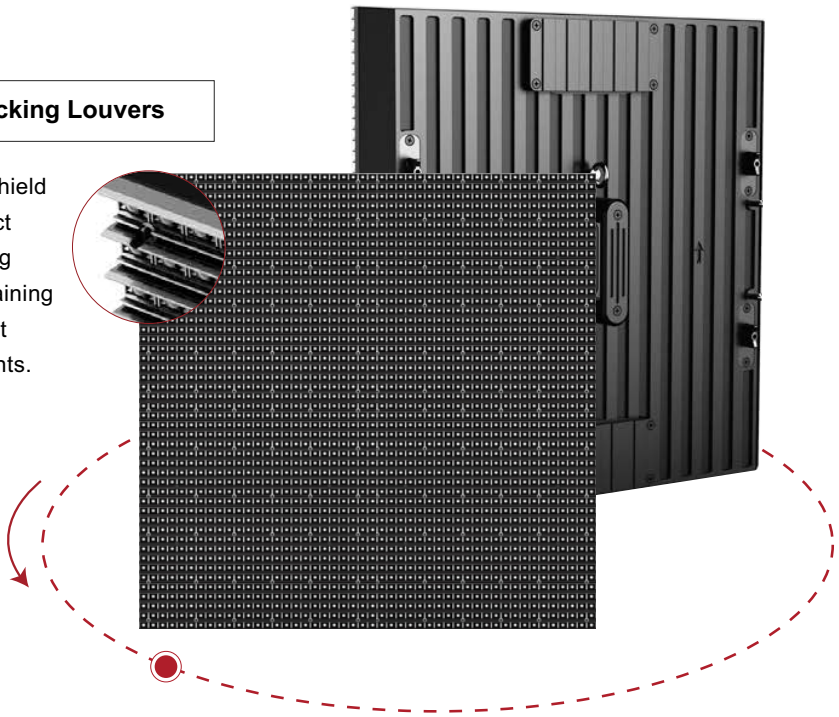
10,000+ nits brightness

3840Hz+ refresh rate

26,000:1+ contrast ratio

Sunlight-Blocking Louvers

Extended louvers shield the LEDs from direct sunlight—enhancing contrast and maintaining clarity even in bright outdoor environments.



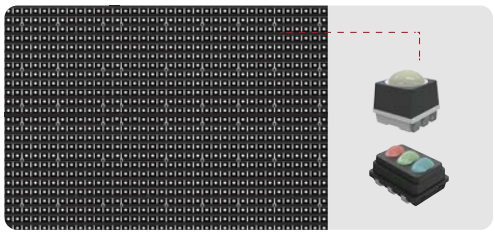
Zero Compromise Experience

Every detail on the M-Series screen stays vibrant, sharp, and fluid—even under direct sunlight.

Whether viewed up close or from a distance, your content remains crystal-clear and visually compelling at all times.

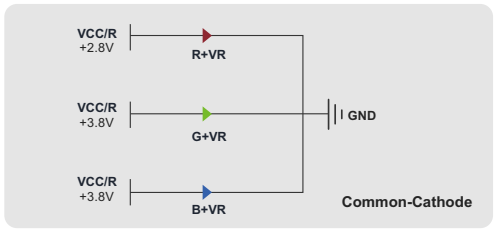
Energy-Saving by Design

By combining a series of intelligent circuit designs, advanced materials, and smart control technologies, M-Series significantly reduces power consumption while maintaining top-tier brightness and performance.



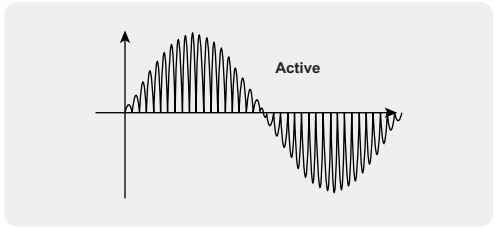
High-Efficiency LEDs

Large-chip, gold-wire LEDs with a lens-enhanced design deliver maximum brightness while consuming minimal power.



Common Cathode Driving

Independent voltage supply for red, green, and blue LEDs based on their actual voltage needs—reduces energy loss by 20%–40%.



High-Efficiency Power Supplies

Power supplies with >90% conversion efficiency and active PFC (Power Factor ≥ 0.98) significantly reduce energy waste.

Automatic Brightness Adjustment

Built-in light sensors dynamically adapt screen brightness to surrounding light conditions, ensuring optimal visibility without overconsumption.

Cloud-Based Energy Management

Scheduled on/off & brightness settings, and real-time adjustment—ensuring intelligent and efficient energy use.

Energy-Saving by Numbers

Based on the U.S. 2024 average commercial electricity rate of $0.16/kWh
14' x 48' Double-Sided Billboard | 10,000 nits Brightness | 24/7 Operation.

With March II, you can achieve up to **56%** energy savings, without compromising brightness or visibility.

	Regular SMD	M-Series	Cost Saved
Cost	$115	$50	$65
Monthly Cost	$3,450	$1,510	$1,940
Annual Cost	$41,978	$18,374	$23,604
10-Year Cost	$419,786	$183,741	$236,045

Value Beyond the Numbers

Lower heat means more than just energy savings. It leads to enhanced product reliability, longer lifespan, and fewer failures—translating into reduced maintenance needs and higher customer satisfaction.

For your business, that means smoother operations, lower total cost of ownership, and long-term peace of mind.

Quick & Seamless Installation

Engineered for Efficiency and Precision

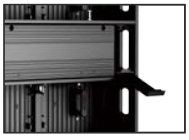
M-Series features a clean, practical, and thoughtfully engineered structure that makes display installation intuitive and hassle-free—perfectly aligned with supporting frameworks.

Lightweight & Robust Cabinet Frame

Designed for structural stability and effortless handling

Quick-Connect, Weather-Proof Power & Signal Connectors

Ensure fast, secure, and reliable setup in all environments



Simple and Clever Cable Cover Design

Provides a neat finish while shielding connectors & cables from UV and weather exposure

Front & Rear Access

Maximized Convenience, Minimized Downtime

M-Series is designed for effortless maintenance—from both front and rear sides. Whether it's a module, power unit, or any other component, everything can be easily accessed and replaced onsite, ensuring quick service and minimal display downtime.

Front Module Access

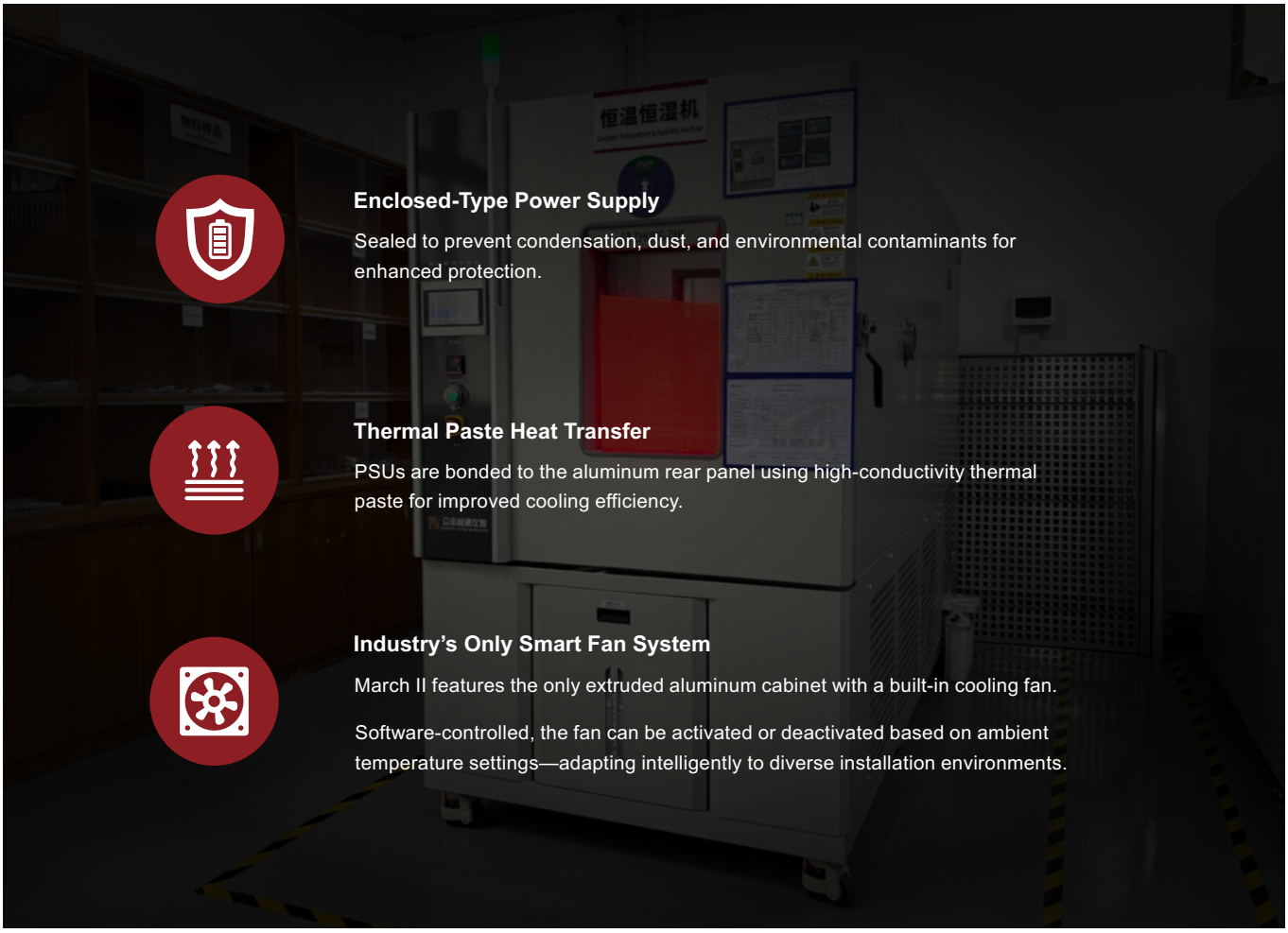
Rear Module Access

Front Cabinet Components Access

Rear Cabinet Components Access

Engineered to Last

With nearly 20 years of expertise in high-end outdoor LED display technology, we have engineered M-Series with reliability as a core priority. From design to material selection and production, every detail meets the highest standards. Whether in rigorous lab simulations or extended real-world testing, March II has proven its exceptional reliability.



Enclosed-Type Power Supply

Sealed to prevent condensation, dust, and environmental contaminants for enhanced protection.

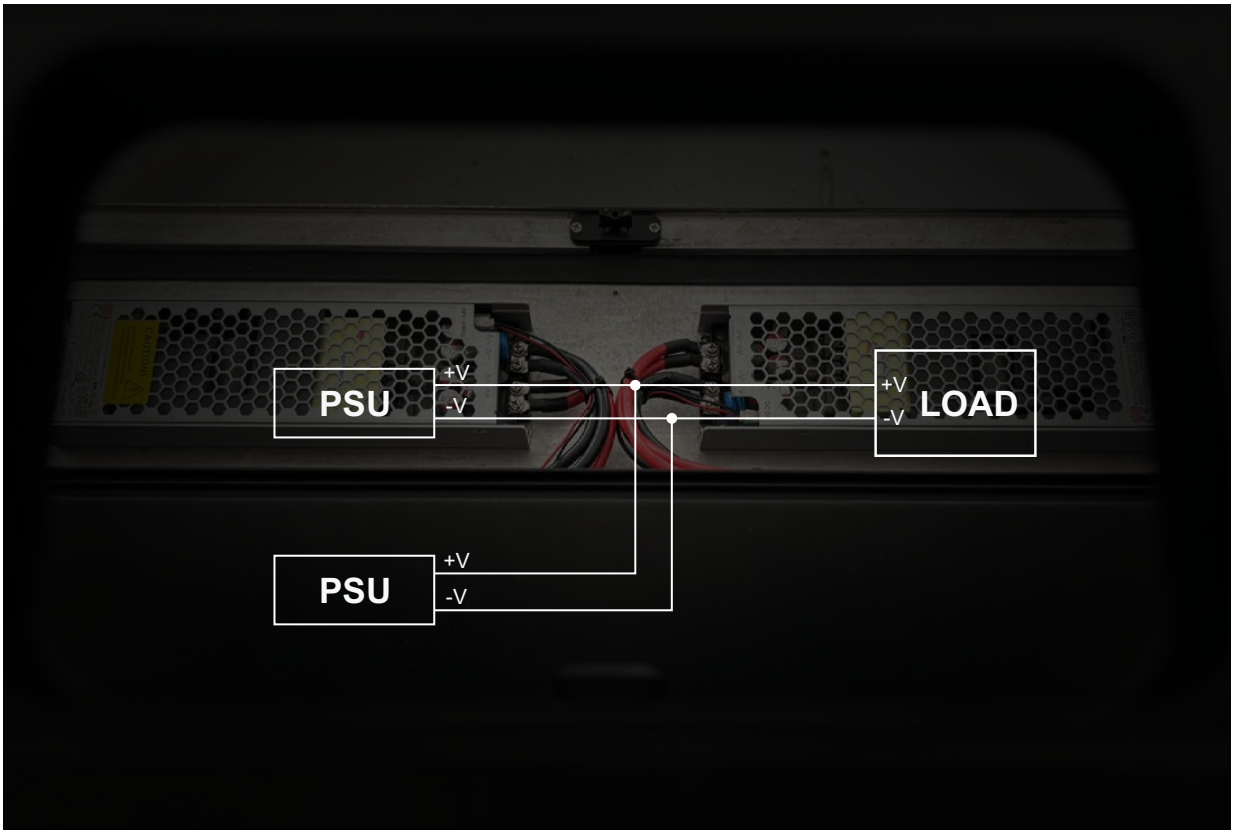
Thermal Paste Heat Transfer

PSUs are bonded to the aluminum rear panel using high-conductivity thermal paste for improved cooling efficiency.

Industry's Only Smart Fan System

March II features the only extruded aluminum cabinet with a built-in cooling fan.

Software-controlled, the fan can be activated or deactivated based on ambient temperature settings—adapting intelligently to diverse installation environments.



Redundancy for Peace of Mind

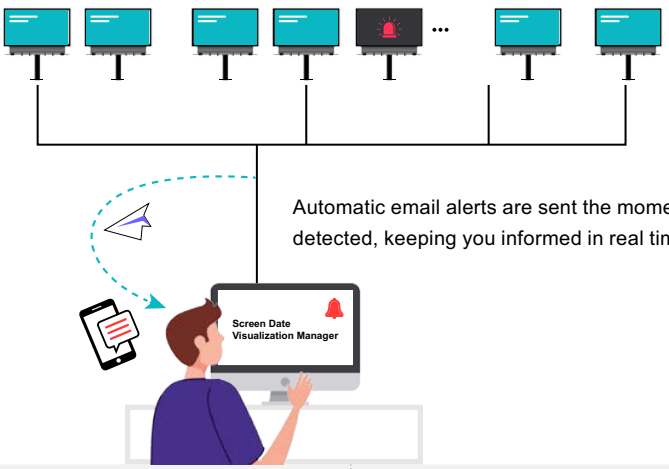
M-Series incorporates targeted redundancy features that proactively prevent visible failures and maximize uptime. These smart safeguards ensure smooth, uninterrupted performance even in the face of component faults.

Connector Redundancy
All module power & signal pins are redundantly configured. Pin contact issue won't impact display performance.

Power Supply Redundancy
Dual power supplies operate in parallel. If one fails, the other instantly takes over the full load—ensuring continuous display output without disruption.

Always On Watch – Monitoring & Diagnosis

Every M-Series unit comes with a powerful Monitoring & Diagnosis system—keeping you fully informed of your display's real-time status. In case of a malfunction, alerts are triggered and detailed diagnostics are available via a cloud platform for efficient troubleshooting and service planning.



Automatic email alerts are sent the moment a fault is detected, keeping you informed in real time.

Combined with redundancy features, many issues can be resolved before any visible error appears on screen—keeping your display uninterrupted.

You can upload and send configuration files from the cloud without connecting computer to player on site.

Calibration Memory Built In

Each module includes a smart chip that stores its original calibration data, ensuring consistent brightness and color when modules are replaced.

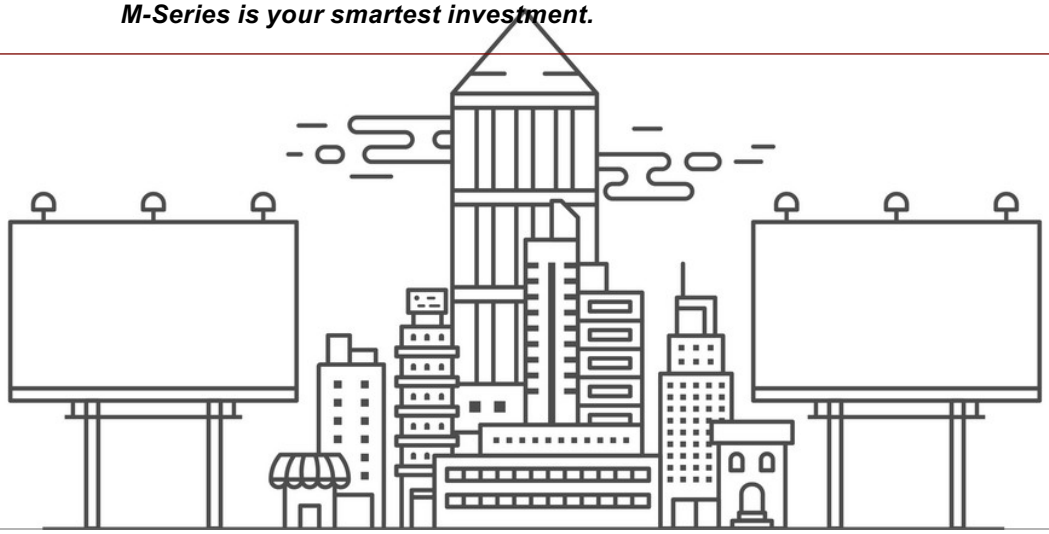
Maximize ROI, Minimize TCO

When designing M-Series, one guiding question stayed with us:

How can we maximize your long-term return?

- **Stunning Visual Performance** — To captivate your target audience
- **Ultra-Low Power Consumption** — To lower long-term electricity bills
- **Quick & Hassle-Free Installation** — To save on labor and time
- **Built for Harsh Outdoor Conditions** — To reduce repair needs
- **Effective Redundancy System** — Zero display interruption, even when issues arise
- **Smart Monitoring & Diagnosis** — Resolve issues swiftly even remotely

If these are your priorities in a large-format outdoor LED displays, M-Series is your smartest investment.



Specifications

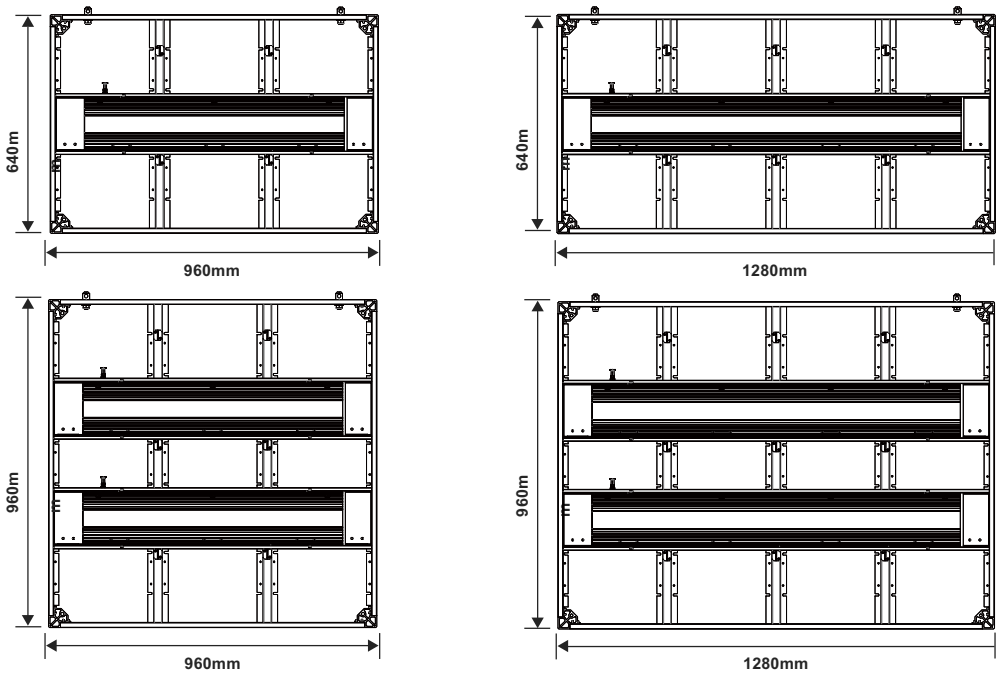
Pixel Pitch (Resolution)	4 mm	6.67 mm	10 mm	10 mm NEW
LED Package Type	SMD+Lens	SMD+Lens	SMD+Lens	Oval Molding
Pixels/m² (Density)	62,500	22,500	10,000	10,000
Module Dimensions	12.6″x12.6″ (320mmx320mm)	12.6″x12.6″ (320mmx320mm)	12.6″x12.6″ (320mmx320mm)	12.6″x12.6″ (320mmx320mm)
Module Matrix	80x80	48x48	32x32	32x32
Module Weight	3.3LB (1.5KG)	3.3LB (1.5KG)	3.3LB (1.5KG)	3.3LB (1.5KG)
Driving Method	1/10 constant current	1/6 constant current	1/2 constant current	1/2 constant current
Refresh Rate	≥3,840 Hz	≥3,840 Hz	≥3,840 Hz	≥3,840 Hz
Video Frame Rate	60 frames/second	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)	65,536 (281 trillion colors)
Color Depth	16 bit	16 bit	16 bit	16 bit
Contrast Ratio	26,000 : 1	26,000 : 1	26,000 : 1	26,000 : 1
Brightness	≥10,000 NITS	≥10,000 NITS	≥10,000 NITS	≥10,000 NITS
Brightness Control	256 levels	256 levels	256 levels	256 levels
Ideal Viewing Range	16′ or greater	18′ or greater	28′ or greater	28′ or greater
Ideal Viewing Angle	120°(H) / 100°(V)	120°(H) / 100°(V)	120°(H) / 100°(V)	120°(H) / 100°(V)
Max. Power Consumption	54W/ft² (580W/m²)	54W/ft² (580W/m²)	54W/ft² (580W/m²)	35W/ft² (380W/m²)
Avg. Power Consumption	18W/ft² (195W/m²)	18W/ft² (195W/m²)	18W/ft² (195W/m²)	12W/ft² (127W/m²)
Input Voltage	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC
Ingress Protection	IP65	IP65	IP65	IP65
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)	-40°F - +140°F (-40 °C - +60 °C)
MTBF	>5,000 hours	>5,000 hours	>5,000 hours	>5,000 hours
LED Life - Span	100,000 hours	100,000 hours	100,000 hours	100,000 hours
Cabinet Material	Aluminum Extrusion	Aluminum Extrusion	Aluminum Extrusion	Aluminum Extrusion
Cabinet Weight	7.2LB/ft² (35KG/m²)	7.2LB/ft² (35KG/m²)	7.2LB/ft² (35KG/m²)	7.2LB/ft² (35KG/m²)
Cabinet Size	640x960x125mm;	640x1280x125mm;	960x960x125mm; 9	60x1280x125mm

* Specifications are based on standard M-Series configurations and are subject to change without prior notice.

4 Standard Cabinet Sizes

Versatility for Any Large-Format Display

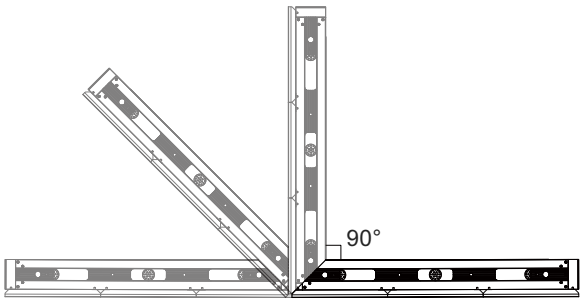
M-Series comes in 4 fundamental cabinet sizes, designed to meet the full spectrum of dimensional needs for large-format flat outdoor LED displays.

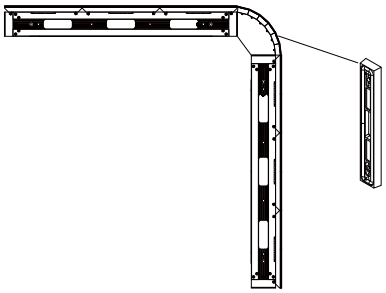


Curves or Corners—You Choose

Precision-Cut for Creative Freedom

With 45-degree beveled module edges, March II supports seamless corner splicing from 90° to 180°, as well as curved surface configurations for large-format outdoor LED displays.





It's also fully compatible with Genesis II's bar-shaped modules—unlocking more possibilities for curved corners and other creative design applications.

ENVOLTAGE®

LARGE FORMAT OUTDOOR LED DISPLAY

M-Series

Unlimited Applications

From DOOH billboards to stadiums and arenas, from hotels, stores, and malls to traffic systems and transportation hubs, M-Series is engineered to meet every large-format outdoor LED display need. Whether it's public squares, iconic landmarks, or even naked-eye 3D and other creative formats, M-Series delivers performance without limits.

ENVOLTAGE®

LARGE FORMAT OUTDOOR LED DISPLAY

M-Series

U.S. Inventory Support

For the U.S. market, we maintain a dedicated inventory to minimize your purchasing cost and ensure convenient domestic delivery.

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.