

Macroblock Company Profile

INNOVATE FOR LIGHT

The image shows a glowing red circuit board with various components and traces. In the center, there is a square black area containing the Macroblock logo, which consists of a stylized diamond shape made of four smaller diamonds, followed by the word "Macroblock" in white text.

About Us

Combining our passion for LED driver IC design and R&D innovation to push the boundaries in the display and lighting industry, Macroblock also expands the business scope to mini-LED modules. When it comes to LED, we are your go-to solution provider.

Founded in 1999	Capital 16 Million	3527 TT
No. 1 in Fine Pitch LED Display Driver IC Market	225 Employees	Market Cap. 290 Million

USD



Mission & Vision

Mission

Illuminate life through lighting innovation

Vision

A leading LED industrial player using digital & data strategies to empower our partners in expanding their addressable market



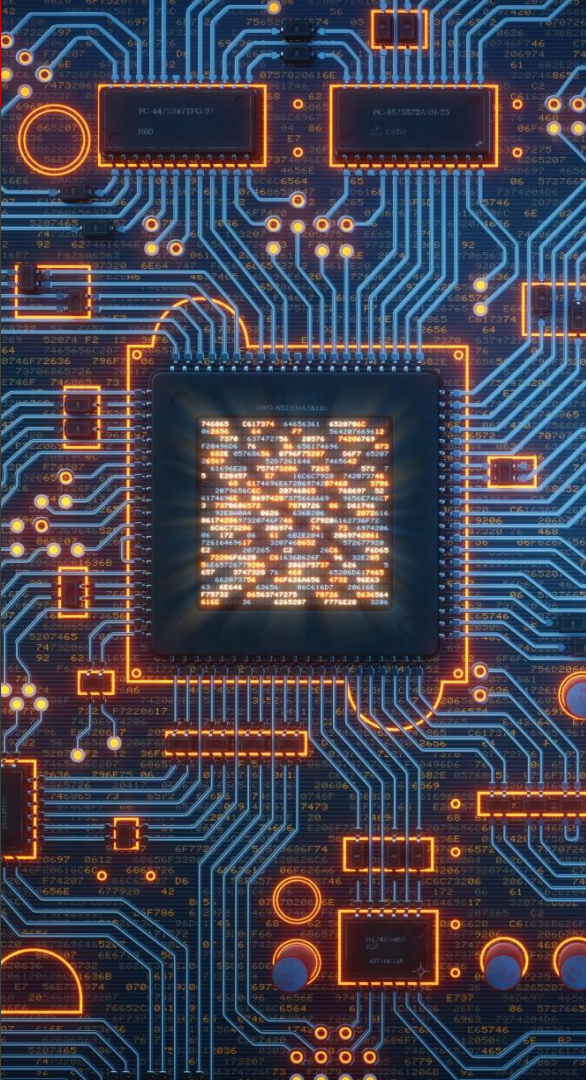
Business Philosophy

Innovation

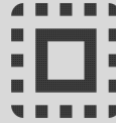
- ① Technology
- ② Management
- ③ Sales & Marketing

Service

- ① Leading Technology
- ② Supreme Quality
- ③ Best Solution
- ④ Instant Service



Focus Market



LED Driver IC

LED Display

LED Backlight

LED Lighting

LED Module

mini-LED

micro-LED

Driver
IC

LED Display

Signage

Cinema Screen

Outdoor Advertising

Rental



Brightness Uniformity

Excellent output current accuracy to ensure brightness uniformity of LED pixels. ($\pm 2.5\%$ current accuracy in ports and $\pm 3\%$ in ICs)



High Refresh Rate

Up to 7680Hz refresh rate without flickers when displaying images or videos.



High Grayscale

Up to 16-bit grayscale to perform billions of colors.



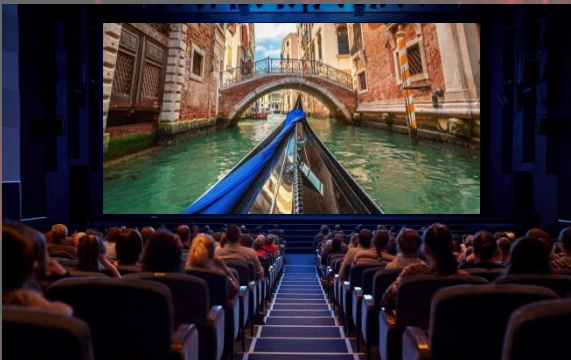
Brightness Adjustment

Brightness adjustment according to ambient light change. (An additional function without adding extra pin on IC)



Simplified PCB Layout

Highly-integrated, MOS-Embedded, up to 48 channels to control 512 LED pixels with single IC.



Driver
IC

LED Display

Variable Message Sign Bus Sign



Instant Detection

Instant LED fault detection. (An additional function without adding extra pin on IC)



Dynamic Power Saving

Adopt 0-Power mode to automatically save power when partial LEDs are not in use.



Driver
IC

Automotive

LED Lighting

Head Light
Tail Light

Ambient Light
Daytime Running Lamp



AEC-Q100 Qualification

Acquired AEC-Q100 qualification, to make sure that the reliability and stability of ICs meet AEC's requirements.



Protection Mode

Has several protection modes, such as LED open, LED short, thermal shutdown, thermal fold-back and so on.

EMI

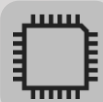
EMI Solution

Can improve EMI performance to pass EMC testing standards as well as reduce external components.



LED Lighting

Stage Lighting



Simple Structure

The overall circuit structure is simple to significantly optimize cost structure and simplify PCB design.



SIMO Scheme

Based on SIMO scheme to achieve perfect dimming, realizing flicker-free low-grayscale dimming, good dimming linearity and 16-bit dimming resolution.



LED Lighting

Architectural Lighting



Stable Transmission

Provide stable transmission without suffering the signal distortion or degradation due to the transmission.



High Grayscale

Up to 16-bit grayscale to perform billions of colors.



Error Detection

Realize LED error detection and read back without additional wires from the driver IC to the controller.



Driver
IC

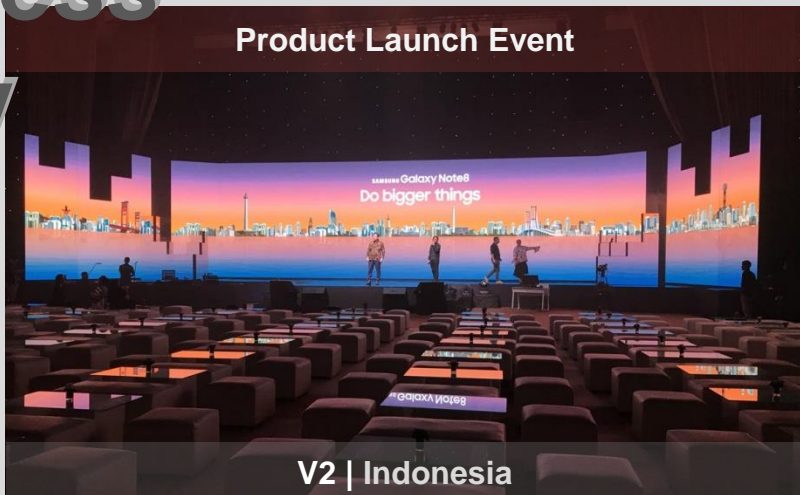
Cinema Screens



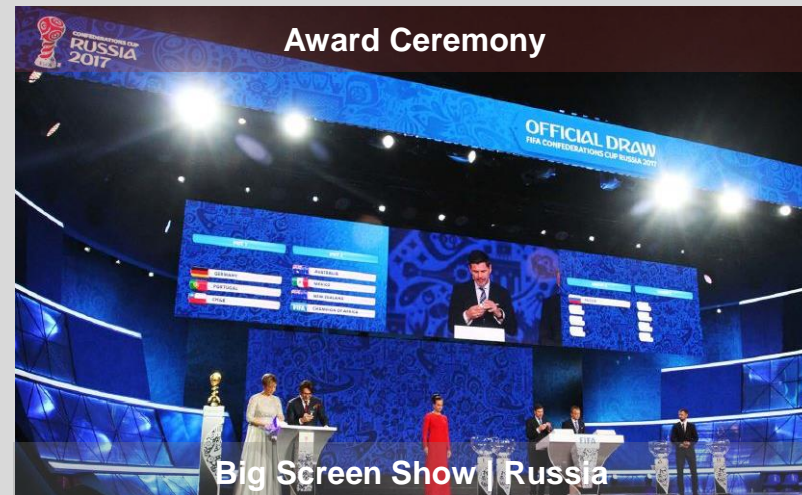
Security Operation Center



Product Launch Event

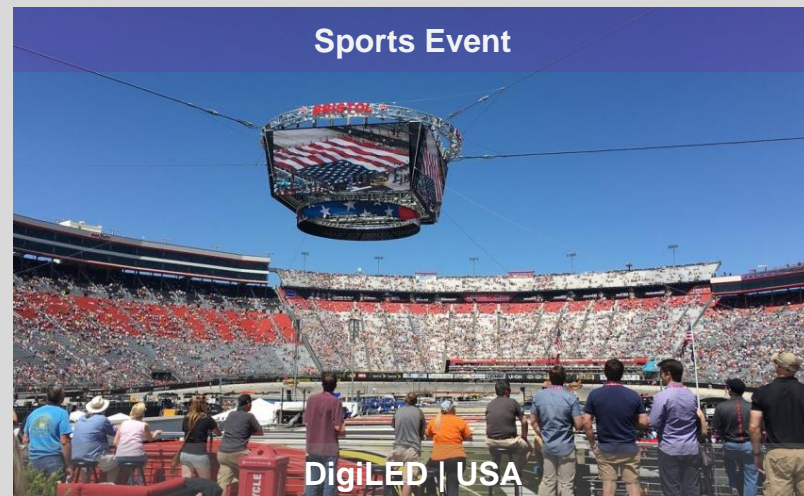


Award Ceremony



Success
Story

Driver
IC



Success
Story

Driver
IC

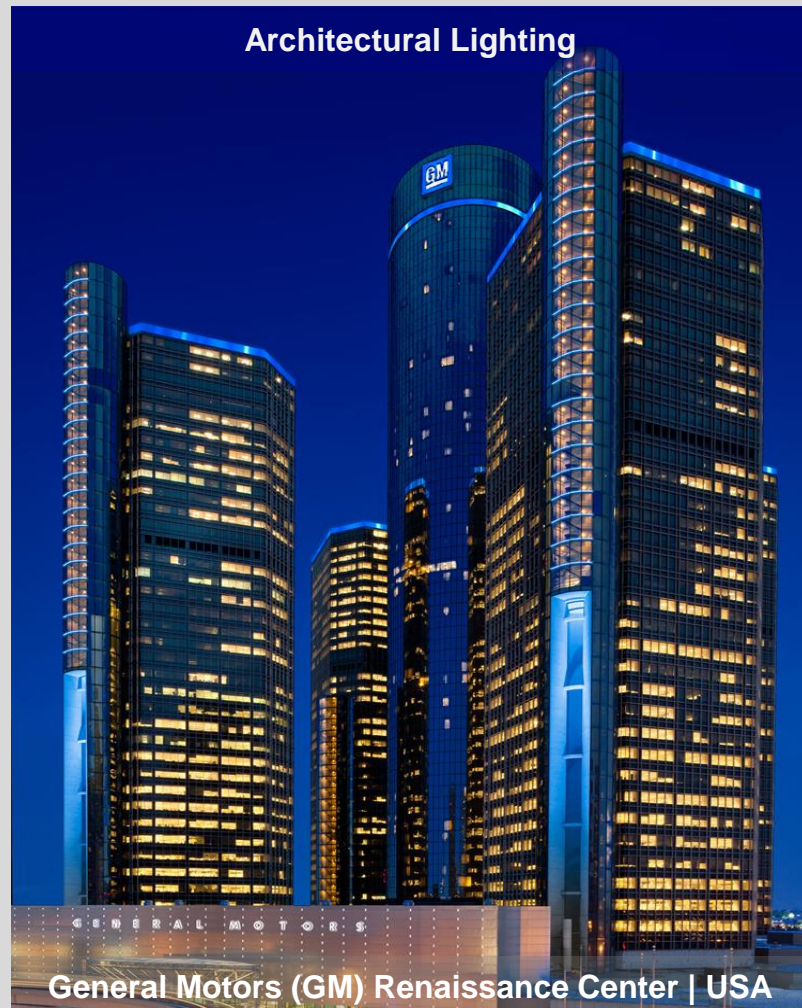
Decoration Lighting



Stage Lighting



Architectural Lighting



Success
Story

Thank You

INNOVATE FOR LIGHT



Reference

Hawkeye Solution Platform	
Hawkeye 100	MBI5251, MBI5262, MBI5253
Hawkeye 150	MBI5264, MBI5265, MBI5754 (for common cathode LED)
Hawkeye 200	MBI5353, MBI5762 (for common cathode LED)
Hawkeye 250	MBI5850
Hawkeye 300	MBI5759 (for common cathode LED), MBI5359
Hawkeye 350	MBI5864

**Display
Product**

Reference

SRAM Embedded S-PWM LED Driver IC

MBI5251, MBI5253, MBI5262, MBI5264, MBI5265, MBI5268, MBI5269
MBI5353, MBI5359, MBI5850, MBI5864, MBI5754, MBI5759, MBI5762

MOSFET for Time-Multiplexing LED Display

MBI5981, MBI5989

S-PWM LED Driver IC

MBI5030, MBI5031, MBI5040, MBI5043

Multi-Function LED Driver IC

MBI5037, MBI5038, MBI5039

Classic Constant Current LED Driver IC

MBI5025, MBI5026, MBI5035, MBI5124

Display Product

Full-Array Local Dimming LED Backlight Driver IC

MBI6322, MBI6328, MBI6329, MBI6334, MBI6353, MBI5353Q

**Backlight
Product**

**Automotive
Lighting
Product**

AEC-Q100 LED Automotive Lighting Driver IC

MBI6657Q, MBI6659Q, MBI6665Q, MBI6671Q, MBI1841Q

Reference

All-Ways-On™ LED Driver IC

MBI1801, MBI1802, MBI1804, MBI1812, MBI1816, MBI1824, MBI1828, MBI1838

DC/DC Converter

MBI6646, MBI6651, MBI6652, MBI6653, MBI6655, MBI6656, MBI6657, MBI6658,
MBI6659, MBI6660, MBI6661, MBI6662, MBI6663, MBI6664, MBI6665

DC/DC Controller

MBI6671, MBI6672, MBI6673, MBI6674

AMUSE LED Driver IC

MBIA043, MBIA045, MBIA128, MBIA129

RGB LED Driver IC

MBI6023, MBI6024, MBI6033, MBI6034, MBI6030

**General
Lighting
Product**