The Building Blocks of Your Outdoor Solution.

**Engineered to serve.** Whether you are starting from scratch with a new LED display or working with your existing display(s) for continuity, we’re tooled up to serve you. Our streamlined build is the same, but we offer different building blocks.

**Let’s Build Your Display.**
Offering you our premium & most flexible series:

- **FLEX-V Series**
  - Our smallest module (or building block) to build your most versatile display within .62 sq feet.
  - Resolutions available: 5, 6, 8, 10, 12, 16, 20, and 24mm.
  - Available in Full Color or Grayscale (red or amber).

- **FLEX-W Series**
  - Build your display within 1 sq feet.
  - Resolutions available: 10.16, 12.7, 16.93, 19.05, and 25.4mm.
  - Available in Full Color only.

- **FLEX-D Series**
  - Build your display within 1.35 sq feet.
  - Resolutions available: 15.85, 19.81, and 26.41mm.
  - Available in Full Color only.

Or, match your existing displays for continuity:

- .62 sq ft Building Block
- 1 sq ft Building Block
- 1.35 sq ft Building Block

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"Not only does Vantage set out to develop a great product with powerful software and support, but they set out to make it their mission to know and understand every dealer partner they work with; that’s the culture at Vantage LED. They bring you in as part of the team to a greater degree than I have experienced with any other supplier."

- Bruce Murray, Sales Team

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Mayfield Village, Mayfield, OH
FLEX-V Full Color Series, 6mm - 200 x 400 / 4-0” x 7-11” / 80K Pixels
"The client bought a brand new LED display that helped revitalize their community. They can reach out with their unique services as well as display public announcements and helpful weather-amber alerts for safety."

- Bruce Murray, Sales Team
Specifications of our Building Blocks.

Your dealer partner can help walk you through this process of understanding and building your display.

**FLEX-V Series** (shown with typical viewing distances for each Resolution)

<table>
<thead>
<tr>
<th>Resolution (Pitch)</th>
<th>Around 50ft (good for walking traffic)</th>
<th>50 - 100ft</th>
<th>100 - 250ft</th>
<th>250+ ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module Matrix (Building Block)</td>
<td>48 x 48</td>
<td>40 x 40</td>
<td>30 x 30</td>
<td>24 x 24</td>
</tr>
<tr>
<td>Pixels Per Sq Foot (Density)</td>
<td>716</td>
<td>2,581</td>
<td>1,452</td>
<td>929</td>
</tr>
</tbody>
</table>

**FLEX-W Series**: (full color only)

<table>
<thead>
<tr>
<th>Resolution (Pitch)</th>
<th>10.16mm</th>
<th>12.7mm</th>
<th>16.93mm</th>
<th>19.05mm</th>
<th>25.4mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module Matrix (Building Block)</td>
<td>30 x 30</td>
<td>24 x 24</td>
<td>18 x 18</td>
<td>16 x 16</td>
<td>12 x 12</td>
</tr>
<tr>
<td>Pixels Per Sq Foot (Density)</td>
<td>900</td>
<td>576</td>
<td>324</td>
<td>256</td>
<td>144</td>
</tr>
<tr>
<td>Dimensions (Per Module)</td>
<td>12&quot; x 12&quot;</td>
<td>12&quot; x 12&quot;</td>
<td>12&quot; x 12&quot;</td>
<td>12&quot; x 12&quot;</td>
<td>12&quot; x 12&quot;</td>
</tr>
</tbody>
</table>

**FLEX-D Series**: (full color only)

<table>
<thead>
<tr>
<th>Resolution (Pitch)</th>
<th>15.85mm</th>
<th>19.81mm</th>
<th>26.41mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module Matrix (Building Block)</td>
<td>20 x 25</td>
<td>16 x 20</td>
<td>12 x 15</td>
</tr>
<tr>
<td>Pixels Per Sq Foot (Density)</td>
<td>370</td>
<td>237</td>
<td>133</td>
</tr>
<tr>
<td>Dimensions (Per Module)</td>
<td>12.48&quot; x 15.6&quot;</td>
<td>12.48&quot; x 15.6&quot;</td>
<td>12.48&quot; x 15.6&quot;</td>
</tr>
</tbody>
</table>

**Traditional Series**: Building blocks based on 8 pixels. Available in Full Color or Grayscale (red or amber).

<table>
<thead>
<tr>
<th>Resolution (Pitch)</th>
<th>10mm</th>
<th>12.5mm</th>
<th>16mm</th>
<th>20mm</th>
<th>25mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module Matrix (Building Block)</td>
<td>16 x 32</td>
<td>16 x 16</td>
<td>16 x 16</td>
<td>8 x 16</td>
<td>8.8</td>
</tr>
<tr>
<td>Pixels Per Sq Foot (Density)</td>
<td>929</td>
<td>595</td>
<td>363</td>
<td>232</td>
<td>149</td>
</tr>
<tr>
<td>Dimensions (Per Module)</td>
<td>6.5&quot; x 12.6&quot;</td>
<td>7.87&quot; x 7.87&quot;</td>
<td>10&quot; x 10&quot;</td>
<td>6.5&quot; x 12.6&quot;</td>
<td>7.87&quot; x 7.87&quot;</td>
</tr>
</tbody>
</table>

**Communication Solutions**:

- **Hardwired**: 5' - 300': Ethernet Cable (Cat 5e or Cat 6) for hardwired connections, separate conduit from power.
- 300' - 1,000': Fiber Optic Cable requires fiber optic converters and can be run with power.
- **Wireless Ethernet Radios**: 5' up to 1000' with line of sight, radio at building & radio at the display.
- **Cell Modem**: Cellular modem in the display that receives a cellular signal (Requires cellular data plan).
- **Broadband**: Internet connection brought to the display (Requires Internet service plan).

“Vantage has the experience to provide us with extraordinary service for all of our projects. I was impressed with their fabrication facility and have always been pleased with the friendly sales staff, both at the home office and in the field. Their industry-leading on-site service warranty and cutting-edge software helps me stay ahead of the competition.”

- James Anderson, Sales Team

**Town Bank Volunteer Fire Company, Cape May, NJ**

**FLEX-V Full Color Series, 22mm**: 36 x 96 / 2’ x 6’-7” / 3K Pixels

“The Phoenix Full Color series provides a solid and effective way for fire departments and churches to share important messages with their community.”

- James Anderson, Sales Team
**Engineered Cabinet**
Designed and built to ensure strength and weatherability.
- Extruded aluminum construction with steel supports to minimize weight while maximizing strength.
- Industry Proven Powder Coat, or use our custom Dragon Skin coating available on request.
- Borderless construction to improve installation options and maximize square footage. Custom borders available on request.

**LED Modules**
The building blocks that connect together to create the display area.
- Deflective louver system shade LEDs & increase contrast.
- Two half-turn connection points for easy front access & serviceability for faster repairs and less downtime.
- Neoprene seals adjust to weather & do not crack ensuring longer performance.

**Power Supplies**
Converts AC power to DC power.
- Conformal coating protects from corrosion & oxidation and increases its durability by 25%.
- Voltage and temperature safeguards mean fewer service issues, and longer lasting systems.

**REVOLUTION™ Controller**
Android-Based Operating System.
- Solid state hard drive for greater reliability.
- Automatically runs complete diagnostics reporting any issues.
- Auto backup of content on the cloud with SM Infinity™.

**Wireless Radios**
Secure message transmission between two radios (at the building and at the LED sign).
- Pre-configured at the factory to be plug-n-play.
- Allows more freedom in choosing where to install LED sign.
- No trenching for a data cable through parking lots or sidewalks.

**Continuous Steel Angle**
High strength steel used to mount the display to any structure.
- 3/16" thick steel allows mounting anywhere as oppose to clips.
- Located along top and bottom edges to support a variety of connection points.
- Angle is inset from the edge to help hide fasteners.

**Master/Slave Connection**
Mirrors the content from the master side to the slave side.
- Backup Cable creates a data loop minimizing image failure.
- Industry standard has data in one direction allowing larger image failure.

**Rear or Front Ventilation Available**
Regulates temperature and eliminates moisture inside display.
- Fans only turn on when it gets hot and turn off when desired temp is achieved.
- Rear Ventilation is a proven industry standard & has unlimited display sizes.
- Front Ventilation is ideal for recessed or enclosed structures & limited to display sizes.

**Power Connection**
Pre-wired for 120 VAC or 240 VAC.
- External power whip provided for easy hookup.
- Power requirements clearly documented and labeled.

**Marks of Safety, Care, and Pride**
- ISO9001 Quality Management Certified
- ETL certified & tested to be safely operated outside
- RoHS compliance means Restriction of Hazardous Substances
- Designed with pride in the USA
The Dynamic FLEX-V Series LED Module

We revisited the common LED module and made it...flexible.
Our FLEX-V module features all our pitches in one universal module size.

All the best resolutions & all the best options.

Future Proof
The FLEX-V Series module makes it easy to upgrade and not be "locked down" to the display you purchased.
Today: If you don't have the budget for a high resolution display (12mm or 16mm), you can begin with a lower resolution, such as a 24mm pitch, and start reaping the benefits of advertising with an LED display.
Later: As your business grows, you can upgrade to a tighter pitch, such as a 16mm, enhancing your advertising, displaying success, and refreshing your image within your community.

Overall Ease and Simplicity
Traditionally, you would have to replace the entire LED display if you wanted to upgrade to a better resolution. Now, you can avoid uninstalling/reinstalling costs and having to worry about a new permit by simply installing new modules. Upgrading the display to a higher resolution will require additional power supplies. All other internal and external components will be forward and backwards compatible.

Ultra Low Power
Our redesigned power configuration and hardware provides a lower power consumption, requiring 70% less power when compared to leading manufacturers. This reduces the operating and long term costs of the LED sign, saving time and money.

2 years ago, you bought a 24mm display
24mm - 60 x 120 / 7,200 pixels / 7K Pixels

Business is good, upgrade to a 16mm display
16mm - 90 x 180 / 16,200 pixels / 16K Pixels

Now, there's nothing common about it.
Ultra Low Power

Custom Conformal Coating:
Our power supplies are custom coated internally to protect against corrosion and oxidation. This extra step we take in the process helps to increase the life by 25%.

Safety and Protection
Built in voltage and temperature protection in our power supplies protects against long term damage from power surges or heat. This means they stay effective longer in the field and help eliminate downtime.

Efficient Power
Through solid engineering and design, our power supply and hardware system helps you save money on electrical installation and service costs.

Advertising Power
Our power supply design facilitates lower powered billboard displays and integrate redundant power configurations. This means less long term costs, downtime, and more advertising revenue for operators.

Ultra Low Power
Our redesigned power configuration and hardware provides a lower power consumption, requiring 70% less power when compared to leading manufacturers. This reduces the operating and long term costs of the LED sign, saving time and money.

<table>
<thead>
<tr>
<th>Type</th>
<th>Pitch</th>
<th>Module Matrix</th>
<th>Watts per Pixel (MAX) Full Brightness</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMD</td>
<td>5</td>
<td>48 x 48</td>
<td>0.020</td>
</tr>
<tr>
<td>SMD</td>
<td>6</td>
<td>40 x 40</td>
<td>0.028</td>
</tr>
<tr>
<td>SMD</td>
<td>8</td>
<td>30 x 30</td>
<td>0.052</td>
</tr>
<tr>
<td>DIP</td>
<td>10</td>
<td>24 x 24</td>
<td>0.026</td>
</tr>
<tr>
<td>DIP</td>
<td>12</td>
<td>20 x 20</td>
<td>0.038</td>
</tr>
<tr>
<td>DIP</td>
<td>16</td>
<td>15 x 15</td>
<td>0.067</td>
</tr>
<tr>
<td>DIP</td>
<td>20</td>
<td>12 x 12</td>
<td>0.105</td>
</tr>
<tr>
<td>DIP</td>
<td>24</td>
<td>10 x 10</td>
<td>0.126</td>
</tr>
</tbody>
</table>

Power Calculation: Watts times Matrix divided by Voltage = Amps for a display
For Example: A standard 20mm, 48 x 96 display would only pull 4 amps per face.
(48*368 = 4.608 * 0.105 = 483.84/120VAC = 4.03 Amps/faces maximum power)

Virtual Enhanced Resolution

Enhanced Performance with Virtual Resolution is not a myth, it's real technology resulting in smoother graphics and extremely fluid video. It does not require more power or more strain on the display. Each individual LED has its own chipset allowing the software to control it like a pixel thus halving the distance from one true pixel to another virtually doubling the resolution (or the pixel matrix) of the display.

No Strain: VR technology simply shares LEDs. We added extra driver IC’s to the modules to provide the computing power to control the complex algorithms.

No Pain: VR does not require more power or require overdriving the LEDs. Overdriving LEDs is a poor choice for a short-game sale. It causes a display’s LEDs to degrade faster and the sign to lose performance over time.

More Gain: Virtual enhanced resolution will make the display look crisper and more defined with sharper images and smoother lines. It’s an upgrade on the system which makes it stand out.

Without Virtual Resolution

With Virtual Resolution: the pixels are able to share the LEDs between them; thus halving the distance from one pixel to another and virtually doubling the resolution of the display and enhancing the content.

Pitch is the measurement in millimeters (mm) from one center point of a group of LEDs (which makes up a Pixel) to the next center point; The closer the pixels, the tighter the pitch, and the higher the Resolution of the display.
**REVOLUTION Controller**

Our REVOLUTION™ Android-Based Controller is a performance game changer.

Featuring a quad-core processor for high-quality graphics and fast performance, it is the brain of the display where messages are stored, processed, and delivered with the complete reliability of a custom-built Android operating system.

**Personalized Solutions:** With a custom operating system and an application framework built from the ground up, we have the flexibility to add and streamline new custom solutions for our clients.

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**Plug-n-Play Install:** Allows the display to automatically connect to the network with virtually no manual configuration.

**Automated Diagnostics:** Our controller continuously monitors display performance by automatically running complete diagnostics, from signal output to temperature and onboard voltage sensors, and quickly reports to ensure a rapid response from support.

**Cloud & Controller Storage:** All message files are stored online in the cloud and locally in the display. The data is always secure, backed up daily, and easily accessible anytime, anywhere, from any device. If the controller ever had to be replaced, the content uploads automatically.

**Stronger Security:** Compared to a Windows-based system, there is a reduced threat of viruses and malware, local encrypted login, and encrypted network transmissions.

**Low Power & Solid Reliability:** Lower power consumption to the industry standard with onboard solid state memory allows for faster processing, lower heat, and outstanding performance. It can operate in the extreme hot or cold: -20 C to 70 C / -4 F to 158 F.

**Exterior & Interior Applications:** Whether installed in an LED outdoor/indoor display or HD interior/exterior screen, we got your back with this flexible next-generation control solution.

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**High Performance Cabinet Coatings**

**Powder Coat**

Powder coating is quickly becoming a required standard for high-quality LED message center manufacturing. Make sure your investment is properly protected. Accept no imitations. While many coatings may appear similar, you'll see the difference when you try to scratch beneath the surface.

- Responsible powder coating emits zero volatile organic compounds (VOC) making it a safe and green alternative to conventional liquid coatings.
- Powder coatings can produce much thicker coatings than conventional liquid coatings without running or sagging delivering a uniform protective seal.
- Powder coating production lines produce less hazardous waste than conventional liquid coatings ensuring a better environment for all.
- Powder coated items generally have fewer appearance differences between horizontally coated surfaces and vertically coated surfaces than liquid coated items, this means your system will look better (longer) than conventional liquid coatings.

**Dragon Skin™** is a rugged and resilient coating on the display cabinet patented by Vantage LED. This high performance coating is designed to protect the display leaving it looking better, longer, and stronger.

- It is highly scratch resistant. When compared to conventional paint, it resists fading and scratching during installation and for the life of the display.
- The coating expands and contracts with weather changes. This means it will not stiffen, crack, or peel like conventional paint adding longevity to the beauty of the display.
- Plus, it's a safe and "green" alternative for our planet. The coating does not use Volatile Organic Chemicals (VOC) unlike typical paint applications which release harmful elements into the atmosphere.

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"It is not the strongest of the species that survives, nor the intelligent, but the one most responsive to change.”

- Charles Darwin, 1809
Typical Installation & Mounting Diagram

- **6'-3 9/16" (1920mm)**
  - Sign Length: 192 x 384, 192 x 432, 192 x 480, 192 x 528, 192 x 576, 192 x 624
  - Sign Height: 192 x 384, 192 x 432, 192 x 480, 192 x 528, 192 x 576, 192 x 624

- **7'-1 1/16" (2160mm)**
  - Sign Length: 216 x 384, 216 x 432, 216 x 480, 216 x 528, 216 x 576, 216 x 624
  - Sign Height: 216 x 384, 216 x 432, 216 x 480, 216 x 528, 216 x 576, 216 x 624

- **7'-10 1/2" (2400mm)**
  - Sign Length: 240 x 384, 240 x 432, 240 x 480, 240 x 528, 240 x 576, 240 x 624
  - Sign Height: 240 x 384, 240 x 432, 240 x 480, 240 x 528, 240 x 576, 240 x 624

- **8'-7 15/16" (2640mm)**
  - Sign Length: 264 x 384, 264 x 432, 264 x 480, 264 x 528, 264 x 576, 264 x 624
  - Sign Height: 264 x 384, 264 x 432, 264 x 480, 264 x 528, 264 x 576, 264 x 624

- **9'-5 3/8" (2880mm)**
  - Sign Length: 288 x 384, 288 x 432, 288 x 480, 288 x 528, 288 x 576, 288 x 624
  - Sign Height: 288 x 384, 288 x 432, 288 x 480, 288 x 528, 288 x 576, 288 x 624

- **10'-2 13/16" (3120mm)**
  - Sign Length: 312 x 384, 312 x 432, 312 x 480, 312 x 528, 312 x 576, 312 x 624
  - Sign Height: 312 x 384, 312 x 432, 312 x 480, 312 x 528, 312 x 576, 312 x 624

- **3'-11 1/4" (1200mm)**
  - Sign Length: 120 x 384, 120 x 432, 120 x 480, 120 x 528, 120 x 576, 120 x 624
  - Sign Height: 120 x 384, 120 x 432, 120 x 480, 120 x 528, 120 x 576, 120 x 624

- **4'-8 11/16" (1440mm)**
  - Sign Length: 144 x 384, 144 x 432, 144 x 480, 144 x 528, 144 x 576, 144 x 624
  - Sign Height: 144 x 384, 144 x 432, 144 x 480, 144 x 528, 144 x 576, 144 x 624

- **5'-6 1/8" (1680mm)**
  - Sign Length: 168 x 384, 168 x 432, 168 x 480, 168 x 528, 168 x 576, 168 x 624
  - Sign Height: 168 x 384, 168 x 432, 168 x 480, 168 x 528, 168 x 576, 168 x 624

- **6'-3 9/16" (1920mm)**
  - Sign Length: 192 x 384, 192 x 432, 192 x 480, 192 x 528, 192 x 576, 192 x 624
  - Sign Height: 192 x 384, 192 x 432, 192 x 480, 192 x 528, 192 x 576, 192 x 624

- **3" Steel Angle Bolts & Hardware, as required**

- **90° Steel Angle**

- **2" typical**

- **1/10" Allen Key**

- **3/4 liquid tight conduit**

- **Master/Slave conduit**

- **Temperature Probe**

- **Preferably mount sensor away from direct sunlight (North or Northeast)**

- **Not required with SM Infinity**

- **Wireless Communication**
  - (with mounting bracket included)

- **Copper grounding wire**
  - Connected to earthing rod

- **POPULAR DISPLAY SIZES**
"What we want to provide is the fact that we design and manufacture here, we customize the product if they need it, and to provide that excellent experience; treat everyone the same, no matter if they are a first time buyer or have been with us for a long time."

- Kyle Carnes, Chief Information Officer

"This is teamwork. We have a group of unselfish individuals who work together to serve its dealer partner network by providing innovative product solutions and fast turnaround...the power of Vantage LED."

- Ricky Chai, VP of Operations
"It's not who I am underneath, but what I do that defines me."
- The Batman

Being a provider of LED Displays for 26 years, I can truly say that our years with Vantage have been the best. Their slogan "We got your back" is not just a slogan, it is a company ethos...starting with the vision of their owner, Chris Ma. His spirit to excel trickles down to every one of his people.

Rhode Island Row, Washington DC
Traditional Full Color Series
16mm - 160 x 336 / 8'-5" x 17'-8" / 54K Pixels

River Center for Performing Arts, Columbus, GA
FLEX-V Full Color Series
20mm - 72 x 372 / 4'-9" x 24'-5" / 27K Pixels

Motley’s Auction, Richmond, VA
FLEX-V Full Color Series
20mm - 132 x 708 / 8'-8" x 46'-6" / 93K Pixels

Stewart’s Marketplace, Roosevelt, UT
Traditional Full Color Series
20mm - 88 x 144 / 6'-1" x 9'-9" / 13K Pixels

"It's not who I am underneath, but what I do that defines me."
- The Batman
“Meeting the Vantage staff in person reinforced our opinion that this is a uniquely customer-centered company!”

“I love sharing the power of SM Infinity and Vantage LED with our customers around the world. Whether it’s a school principal or business owner, the genuine excitement about how the display can empower them and the community never gets old. The dedicated nature of our people behind the product truly flows into everything we do.”

- Scott Hofheins, Specialist