

ADTENTUS SERIES



ULTRA ENERGY SAVING BILLBOARD



PRODUCT ADVANTAGES

Pledco's innovated power saving technology is rapidly replacing standard LED display billboards as an emerging giant in the market of DOOH. The Adtentus saves more than 150% in power consumption costs when compared to a standard SMD Billboard.



Power Consumption & Cost Savings per Year

The Adtentus Series has been fully certified as EN12966 by the Italian Lab – Istituto Giordano. All products within the Adtentus Series display revolutionary technology which has only recently hit the market. After undergoing rigorous testing, the Adtentus Series has placed with flying colors across all facets such as; Color, Contrast, Viewing Angle, Power Consumption, Reflection and Light Pollution.

Pledco's innovated power saving technology is rapidly replacing standard LED display billboards as an emerging giant in the market of DOOH. The Adtentus saves more than 150% in power consumption costs when compared to a standard SMD Billboard (figure 1). More importantly, the ecological footprint has been reduced by nearly 170 KW per year when comparing 60SQM of Adtentus vs. a standard SMD Billboard (figure 2). In (figure 3) a chart details specifications which are considered of the utmost important when choosing a LED Billboard.

FIGURE 01

TYPES OF LED COMPARISON

| ProductP | itch | Brightness | Max Power Consumption | Viewing Angle (H/V) | Max Brightness Video Mode | Dally Video Mode Power Consumption |
|----------|------|------------|-----------------------|---------------------|---------------------------|------------------------------------|
| SMD | 16mm | 5000 nits | 1100W | 160°/160° | 6000 nits | 366W |
| DIP | | | 740W | 180°/55° | 7500 nits | 240W |
| ADTENTUS | | 5000 nits | 140W | 30°/15°1 | 2000 nits | 45W |

FIGURE 02

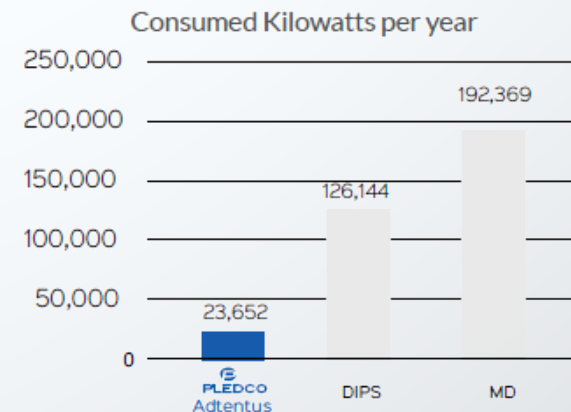
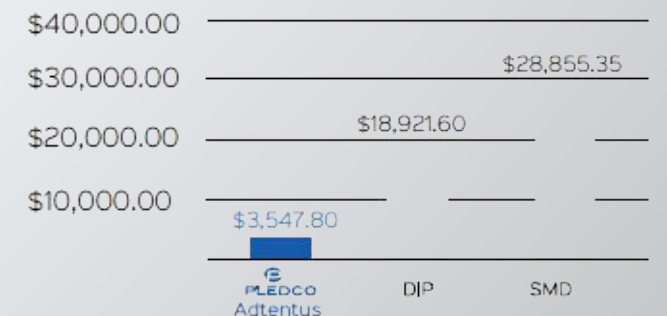


FIGURE 03

Avg. Power Consumption Cost per Year
60 SQM Billboard 24/7/365 @ \$0.15 per KWH



PRODUCT DESIGN

EN12966 Certified
(European Standard)

The Adtentus saves more than 150% in power consumption costs when compared to a standard SMD Billboard (figure 1). More importantly, the ecological footprint has been reduced by nearly 170 KW per year when comparing 60SQM of Adtenus vs. a standard SMD Billboard (figure 2). In (figure 3) a chart details specifications which are considered of the utmost important when choosing a LED Billboard.

The Importance of an Efficient Viewing Angle

Light pollution is excessive, misdirected, or obtrusive artificial light. Over-illumination, as one form of light pollution, occurs in traffic. Over-illumination means the excessive use of light. It happens mostly due to the incorrect choice and design of LED fixtures in traffic signs. This is the result of not directing light only to the areas needed, but letting light dissipate and, thus, not providing the optimal light pattern.

Light pollution by a LED Display can be caused by:

- High-intensity LEDs
- Non-optimal light pattern
- Wide Beam Width

Consequences of light pollution are numerous, but the most critical are the waste of energy and disruption of our eco-system, as seen in figure 4.

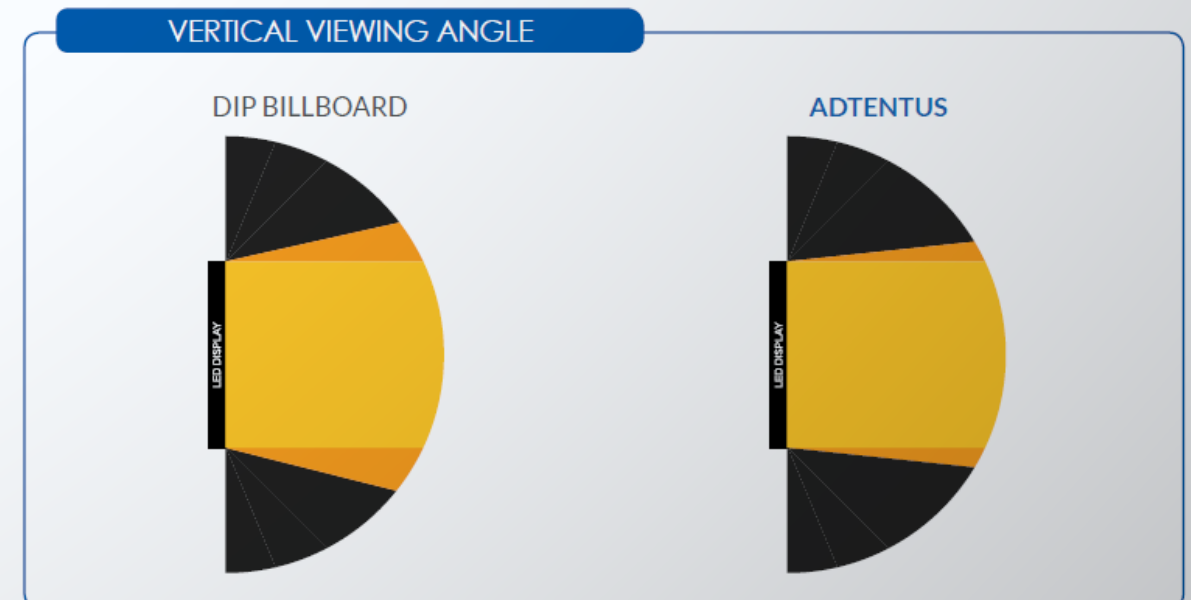
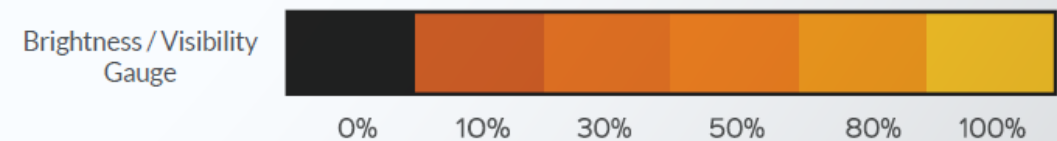
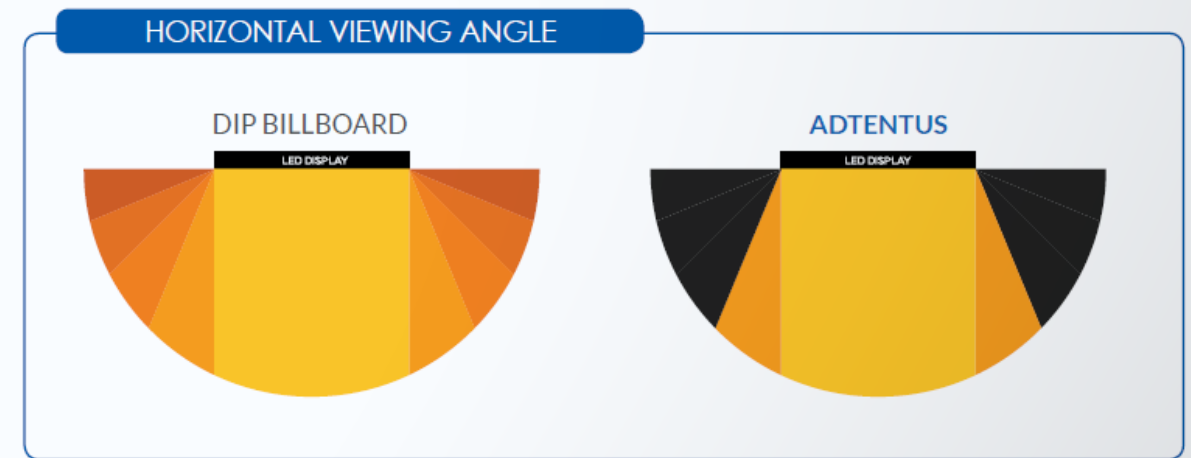
FIGURE 04

Our well-designed optical Adtentus system shapes the light in such a way that it's projected exactly to the road with no light is wasted.



Understanding Beam Width

Beam Width (viewing angle) is an essential parameter that determines the visibility of a LED Display. Beam Width is the visual region in which the LED Display is still visible to the viewer. It is a set of three viewing angles from the center (horizontal left, horizontal right, vertical down), at which the brightness level is at least 50% from the 0° point of directivity. The graphics below show the difference between a DIP billboard and the Adtentus technology. The Adtentus's brightness and viewing angle is extremely precise and accurate in order to ensure zero power consumption and light pollution is wasted.



APPLICATIONS



ARCHITECT



TRAFFIC



BUILDING FACADES



PLEDCO HD DISPLAY

Our calibration technology reaches all possible X & Y coordinates ensuring you HD broadcasting experience is crystal clear.

1 COLOR ENHANCING

After calibrating with our Radiant PM-1400F Calibration System in a dark room, the wave length difference for each color will only be less than 0.01nm. Our patented control system allows users to select several different color spaces such as; 2k (REC709), 4K (REC2020) or create your own color space by using our user-friendly software.

2 COLOR COORDINATION PROCESS

The same batch of LED's with discrete distribution is all moved to PAL Mode Chroma Area through color coordinate calibration Technology.

Since each LED batch produced has different coordinates this requires precise color calibration, which in turn allows:

- ▶ Allows the LED display to show natural and vivid colors.
- ▶ Ensures that all LEDs have been color rendered consistently.

SYSTEM CALIBRATION

All X & Y coordinates are kept in our client project database. When you order new tiles for an existing project we retrieve the original X & Y coordinates. This ensures during calibration all colors are matched properly. Typically, in video mode, no color differences are visible, however, if white has been set at 50% brightness, the user may see a slight difference in color.



3 DIGITAL DATA REVISION

If a single pixel fails, the data will be read-out from the EEPROM and then re-wrote to the replacement chip. After this process the brightness value is calibrated again to ensure the uniformity of the entire system, thus providing easy and fast maintainability.

At the same time, the system records every displays' initial calibration data to avoid uneven brightness caused by led attenuation. The updated screen brightness calibration data and recorded data, both ensure the uniformity of the display's brightness over a period of time.

CONTROL SYSTEM 4K PROCESSING

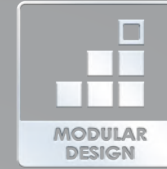


| Input | | | |
|---------------------------------------------------------------------------|------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------|
| Type | Channel | Connector | Details |
| DisplayPort | 1 | DisplayPort Standard | Supports DisplayPort 1.2. Max.3840×2160@30Hz |
| HDMI | 3 | HDMI Standard | Supports HDMI 1.4 Max.3840×2160@30Hz |
| DVI | 2 | DVI-I | Analog inputs not supported. DVI1 Supports dual-link Max.2560×1600@60Hz |
| SDI | 1 | BNC | Supports SMPTE 425M-Level A(3G-SDI), SMPTE 292M(HD-SDI), SMPTE 259M-C(SDI) |
| VGA | 1 | HD-15 | Max.1080P@60Hz |
| YPrPb | 1 | 3.5mm jack | Max.1080P@60Hz |
| Genlock | 1 | BNC | SD bi-level and HD tri-level sync, PAL, NTSC, 720p, 1080i/p, 576i/p, 480i/p |
| Output | | | |
| Type | Channel | Connector | Details |
| DisplayPort | 1 | DisplayPort Standard | Supports DisplayPort 1.2. Max.3840×2160@30Hz |
| HDMI | 1 | HDMI Standard | HDMI1.4.Suports 12bit deep color |
| DVI | 1 | DVI-I | Loop out from DVI2 input |
| SDI | 1 | BNC | Loop out from SDI input |
| Genlock | 1 | BNC | Loop out from Genlock Input |
| SPDIF | 1 | RCA | Supports standard S/PDIF for stereo LPCM or compressed audio up to 192 kHz |
| Headphone | 1 | 6.5mm audio jack | Stereo Audio Output |
| LED Datalink | 6 | Neutrik etherCON | 1Gbps/port |
| Others | | | |
| Control Methods | USB, Gigabit Ethernet, IR, HMI on the Font Panel | | |
| Power | Neutrik powerCON connector, 100-240 VAC, 50-60 Hz, Max.25W | | |
| Temperature | -10 ~ +50 °C | | |
| Mechanical | 472×375×90 mm | | |
| Optional | | | |
| Fiber optical direct output, single mode or multi mode MPU9000 (FM or FS) | | | |

- Integrated with SWITCH Monitor(2x2), Video Processor, Full-HD Media Payer and LED Display Controller
- Supports SD Card and mSATA SSD Mass Storage devices (up to 256GB for SSD and 200GB for SD)
- Available in fiber version with single mode or multi mode direct fiber output
- Supports DisplayPort 1.2, HDMI 1.4, dual-link DVI and 3G SDI Inputs
- Advanced Faroudja® video processing: MADi and DCDi
- Supports daisy chaining of monitors of up to four streams
- 6GB LED Display Data Link(optional fiber output)
- 6-axis color control independent of ACC
- 4K×2K screen resolution support
- Supports Gigabit Ethernet
- Built-in 6.5mm audio jack
- SPDIF Output by coaxial
- Supports Genlock
- Built-in Monitor
- 16bits Process



PRODUCT FEATURES



Custom designed by an industry leading Canadian engineer, our ADTENTUS SERIES is equipped with automatic brightness technology to overcome any lighting conditions while delivering HD imagery.

| ADTENTUS SL-SERIES | | | | | |
|--------------------------|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------|-----------|
| OVERVIEW | Model Name | VFO12ASL | VFO16ASL | VFO20ASL | VFO25ASL |
| | Physical Pitch (mm) | 12 | 16 | 20 | 25 |
| | Tile Size wxh(pixels) | 96 x96 | 128 x 128 | 160 x 160 | 200 x 200 |
| | LED | SMD + Lens | | | |
| LIGHTING | Conformity | EN12966 L3,R3,C2,B6 | | | |
| | Luminance Intensity | L3:Red > 3100 cd/m ² Green > 3720 cd/m ² Yellow > 7440 cd/m ² White > 12400 cd/m ² | | | |
| | Contrast Ratio | R3 | | | |
| | Color | C2 | | | |
| | Beam Width | B6 (B1-B6 Can be customized) | | | |
| | Brightness Control | 100 levels | | | |
| | CABINET | Cabinet Material | Aluminum, Stainless Steel & Plastic | | |
| Cabinet Surface Material | | Black Matte Powder Coated | | | |
| Work Temperature (°C) | | T1 (-15°C to +60°C) ; T2 (-25°C to +55°C) | | | |
| Humidity Range | | <95% Relative Humidity | | | |
| Light Pollution | | D3 | | | |
| IP Rating | | P1(IP44), P2(IP54),P3(IP56), to IP65 | | | |
| ELECTRICAL | | Power Supply | AC 85-140V; AC 180-260V; 50/60HZ | | |
| | Solar Power System | DC 12V; DC 24V Available | | | |
| | Estimate Power Consumption (Watt/m ²) | 850 | 650 | 420 | 280 |
| | Controller | Embedded controller designed for industrial rang integrated fast access solid state data memory | | | |
| | Communication | RS232; RS485; Ethernet; GPRS; 3G/4G; TCP/IP via RJ45 | | | |
| | Protocol | NTCIP/Jet File II (Others Available) | | | |
| | Communication | Compliant with EN50293 | | | |
| | Protocol | EN12966:2005+A1:2009 | | | |

| ADTENTUS SFML-SERIES | | | | |
|-----------------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--|
| OVERVIEW | Model Name | VFO10SFML | VFO16SFML | |
| | Physical Pitch (mm) | 10.6 | 16 | |
| | Tile Size wxh(mm) | 384 x 192 | 384 x 192 | |
| | LED | SMD + Front Mask + Lens | | |
| LIGHTING | Conformity | EN12966 L2/L3,R3,C2,B7 | | |
| | Luminance Intensity | L2: (Can be made to L3) Red > 1550 cd/m ² Green > 1860 cd/m ² Yellow > 3720 cd/m ² White > 6200 cd/m ² | | |
| | Contrast Ratio | R3 | | |
| | Color | C2 | | |
| | Beam Width | B6/B7 | | |
| | Brightness Control | 100 Levels | | |
| | CABINET | Cabinet Material | Aluminum, Stainless Steel & Plastic | |
| | | Cabinet Surface Material | Black Matte Powder Coated | |
| Work Temperature (°C) | | T1 (-15°C to +60°C) ; T2 (-25°C to +55°C) | | |
| Humidity Range | | <95% Relative Humidity | | |
| Light Pollution | | D3 | | |
| IP Rating | | P1(IP44), P2(IP54),P3(IP56), to IP65 | | |
| ELECTRICAL | | Power Supply | AC 85-140V; AC 180-260V; 50/60HZ | |
| | Solar Power System | DC 12V; DC 24V Available | | |
| | Estimate Power Consumption (Watt/m ²) | 840 | | |
| | Controller | Embedded controller designed for industrial rang integrated fast access solid state data memory | | |
| | Communication | RS232; RS485; Ethernet; GPRS; 3G/4G; TCP/IP via RJ45 | | |
| | Protocol | NTCIP/Jet File II (Others Available) | | |
| | Communication | Compliant with EN50293 | | |
| | Protocol | EN12966:2005+A1:2009 | | |



CUSTOMER SERVICE

At PLEDCO, we strongly emphasize the importance of customer relationships, and their trust in our products. Our key to lasting relationships focuses on delivering world-class LED products, while promising exceptional customer service and reliability, ensuring our clients a relaxing experience. PLEDCO is recognized as an industry leading LED total solution provider, from initial inquiry to after sales, our heavily trained team will guide you step-by-step through the entire process of your LED project.

Installation Support

Our skilled technicians can professionally install your LED Displays without disturbing your projects schedule. Mitigation and problem-solving are inevitable during the installation process, and PLEDCO's installation "Gurus" have the experience, know-how, and technical expertise to handle nearly any situation. We are able to provide you with all the required documents including; specification sheets, system diagrams, complete display and structure elevation drawings, and 3D rendering if required. As your dedicated total solution provider, we promise to be there step-by-step guiding you through your project, from initiation to closing.

24/7 Technical support via online or phone

Our phone and online live support systems enable us to provide 24/7 technical assistance. If you require urgent assistance our skilled technicians are always ready to help, regardless of difficulty. Technicians are required to pass intensive training and testing to ensure issues are dealt-with professionally and accurately, while emphasizing the importance of your project's

Warranty & Maintenance

With over 20 years of combined professional experience, our internationally exposed engineers have specially designed and developed LED Display solutions to cope with harsh environments and withstand extreme temperatures. However, in the event of a problem, our highly experienced technical support team promises minimal display downtime by utilizing our bullet-proof troubleshooting expertise. Nearly all of Pledco's products include a 5-year warranty, with optional extensions available upon request.

Parts Availability for the Next 15 Years

Our manufacturing facility produces all the parts used assemble our LED displays. More importantly, we own all the technology, molds and PCB layout designs that are used to develop these parts. This provides us with the reliability knowing exactly what materials are being used and ensures the quality of our products can easily be managed directly from the production level. One of the biggest after-sales issues a client could have is being able to receive replacement LEDs that have been recalibrated exactly the same as the display when first produced. PLEDCO is one of the few companies in the world who utilizes the international HD NTSC REC-709 calibration in LED display, thus making it possible for us to provide our clients the exact same LEDs to match their display by using Radiant's camera technology.



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