

ADTENTUS SERIES



LOW POWER CONSUMPTION



HIGH BRIGHTNESS



HIGH CONTRAST



MODULAR DESIGN



REAL-TIME MONITORING

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

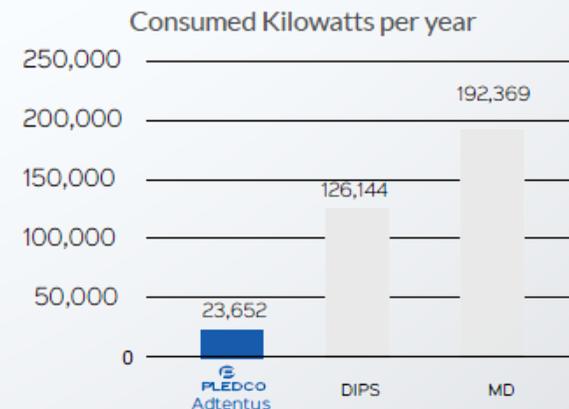
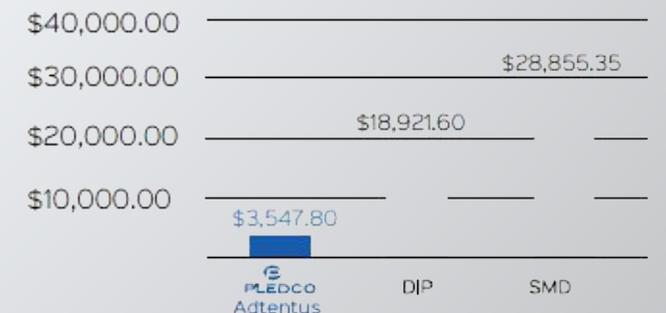


FIGURE 03

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.

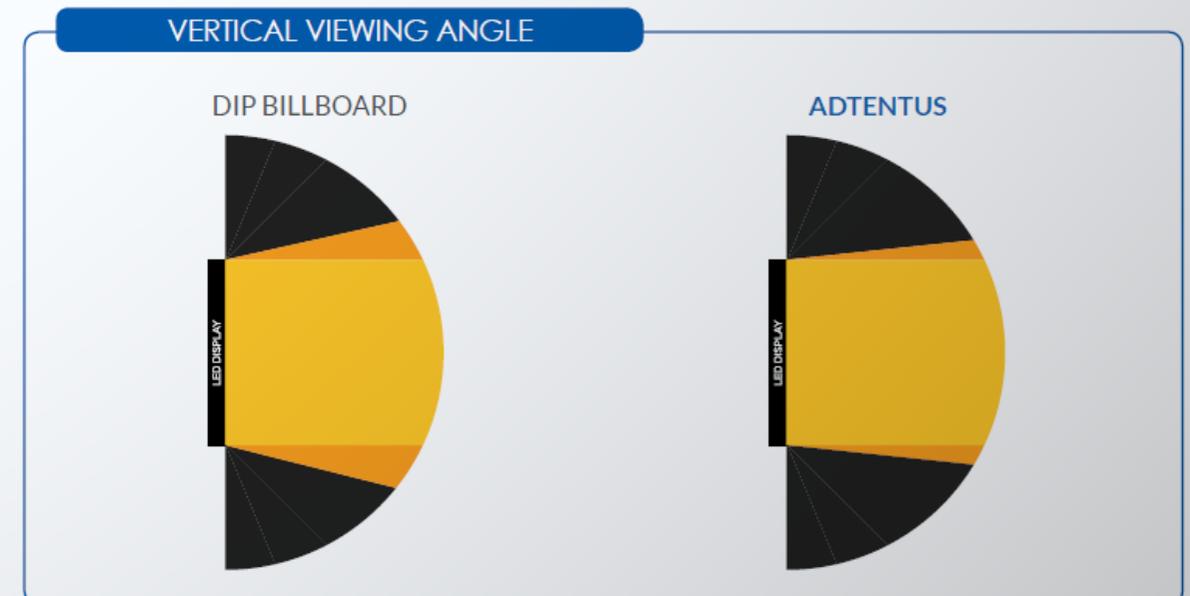
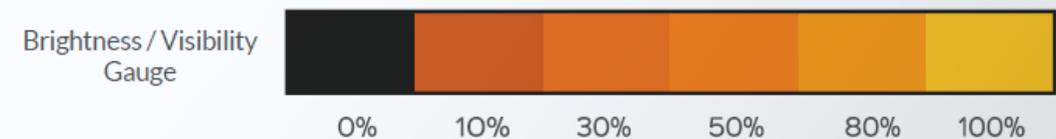
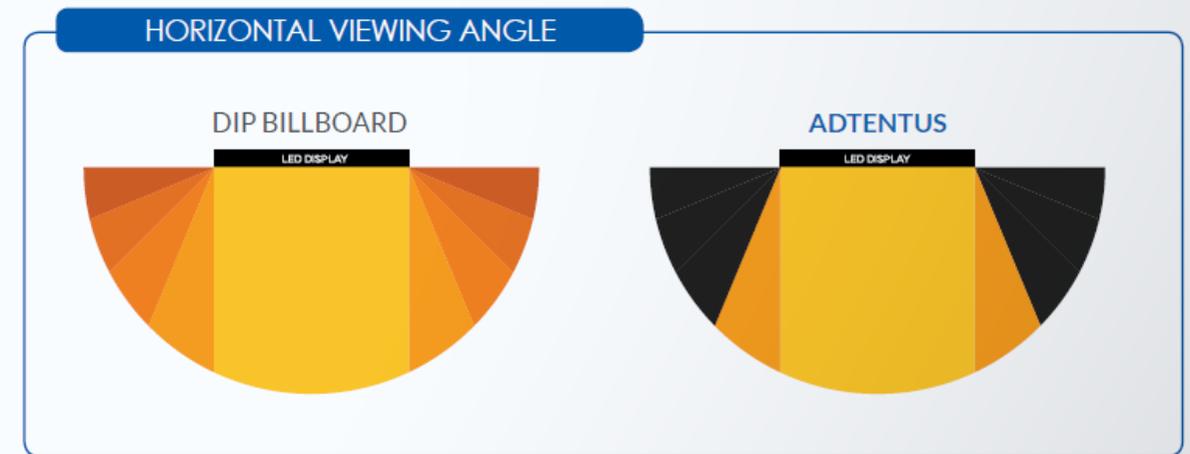
FIGURE 04

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

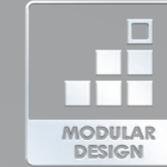
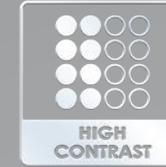


Input			
Type	Channel	Connector	Details
DisplayPort	1	DisplayPort Standard	Supports DisplayPort 1.2. Max.3840×2160@30Hz
HDMI	3	HDMI Standard	Supports HDMI 1.4 Max.3840×2160@30Hz
DVI	2	DVI-I	Analog inputs not supported. DVI1 Supports dual-link Max.2560×1600@60Hz
SDI	1	BNC	Supports SMPTE 425M-Level A(3G-SDI), 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



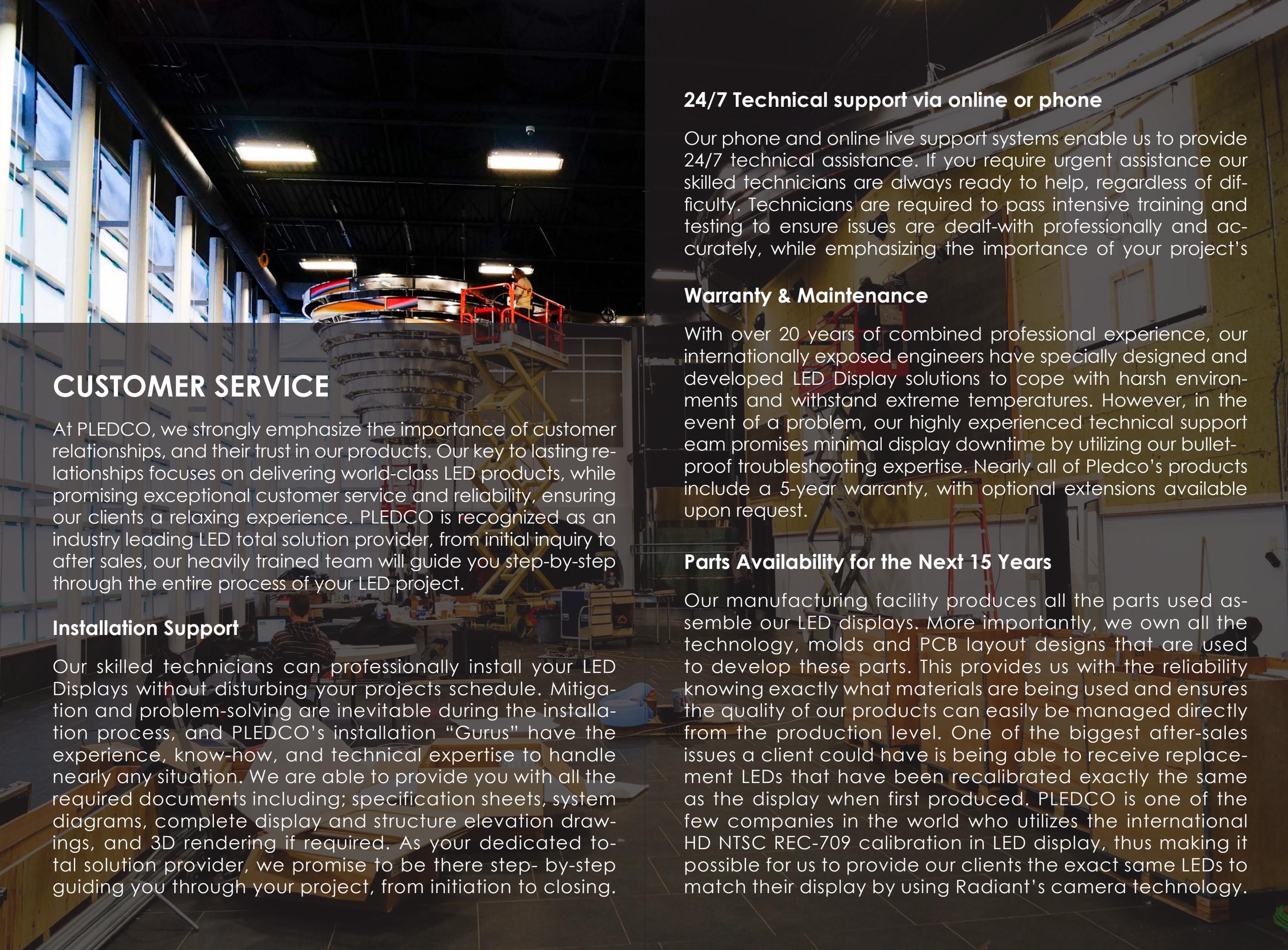
PRODUCT FEATURES



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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