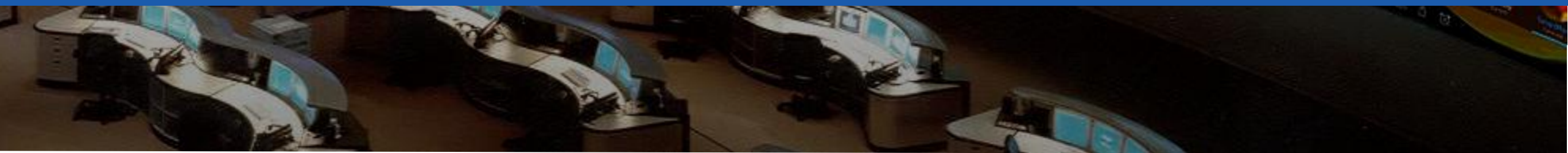




**TITAN** series  
Indoor SMD-HD LED Display  
**PLEDCO**



## HIGH PRECISION & SLEEK CABINET ALIGNMENT

The Titan Series' Indoor LED Display cabinet has a sleek aluminium cabinet which has been CNC processed to ensure a precise and durable cabinet alignment. Our cabinets seamlessly connect ensuring there is less than a <math><0.2\text{mm}</math> tolerance while projecting a stunning uniform image.



## LOW BRIGHTNESS & HIGH GREY LEVELS

The Titan Series' Indoor LED Display cabinet has the ability to project high levels of grey while maintaining low brightness. The grayscale comparison can be seen below to prove our technology's pristine imagery. Standard LED display cabinets fail to reach high levels of grey scale due to low quality engineering from their software and calibration, however Pledco's advanced software, control system and calibration enables us to reach these picturesque levels while maintaining low brightness.

## HD BROADCAST COMPATIBLE

The Titan Series' Indoor LED Display cabinet is HD Broadcast compatible for television recording. Our ultra-high refresh rates ensure when broadcasting live television the LED display stays flicker free but more importantly continues to project pristine imagery. In addition all our HD LED display are fully equipped with a full redundancy control system to ensure zero downtime during a live event.



# PRODUCT ADVANTAGES

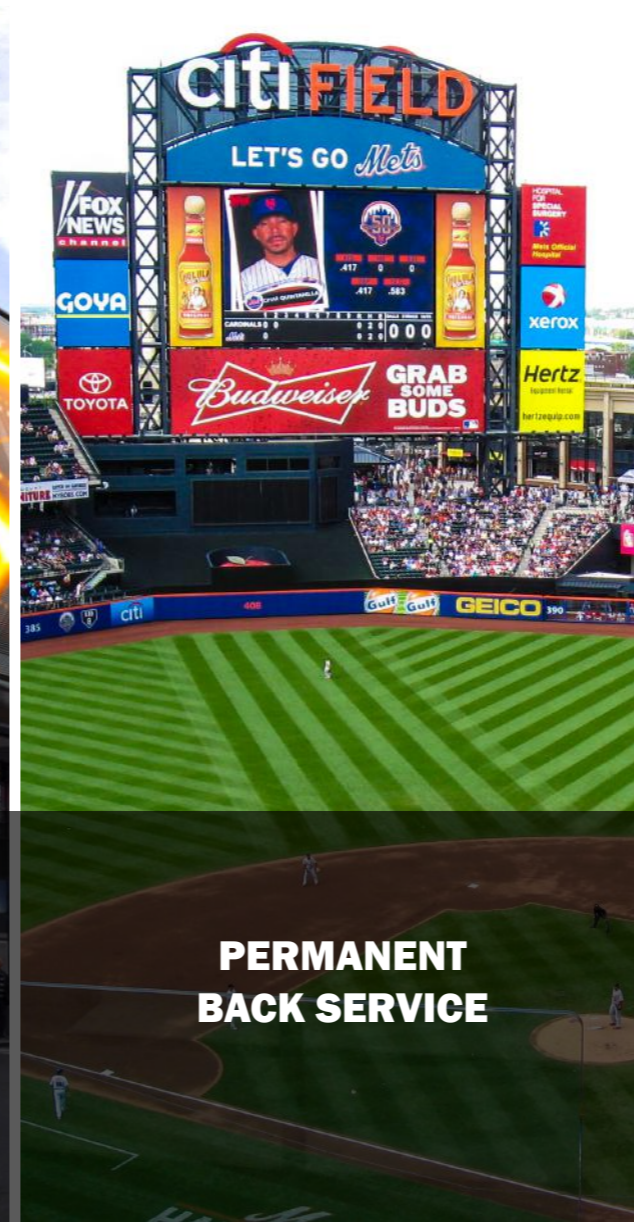
PLEDCO's Titan Series offers a variety of cabinet sizes in both front/back service and rental. Most companies are limited to their availability in cabinet sizes. This limitability can make it extremely difficult when trying to meet a client's dimension demands for an exact sized project request. At PLEDCO we are able to produce any size of LED display requested based on our versatile cabinet structure size availability.



## CABINET STRUCTURES



**PERMANENT  
FRONT SERVICE**



**PERMANENT  
BACK SERVICE**



**RENTAL**



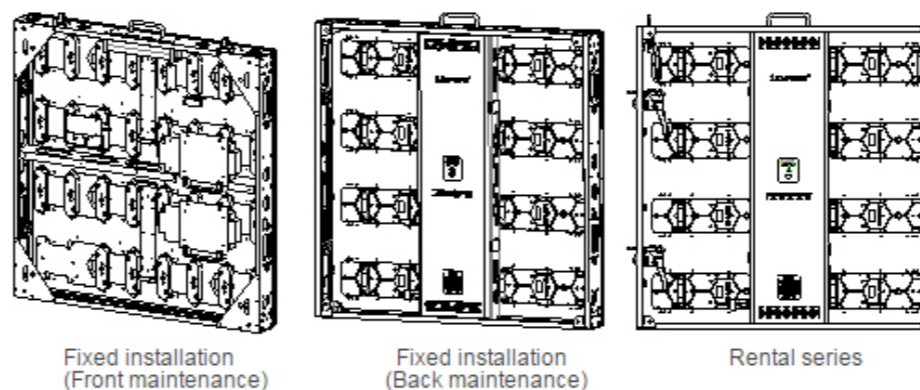
**CUSTOM & CURVE**

# CABINET STRUCTURES

## BACK SERVICE

- ▶ The Pledco Titan series cabinets can be freely used for fixed installation, rental purposes, or even as a perimeter display with front or back maintenance cabinets.
- ▶ All Pledco Titan series displays are for indoor uses.

Cabinet size (unit: mm) 768×768

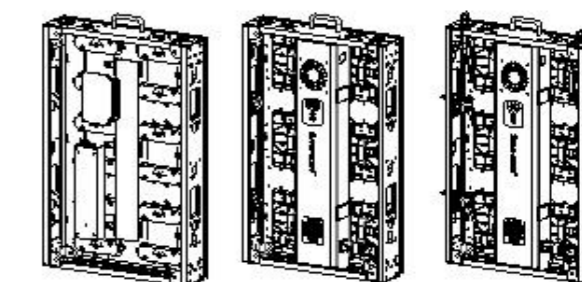


Fixed installation (Front maintenance)

Fixed installation (Back maintenance)

Rental series

Cabinet size (unit: mm) 576×384



Fixed installation (Front maintenance)

Fixed installation (Back maintenance)

Rental series

## FRONT SERVICE

- ▶ Special design with pulley lock, which is convenient and practical for module fixation.
- ▶ The smallest pitch for front-access modules: 4 mm.



Front view

Front maintenance

Back maintenance

When pulley is opened, module is locked.

Front maintenance

Back maintenance



## PLEDCO HD DISPLAY

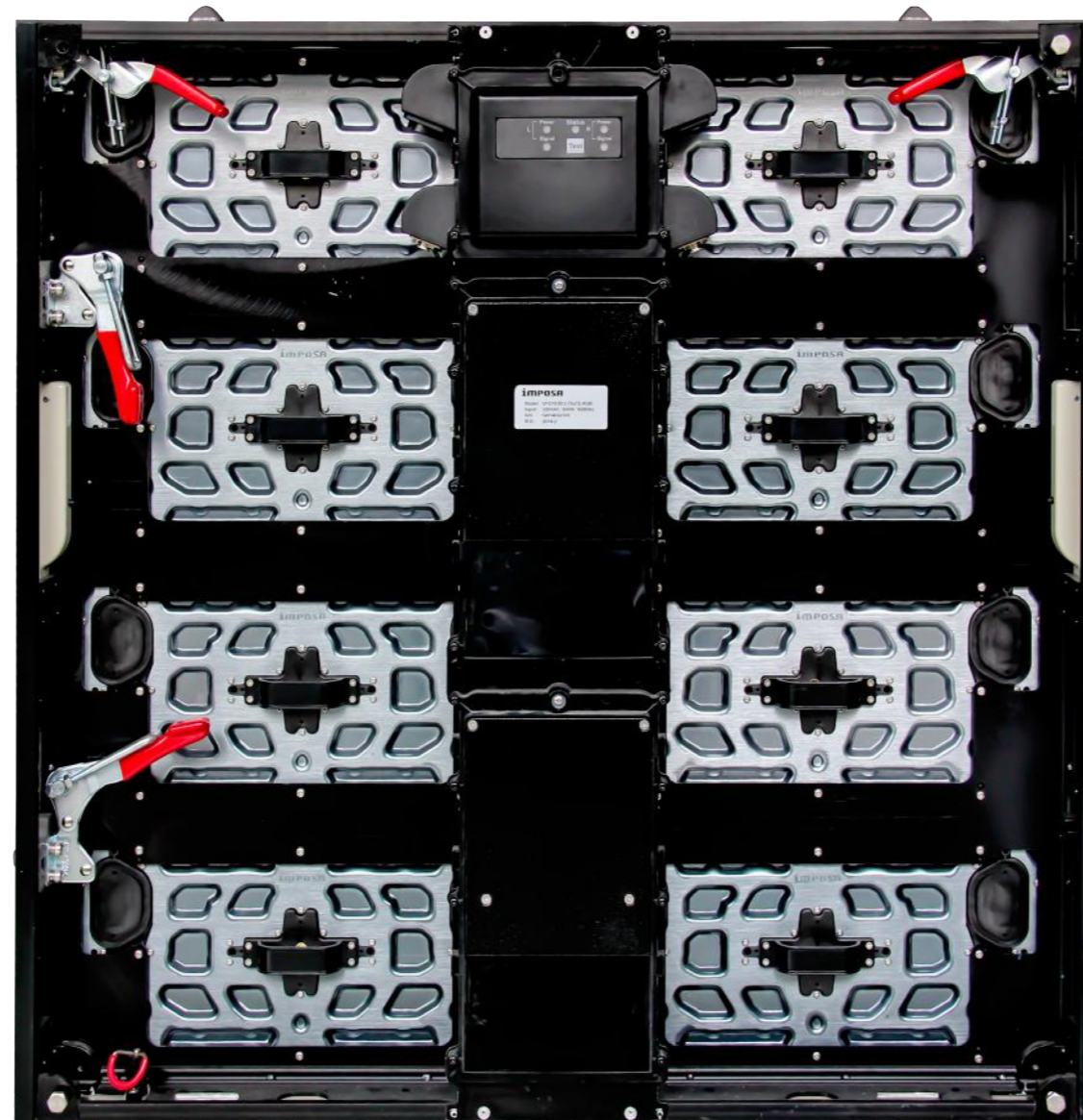
Our calibration technology reaches all possible X & Y coordinates ensuring you HD broadcasting experience is crystal clear.

## 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 you will not see any color differences, however when white is at 50% brightness the user may see a slight difference in color.

## 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 are 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.

## 3 DIGITAL DATA REVISION

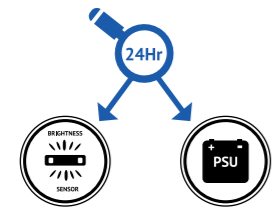
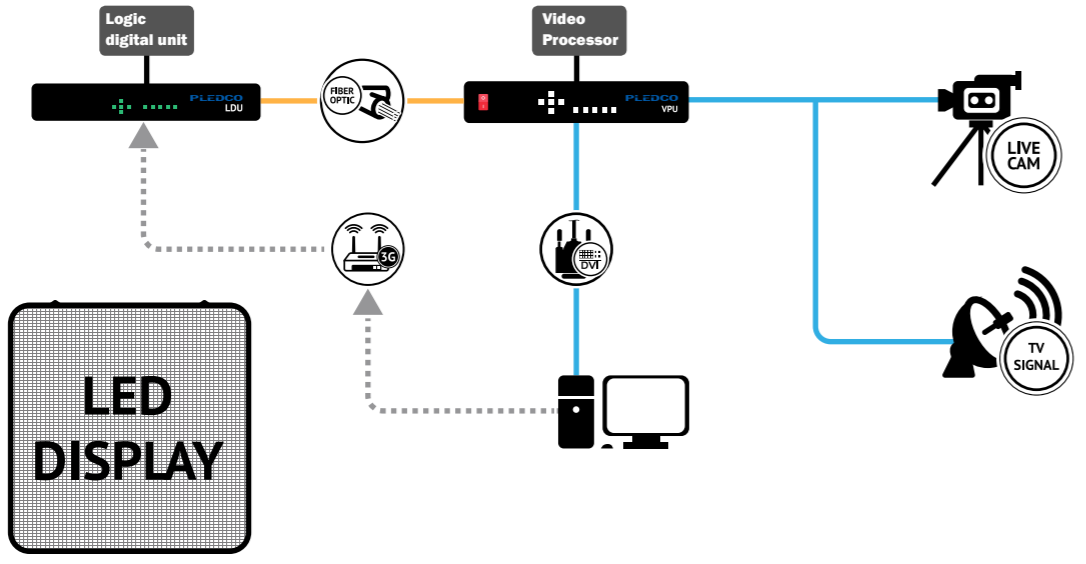
If an single pixel fails, the data will be read-out from the EEPROM and then re-wrote to the replacement chip. After this process the brightness value is calibrated again to ensure the uniformity of the entire system, thus providing easy and fast maintainability.

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.

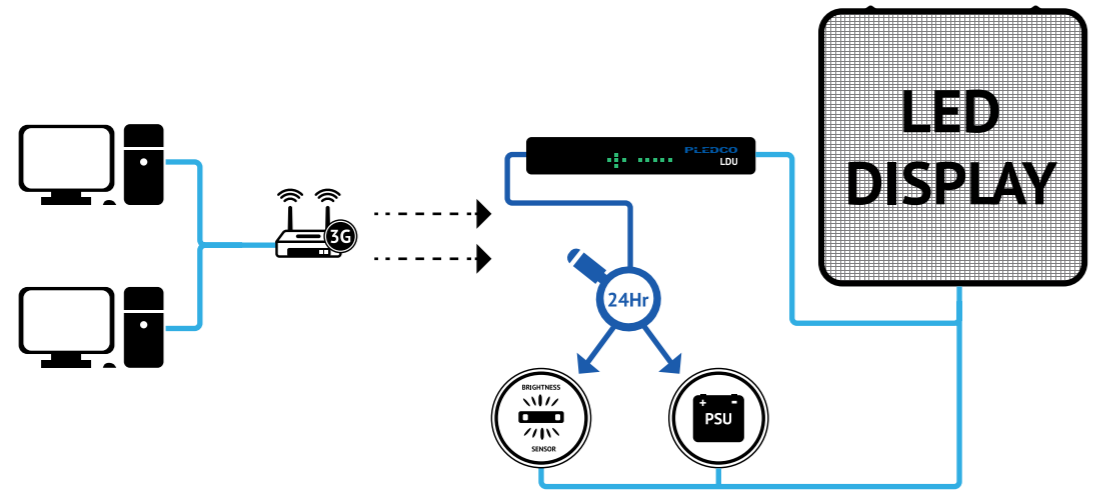
# CONTROL SYSTEM

Our Control System can run on-line (synchronous) as well as off-line (asynchronous). The displays can be accessed, controlled as well as monitored online thanks to our unique, reliable and stable Linux-based platform.

The Synchronous Diagram

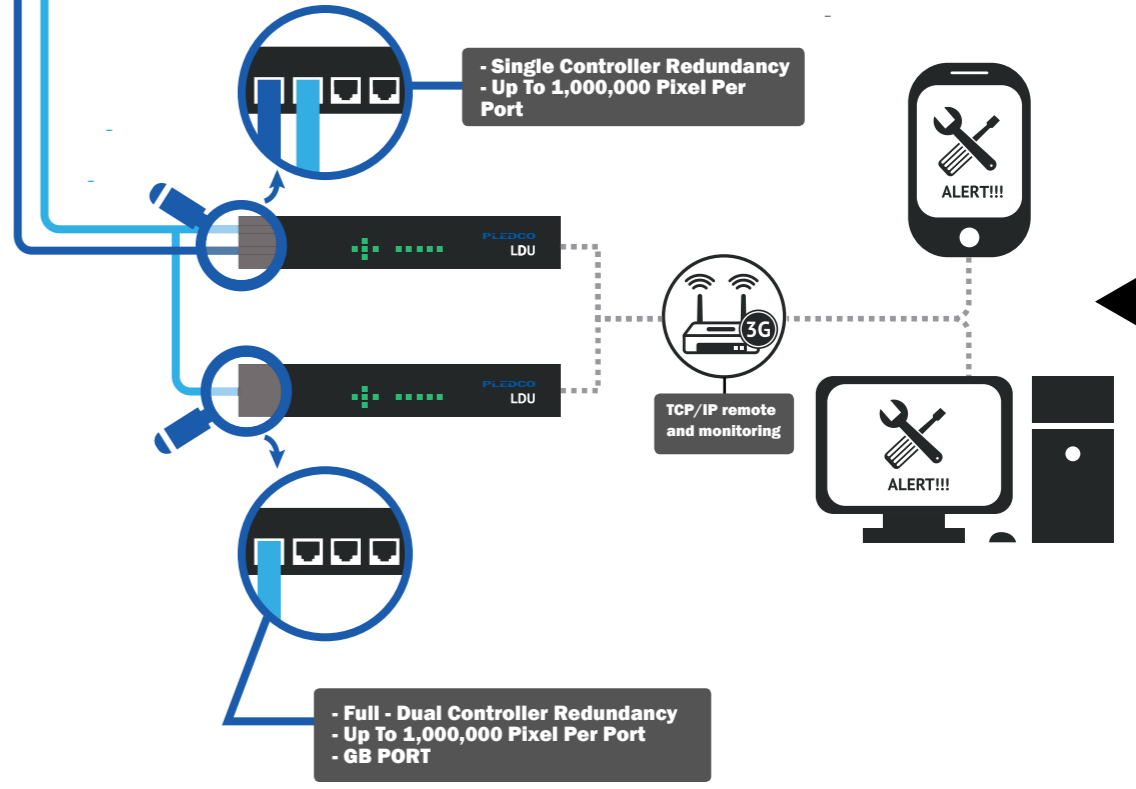
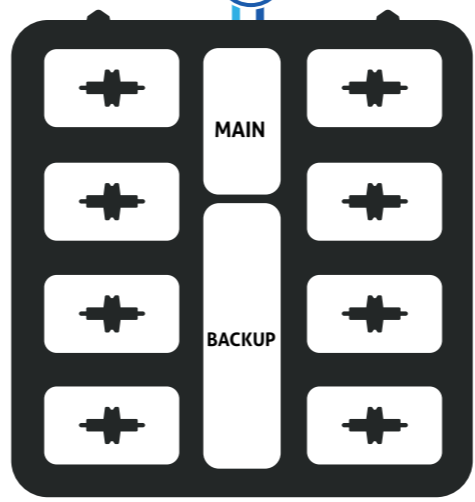
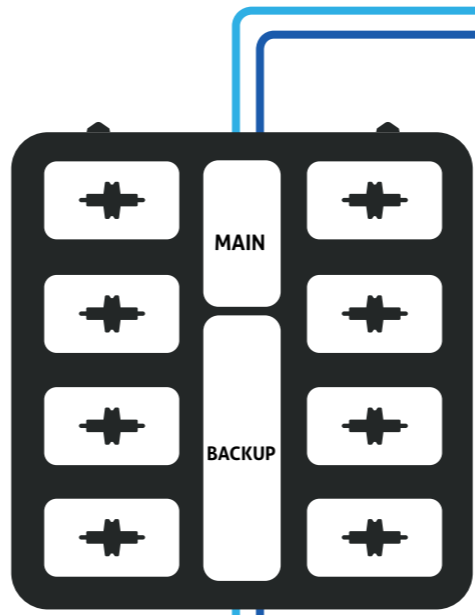


The Asynchronous Diagram



# DATA, POWER BACKUP AND MONITORING

The system monitors every LED lamp and Power Supply, with the ability to notify immediately upon failure. This highly innovative function ensures continuous display up-time. In case of failure, your displays' control system can send a SMS or an e-mail, and inform you of the exact error in occurring.



Data & power Monitoring Diagram

# LED Display **UHD Applications**



**Conference  
Room**



**Subway Control  
Room**



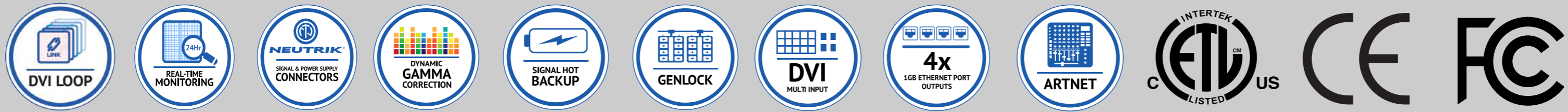
**NASA Control  
Room**

# PRODUCT FEATURES

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

 Industry Canada / Industrie Canada  
**ICES-003** INFORMATION TECHNOLOGY EQUIPMENT (ITE)

 European Commission  
**LOW VOLTAGE DIRECTIVE**



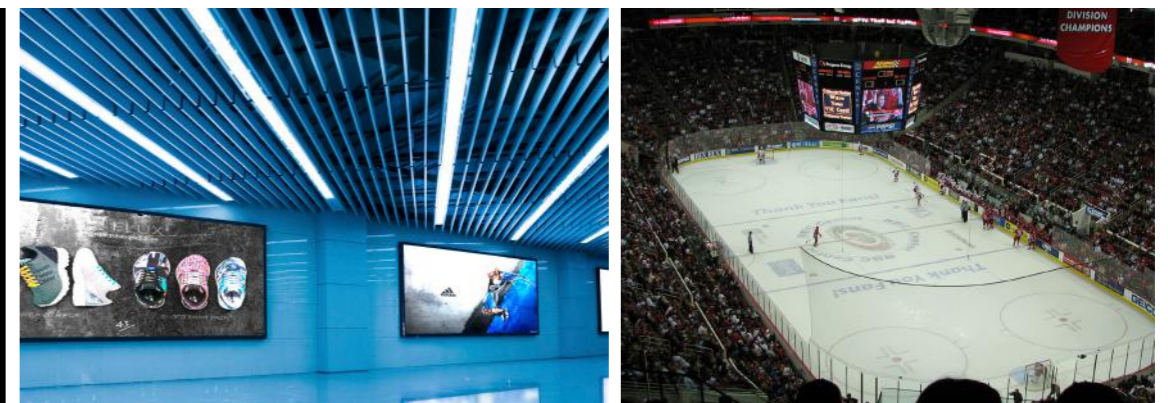
# TITAN SPECIFICATIONS

Physical pitch (mm)	1.6mm	1.7mm	1.9mm	2mm	2.46mm	3mm	4mm
Standard Cabinet Size (WxHxD mm)	384 x 576 x 92						
Cabinet Resolution WxH (pixels)	240 x 360	224 x 336	202 x 303	192 x 288	156 x 234	128 x 192	96 x 144
Cabinet Weight (KG)	8						
Tile Size (mm) L x H	192 x 192 (2x3 per panel)						
Tile Resolution (pixels)	120 x 120	112 x 112	101 x 101	96 x 96	78 x 78	64 x 64	48 x 48
LED Type	3 in 1 SMD 1010 True Black						SMD 1212 True Black
Grayscale	20 bit						
Refresh Frequency	>4800HZ on MSB and LSB Grey scale and special proprietary cross scanning technology.						
White Balance Brightness at 6500K after Calibration	1500 Nits			1200 Nits			
Color Temperature	3200K to 9500K (4 fix Presets and 1 Custom)						
Maintenance Access	Rear (Front Access Optional)						
Viewing Angle	>= 170° x 170°						
Operating Temp. Range	-20 to 65°C						
Voltage	110/220VAC, 50-60HZ						
Operating Humidity Range	0-90%						
Typical Lifetime	>= 100 000 hrs MTBF 25 000 hrs						
Maximum (per cabinet)	240 Wh	210 Wh	204 Wh	150 Wh			
Average (per cabinet)	72 Wh	62.5 Wh	60 Wh	50 Wh			



**THE FUTURE**  
of LED technology

From sports stadiums, to spectaculars and beyond, PLEDCO has over 25 years experience in meeting customers' unique needs. Backed by a talented team of engineers and designers and a robust product line offering, PLEDCO can turn your display dream into a reality.







## 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.

## 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 down-time by utilizing our bullet-proof trouble-shooting expertise. Nearly all of PLEDCO's products include a 5-year warranty, with optional extensions available upon request.

## 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 schedule.

## 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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