ALWAYS BRIGHT

LEDECA®

LEDECA

Since 2007, we manufacture, deliver and integrate high quality LED based multimedia solutions across multiple vertical markets, which includes but are not limited to; outdoor advertisement, out-of-home messaging, traffic variable messaging, rental, broadcast, sports and media facade applications.

As of 2019, our installed based of screens number over 10.000 distributed across 50 countries. We complement our LED multimedia products with supplementary offerings where necessary, such as monitoring system, display processors, content automation software, turnkey project design & build & calibration services.

Our philosophy is dedication and constant improvement in the LED display business, in order to provide the best possible value to our customers and competitiveness to our partners with turnkey solutions.

LEDECA, always bright!

WE ANALYSE
We understand your requirements

WE DESIGN
Create the most suitable and cost effective solution with engineering and industrial experience

WE PROVIDE SOLUTION
We deliver and execute the turnkey solution

LEDECA
www.ledeca.com

distributed by

WHOWEARE

Apron Teknoloji is a turnkey LED screen manufacturer who was born in 2007, 4.000sqm manufacturing base, operations and subsidiaries in all over the world and best projects and solutions which are best in their own area. To focus on turnkey solution! This is the key of our success. We listen to you, analyze your demands, find solutions with our professional team whose target is to catch the optimum point between cost and performance.
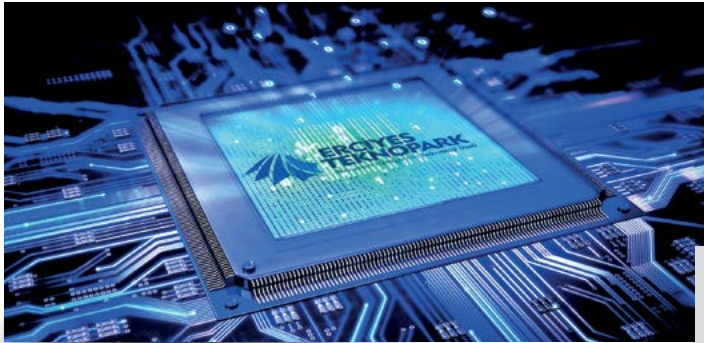
OURTEAM

LEDECA was born in Technopark at University of Erciyes. That gives us power for continuous improvement with young and well educated human resource under orientation of academic management.

OFFTHESHELFSTANDARDIZED

We provide standardized, off-the-shelf products that are optimized for application. Thus, we can offer the most suitable product per application, achieve standardization of quality, and provide fast turn around to inquiries.

Where required, we do design and provide turnkey projects with all necessary supplementary products including frame design for any kind of metal construction and adaptation, hardware, software, substructure and services.

Just pixel pitch is not enough to talk about led screens. You can see many of our products before making a decision, ask questions that are in your mind, see the difference of LEDECA with your own eyes.
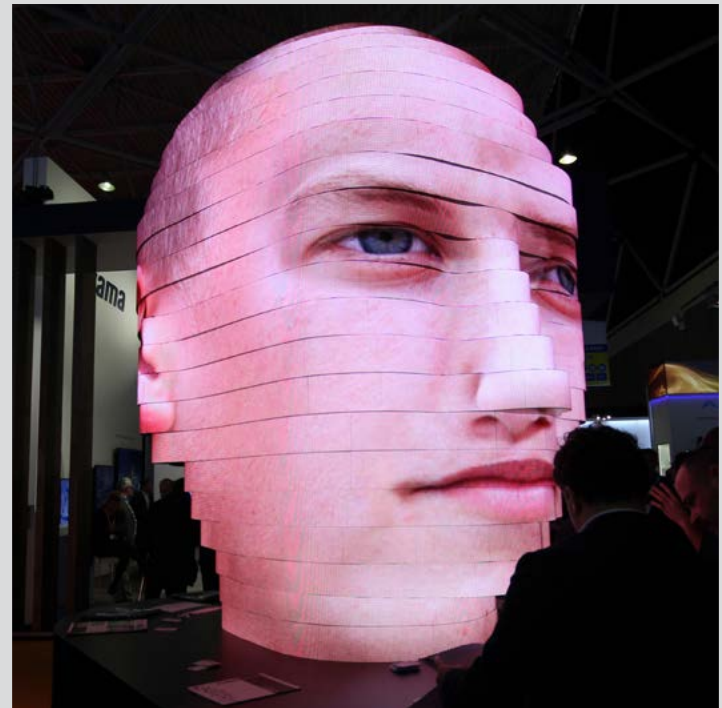
SUBSIDIARIES

PARYA METAL AS, as subsidiary company of LEDECA; provides a solution-oriented production service for your any kind of indoor & outdoor projects with its innovative concept of advertising and city furnishing industry, design and produce metal constructions. PARYA has over 10 years of operational history as a supplier of brands built across Europe, Africa and Asia.

ALTUM TEKNOLOJİ AS, as subsidary company of LEDECA; provides signal management equipment where necessary. and includes single or multi channel scalers, video processors, signal extenders, converters, content management software and LED wall controllers.

PRODUCTION

We have complete control over all mechanical and electronic aspects of the production process. Our products are compliant with CE, LVD, EMC, RoHS standards. Apron Teknoloji has fully ESD compliant production area and all the products are protected for Electro Static Discharges. Not only ESD, but also all steps and processes take action according to IPC standards.

AGING

The most important QC step is "aging". That's not only to find errors seen in this step, but also it's important to adjust future production adjustment coz of sustainable 100% success. Products tested for 72 hours, faults that may occur during aging test are eliminated once after that step.

CALIBRATION

All our products are tested and calibrated for uniformity of color and brightness before leaving the factory. We do also provide periodic after-sales calibration services.

FRAMEWORK

We utilize the experience of our mother company in metalworking to construct the framework and construction necessary for your LED screens. We are able to design and build non standard curved, spherical or any other custom shaped framework.

SAFETY

"Safety first"! is a key principle at LEDECA. Human safety comes first and is more important than anything else. We focus on safety on each step of the production process. Our facilities have the most current ISO standards in operational and environmental safety.

INSTALLATION

Small or huge screen, located in indoor or outdoor, from snowy mountains to deserts, wherever you are in Europe, Asia or Africa, whatever your project is retail, stadium or facade... We will be there for your turnkey demands .

FIRST PRODUCT
First in-house-designed Product

2007   **2008**

FOUNDED
LEDECA Founded as a LTD

**METAL PRODUCTION
FACILITY INVESTMENT**
Metalworks facility created

2016   **2015**

LETSMON
LEDECA developed
LETSMON monitoring system

FIRST UEFA APPROVED PERIMETER SYSTEM
First UEFA approved stadium perimeter screen

FIRST FIDS INTEGRATION
First FIDS (Flight Information Display System) integration

2017   **2018**

EXPORT TO 40 COUNTRY
LEDECA products are used in 40 countries

LEDECA
www.ledeca.com

MOVE TO ISTANBUL
LEDECA moves to Istanbul

FIRST PRODUCTION INVESTMENT
First assembly line for serial production created

2009

2010

CERTIFICATIONS
LEDECA ISO-certified (9001 and 14001)
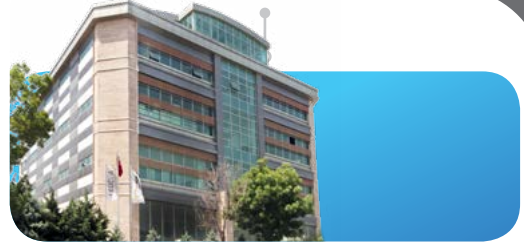
FIRST OUTDOOR SMD SCREEN PRODUCTION
First self-designed outdoor SMD LED screen product

2012

2011

INCORPORATED COMPANY
Ledeca converted into an incorporated company
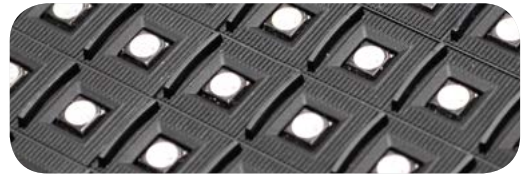
12th BIGGEST MANUFACTURER
As a Turkey's 12th biggest hardware manufacturer in IT industry.

2019

2019

PATENTED FREEFORM DESIGN
Patented freeform / flexible module designed.

global brands
trust us for years;
while we trust in our quality, power and ability...

APRON TEKNOLOJI AS, the owner of LEDECA brand; manufacture, deliver and integrate high quality LED based multimedia solutions across multiple vertical markets.

We are producing solutions for our customers with confidence which come from the experience of working with global brands and by their trust in our quality, power and ability…

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As of 2019, our installed based of screens number over 10.000 distributed across 50 countries.

LC WAIKIKI
LC WAIKIKI LC WAIKIKI LC WAIKIKI

Koç

L'ORÉAL®

METEOROLOJI

KGM

MiGROS

Türk Telekom

₿

Shell

Opet

HSBC

Ray-Ban

Wonderland Eurasia

S&C
SILK AND CASHMERE

tv100

QNB

GAZPROM

Tefal®

İDO

netmecra
GÖRSEL İLETİŞİM

FENERBAHÇE SPOR KULÜBÜ 1907

adidas®

TIFFANY & CO.

HILTI

MEDYA GETS OUTDOOR

Ford

FLO

SOCAR

PO
Petrol Ofisi

TOTAL

CINEMARINE

Switch

NEVŞEHİR ÜNİVERSİTESİ 2007

BOSS
HUGO BOSS

ŞEVİL

Infront
SPORTS & MEDIA

FIAT

AFAD

BEYAZ İNŞAAT

NİLÜFER BELEDİYESİ BURSA

nurol

HUAWEI

VESTEL

al hokair group
مجموعة الحكير

BURGER KING™

IKEA

BJK 1903

Levi's®

AVCILAR BELEDİYE BAŞKANLIĞI

Setur

MANİSA BÜYÜKŞEHİR BELEDİYESİ

IBM

TAFF PICTURES

TCDD

1905

DSİ

ASO

Demirören

BestValue
DUTY FREE EXPERIENCE

HALKBANK
> Üreten Türkiye'nin Bankası

iGA

Marmaray

MESKİ

PARK

SPORT IN STREET

Cadillac.

ROYAL MOTORS
İSTANBUL

OPEL

RÖNESANS HOLDING

TOSYALI HOLDING

TBMM MİLLİ SARAYLAR

BURSA BÜYÜKŞEHİR BELEDİYESİ

sunglass hut

vodafone

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over 50 countries and over 10.000 screens;

all turnkey solutions...

LEDSCREENSOLUTIONS

No matter the sector and the application, no matter the requirements, whether it is for one or one thousand square meters, whether it's a single screen or a network of one hundred points, we can provide the right LED solution at the right price-performance point. This is our core business.

Our products are currently used in the following markets: OOH advertising, retail, digital city furniture, traffic, sport, broadcast, etc. We have standard off-the-shelf products that are optimized for these markets, and further we are able to create custom design products for a specific purpose or project.
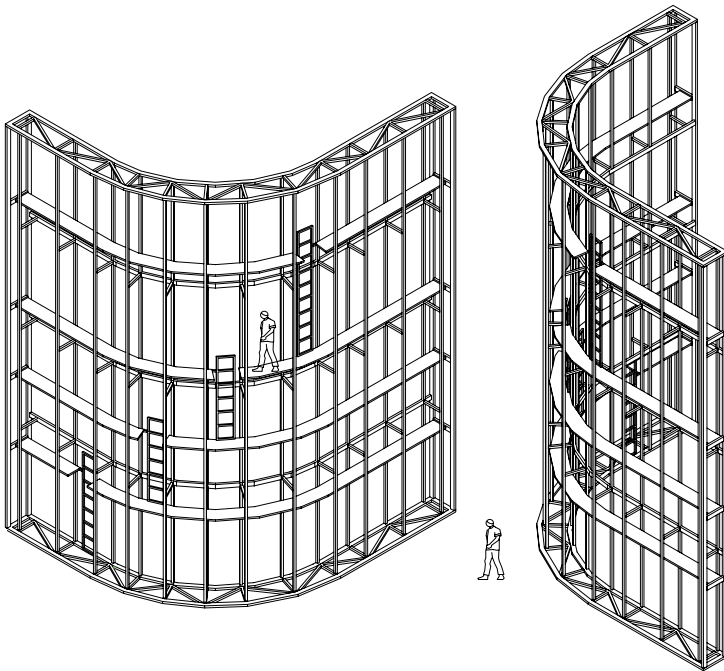
TURNKEYSOLUTION

The challenge here is to send the right info at the right time to the right target audience. We can design and install centrally managed digital signage networks that could be as large as hundreds of displays made up of different types.

CONTENTMANAGEMENTSOFTWARE

EASESCREEN, our strategic partner, offers you several distinct advantages when compared to other digital broadcasting and information solutions. Rich content management and convenient report monitoring features, customized messages for your target audience, easy integration of different content into different applications on multiple media, offering excellence by combining rich media content with interactive broadcasts.

easescreen

AGING

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OUTDOOR ADVERTISEMENT

CITYLINE

Outdoor LED screens specialized for outdoor advertising and out-of-home messaging. High brightness, rugged construction, able to function in tough environments.

GALLERY

Indoor and semi outdoor LED screens specialized for retail. Featuring high brightness values so that they can be placed in daylight or under sunlight (storefronts) low power consumption, silent operation.

RETAILING

MEDIA BROADCAST

ULTRA

Indoor LED screens for TV studios. Very high pixel density, silent operation, high refresh rate (so as not to cause artifacts in recordings).

ARENA

Indoor and outdoor LED screens customized for sports venues. Scoreboards, scorecards, perimeter screens. FIBA and UEFA certified where necessary.
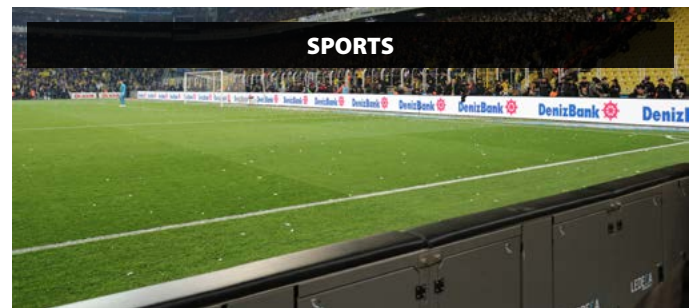
SPORTS

LIMITLESS DESIGN

FREEFORM

Flexible indoor and outdoor LED screens that can be built in custom shapes and forms. Use them to give life to your creative designs.

STAGE

Indoor and outdoor LED screen solutions optimized for live events and rental companies. High brightness and rugged construction that allows repeated installations.

SCREENS FOR MICE & STAGE INDUSTRY

PLUG&PLAY SCREENS
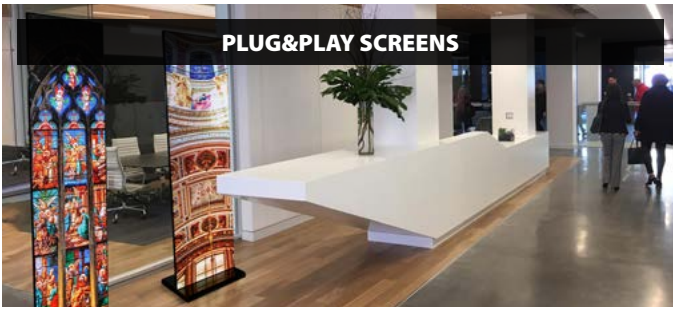
▶ LEDUP

Plug&Play LED displays, lightweight, easy to move, easy to manage your contents via mobile phone, cloud software or via direct computer connection, just plug&play.

FACADE ◀

Architectural semi transparent LED wall curtains, that allow you to convert your building's glass surfaces without blocking the view of the tenants.

LED WALLS FOR BUILDINGS

FACADE LIGHTING

▶ CITYLIGHT

Citylight product convert your building's facade to colorful dynamic LED walls with real video capability. Product range has installation solution for any kind of building facade.
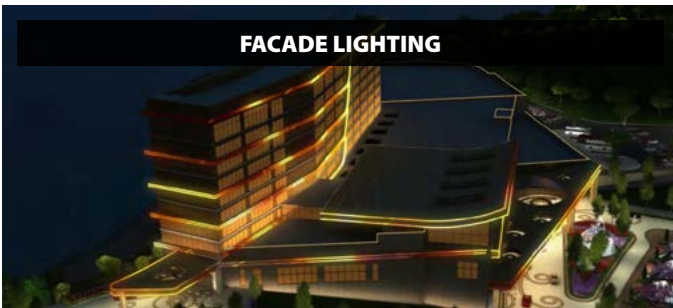
DOOH ◀

Standardized outdoor city furniture such as billboard, totem, outdoor kiosk and other message signs. High brightness and affordable price.

DIGITAL CITY FURNITURE

FLIGHT INFORMATION DISPLAY SYSTEM

▶ FIDS

When you need 100% stability and 100% reliability, when you need your display keep working in any condition; LEDECA FIDS display designed for you. Not only display but also able to establish any kind of communication integration with your system.

TRAFFIC ◀

Variable Message and Traffic Signs designed for highway and traffic management, Compliant with the international standards on display systems for motorways.

VARIABLE MESSAGE SIGN

CITYLINE

OUTDOOR LED SCREENS FOR DIGITAL OUT-OF-HOME MESSAGING

OSB CENTER
KAYSERI / TURKEY

New generation cost effective led screen panel design for outdoor use

Right choice for DOOH media screen installations

Lightweight for easy adaptation and low cost framework design

Production level calibration for best color uniformity

PARKORA MALL
BURSA / TURKEY

LEDECA
www.ledeca.com

distributed by **sys com tec** Distribution AG

	COMPACT	COMPACT	COMPACT	COMPACT	COMPACT	COMPACT
	LDCOSP03.0CL	LDCOSP04.0CL	LDCOSP05.0CL	LDCOSP06.0CL	LDCOSP08.0CL	LDCOSP10.0CL
General						
Operating environment	outdoor	outdoor	outdoor	outdoor	outdoor	outdoor
Pixel pitch	3.07mm	4mm	5mm	6mm	8mm	10mm
Service type	rear access	rear access	rear access	rear access	rear access	rear access
Calibrated brightness (nits)	>5.500nits	>5.500nits	>5.500nits	>7.000nits	>7.000nits	>7.000nits
Lamp type	SMD	SMD	SMD	SMD	SMD	SMD
Lifespan (hours at %50 brightness)	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours
White color calibration (adj.)	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K
Gray scale	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits
Brightness control	256 level	256 level	256 level	256 level	256 level	256 level
Module Specifications						
Module dimensions (mm)	320x160	320x160	320x160	192x192	256x256	320x160
Refresh frequency	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable
Module resolution	104x52px	80x40px	64x32px	32x32px	32x32px	32x16px
LED drive method	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic
Module material	plastic (PC)	plastic (PC)	plastic (PC)	plastic (PC)	plastic (PC)	plastic (PC)
Module type	apparent	apparent	apparent	apparent	apparent	apparent
PCB type	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer
PCB surface coating	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal
Panel Specifications						
Panel material	galvanized steel sheet	galvanized steel sheet	galvanized steel sheet	galvanized steel sheet	galvanized steel sheet	galvanized steel sheet
Panel paint	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated
Panel dimensions (mm)[1]	960x960mm	960x960mm	960x960mm	960x960mm	1024x1024mm	960x960mm
IP level	IP67 front, IP54 rear	IP67 front, IP54 rear	IP67 front, IP54 rear	IP67 front, IP54 rear	IP67 front, IP54 rear	IP67 front, IP54 rear
Panel weight	<50kg	<50kg	<50kg	<50kg	<50kg	<50kg
Panel resolution	312x312px	240x240px	192x192px	160x160px	128x128px	96x96px
Pixel density (pcs/sqm)	105.625	62.500	40.000	27.556	15.625	10.000
Viewing angle (horizontal x vertical)	>120°x80°	>120°x80°	>120°x80°	>120° x 80°	>120°x80°	>120°x80°
Minimum viewing distance	>3m	>4m	>5m	>6m	>8m	>10m
Operating temperature range	-15C ~ +45C	-15C ~ +45C	-15C ~ +45C	-15C ~ +45C	-15C ~ +45C	-15C ~ +45C
Storage temperature range	-40C ~ +60C	-40C ~ +60C	-40C ~ +60C	-40C ~ +60C	-40C ~ +60C	-40C ~ +60C
Operating humidity	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%
Power input voltage	110~240 VAC	110~240 VAC	110~240 VAC	110 ~ 240 VAC	110~240 VAC	110~240 VAC
Power input frequency	50~60 Hz	50~60 Hz	50~60 Hz	50 ~ 60 Hz	50~60 Hz	50~60 Hz
Average power per sqm	<150W	<150W	<150W	<150W	<150W	<150W
Max power per sqm	<650W	<650W	<650W	<650W	<650W	<650W
Active PFC	YES	YES	YES	YES	YES	YES
Load tolerance[2]	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.
Panel installation type	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation
Cooling	Internal fan	Internal fan	Internal fan	Internal fan	Internal fan	Internal fan
Other						
Max input resolution	>2K	>2K	>2K	>2K	>2K	>2K
Standard video sources[3]	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI
Other direct video sources	Optional	Optional	Optional	Optional	Optional	Optional
Brightness adjustment	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual
Death pixel monitoring	Optional	Optional	Optional	Optional	Optional	Optional
Module monitoring	YES	YES	YES	YES	YES	YES
Temperature monitoring	YES	YES	YES	YES	YES	YES
Smoke monitoring	Optional	Optional	Optional	Optional	Optional	Optional
Voltage monitoring	YES	YES	YES	YES	YES	YES
Power redundancy	N/A	N/A	N/A	N/A	N/A	N/A
Signal path backup	YES	YES	YES	YES	YES	YES
Signal transmission	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic
Standby scheduling	YES	YES	YES	YES	YES	YES
Power on/off scheduling	Optional	Optional	Optional	Optional	Optional	Optional
Power saving mode	YES	YES	YES	YES	YES	YES
Certification	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS
Options						
LED brand[4]	Optional	Optional	Optional	Optional	Optional	Optional
LED surface color	Black	Black	Black	Black	Black	Black

1- Panel dimensions can change upon customer request
2- That value is the remain capacity of PSU's at 100% brightness and white color content
3- Different types of video input available as option
4- Available LED options are CREE [/CR], NICHIA [/NC], EVERLIGHT [/EV], MULTICOLOR [/MC], NATIONSTAR [/NS]. Please check order code for details.

Front Access | Lightweight | Slim | Temp Monitoring | Smoke Monitoring | Voltage Monitoring | Remote Control | Easy To Install | Wide Angle | High Refresh Rate | Transparent | Noiseless | Calibration | Pixel Detection | Fanless

Apron Teknoloji AS. reserves the right to change any product specification, discontinue of any product or services without prior notice

LEDECA®

CITYLINE

OUTDOOR LED SCREENS FOR DIGITAL OUT-OF-HOME MESSAGING AT HIGH GRADE PROJECTS

INDUSTRY ZONE
ANKARA / TURKEY

New generation cost effective led screen panel design for outdoor use

Right choice for DOOH media screen installations

Lightweight for easy adaptation and low cost framework design

Production level calibration for best color uniformity

MALL OF ISTANBUL
ISTANBUL / TURKEY

LEDECA
www.ledeca.com

	SMART LDSOSP02.9CL	SMART LDSOSP03.9CL	SMART LDSOSP04.8CL	SMART LDSOSP06.6CL	SMART LDSOSP10.0CL	SMART LDSOSP16.0CL
General						
Operating environment	outdoor	outdoor	outdoor	outdoor	outdoor	outdoor
Pixel pitch	2.9mm	3.9mm	4.8mm	6.6mm	10mm	16mm
Service type	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access
Calibrated brightness (nits)	>5.500nits	>5.500nits	>5.500nits	>7.000nits	>7.000nits	>7.000nits
Lamp type	SMD	SMD	SMD	SMD	SMD	SMD
Lifespan (hours at %50 brightness)	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours
White color calibration (adj.)	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K
Gray scale	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits
Brightness control	256 level	256 level	256 level	256 level	256 level	256 level
Module Specifications						
Module dimensions (mm)	250x500	250x500	250x500	320x320	320x320	320x320
Refresh frequency	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable
Module resolution	86*172	64x128px	52x104px	48x48px	32x32px	20x20px
LED drive method	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic
Module material	plastic (PC)	aluminum	aluminum	plastic (PC)	plastic (PC)	plastic (PC)
Module type	sealed	sealed	sealed	sealed	sealed	sealed
PCB type	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer
PCB surface coating	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal
Panel Specifications						
Panel material	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Panel paint	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated
Panel dimensions (mm)[1]	500x1000	500x1000	500x1000	960x960mm	960x960mm	960x960mm
IP level	IP65 front, IP54 rear	IP65 front, IP54 rear	IP65 front, IP54 rear	IP67 front and rear	IP67 front and rear	IP67 front and rear
Panel weight	<30kg	<30kg	<30kg	<30kg	<30kg	<30kg
Panel resolution	168x336px	128x256px	104x208px	144x144px	96x96px	60x60px
Pixel density (pcs/sqm)	112.896	65.536	43.264	22.500	10.000	4.096
Viewing angle (horizontal x vertical)	>120° x 80°	>120° x 120°	>120° x 120°	>120°x80°	>120°x80°	>120°x80°
Minimum viewing distance	>3m	>4m	>5m	>6m	>10m	>16m
Operating temperature range	-10C ~ +40C	-10C ~ +40C	-10C ~ +40C	-20C ~ +50C	-20C ~ +50C	-20C ~ +50C
Storage temperature range	-40C ~ +60C	-20C ~ +60C	-20C ~ +60C	-40C ~ +60C	-40C ~ +60C	-40C ~ +60C
Operating humidity	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%
Power input voltage	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110~240VAC	110~240VAC	110~240VAC
Power input frequency	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50~60 Hz	50~60 Hz	50~60 Hz
Average power per sqm	<150W	<150W	<150W	<150W	<150W	<150W
Max power per sqm	<650W	<650W	<650W	<650W	<650W	<650W
Active PFC	YES	YES	YES	YES	YES	YES
Load tolerance[2]	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.
Panel installation type	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation
Cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling
Other						
Max input resolution	>2K	>2K	>2K	>2K	>2K	>2K
Standard video sources[3]	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI
Other direct video sources	Optional	Optional	Optional	Optional	Optional	Optional
Brightness adjustment	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual
Death pixel monitoring	Optional	Optional	Optional	Optional	Optional	Optional
Module monitoring	YES	YES	YES	YES	YES	YES
Temperature monitoring	YES	YES	YES	YES	YES	YES
Smoke monitoring	Optional	Optional	Optional	Optional	Optional	Optional
Voltage monitoring	YES	YES	YES	YES	YES	YES
Power redundancy	N/A	N/A	N/A	N/A	Optional	Optional
Signal path backup	YES	YES	YES	YES	YES	YES
Signal transmission	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic
Standby scheduling	YES	YES	YES	YES	YES	YES
Power on/off scheduling	Optional	Optional	Optional	Optional	Optional	Optional
Power saving mode	YES	YES	YES	YES	YES	YES
Certification	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS
Options						
LED brand[4]	Optional	Optional	Optional	Optional	Optional	Optional
LED surface color	Black	Black	Black	Black	Black	Black

1- Panel dimensions can change upon customer request
2- That value is the remain capacity of PSU's at 100% brightness and white color content
3- Different types of video input available as option
4- Available LED options are CREE [/CR], NICHIA [/NC], EVERLIGHT [/EV], MULTICOLOR [/MC], NATIONSTAR [/NS]. Please check order code for details.

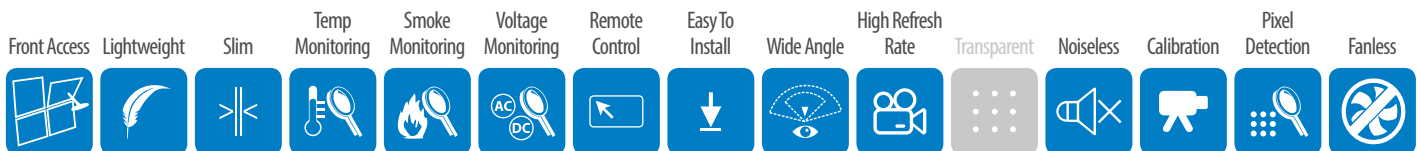| Front Access	Lightweight	Slim	Temp Monitoring	Smoke Monitoring	Voltage Monitoring	Remote Control	Easy To Install	Wide Angle	High Refresh Rate	Transparent	Noiseless	Calibration	Pixel Detection	Fanless

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Right choice for DOOH media screen installations

Lightweight for easy adaptation and low cost framework design

Production level calibration for best color uniformity

OUTDOOR ADVERTISEMENT
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	ARMOUR LDAOSP04.8CL	ARMOUR LDAOSP05.9CL	ARMOUR LDAOSP07.8CL	ARMOUR LDAOSP10.4CL	ARMOUR LDAOSP15.6CL
General					
Operating environment	outdoor	outdoor	outdoor	outdoor	outdoor
Pixel pitch	4.8mm	5.95mm	7.81mm	10.41mm	15.6mm
Service type	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access
Calibrated brightness (nits)	>7.000nits	>7.000nits	>7.000nits	>7.000nits	>7.000nits
Lamp type	SMD	SMD	SMD	SMD	SMD
Lifespan (hours at %50 brightness)	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours
White color calibration (adj.)	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K
Gray scale	>16bits	>16bits	>16bits	>16bits	>16bits
Brightness control	256 level	256 level	256 level	256 level	256 level
Module Specifications					
Module dimensions (mm)	250x250	250x250	250x250	250x250	250x250
Refresh frequency	adjustable	adjustable	adjustable	adjustable	adjustable
Module resolution	52x52px	42x42px	32x32px	24x24px	16x16px
LED drive method	dynamic	dynamic	dynamic	dynamic	dynamic
Module material	plastic (PC+FG)	plastic (PC+FG)	plastic (PC+FG)	plastic (PC+FG)	plastic (PC+FG)
Module type	sealed	sealed	sealed	sealed	sealed
PCB type	multilayer	multilayer	multilayer	multilayer	multilayer
PCB surface coating	humiseal	humiseal	humiseal	humiseal	humiseal
Panel Specifications					
Panel material	aluminum	aluminum	aluminum	aluminum	aluminum
Panel paint	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated
Panel dimensions (mm)[1]	1000x1000	1000x1000	1000x1000	1000x1000	1000x1000
IP level	IP67 front, IP65 rear	IP67 front, IP65 rear	IP67 front, IP65 rear	IP67 front, IP65 rear	IP67 front, IP65 rear
Panel weight	<45kg	<45kg	<45kg	<45kg	<45kg
Panel resolution	208x208px	168x168px	128x128px	96x96px	64x64px
Pixel density (pcs/sqm)	43.264	28.224	16.384	9.216	4.096
Viewing angle (horizontal x vertical)	>160° x 140°	>160° x 140°	>160° x 140°	>160° x 140°	>160° x 140°
Minimum viewing distance	>4m	>5m	>7m	>10m	>15m
Operating temperature range	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C
Storage temperature range	-25C ~ +60C	-25C ~ +60C	-25C ~ +60C	-25C ~ +60C	-25C ~ +60C
Operating humidity	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%
Power input voltage	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC
Power input frequency	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz
Average power per sqm	<120W	<120W	<120W	<120W	<120W
Max power per sqm	<600W	<600W	<600W	<600W	<600W
Active PFC	YES	YES	YES	YES	YES
Load tolerance[2]	25% min.	25% min.	25% min.	25% min.	25% min.
Panel installation type	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation
Cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling
Other					
Max input resolution	>2K	>2K	>2K	>2K	>2K
Standard video sources[3]	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI
Other direct video sources	Optional	Optional	Optional	Optional	Optional
Brightness adjustment	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual
Death pixel monitoring	Optional	Optional	Optional	Optional	Optional
Module monitoring	YES	YES	YES	YES	YES
Temperature monitoring	YES	YES	YES	YES	YES
Smoke monitoring	Optional	Optional	Optional	Optional	Optional
Voltage monitoring	YES	YES	YES	YES	YES
Power redundancy	N/A	N/A	N/A	N/A	N/A
Signal path backup	YES	YES	YES	YES	YES
Signal transmission	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic
Standby scheduling	YES	YES	YES	YES	YES
Power on/off scheduling	Optional	Optional	Optional	Optional	Optional
Power saving mode	YES	YES	YES	YES	YES
Certification	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS
Options					
LED brand[4]	Optional	Optional	Optional	Optional	Optional
LED surface color	Black	Black	Black	Black	Black

1- Panel dimensions can change upon customer request
2- That value is the remain capacity of PSU's at 100% brightness and white color content
3- Different types of video input available as option
4- Available LED options are CREE [/CR], NICHIA [/NC], EVERLIGHT [/EV], MULTICOLOR [/MC], NATIONSTAR [/NS]. Please check order code for details.

Front Access | Lightweight | Slim | Temp Monitoring | Smoke Monitoring | Voltage Monitoring | Remote Control | Easy To Install | Wide Angle | High Refresh Rate | Transparent | Noiseless | Calibration | Pixel Detection | Fanless

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Easy to install, easy to adaptation, easy to connect DS network

Production level calibration for best color uniformity

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	COMPACT	COMPACT	COMPACT	COMPACT
	LDCISP01.6GA	LDCISP02.0GA	LDCISP02.5GA	LDCISP03.0GA
General				
Operating environment	indoor	indoor	indoor	indoor
Pixel pitch	1.66mm	2mm	2.5mm	3mm
Service type	front or rear access	front or rear access	front or rear access	front and rear access
Calibrated brightness (nits)	>1.000nits	>1.000nits	>1.000nits	>1.000nits
Lamp type	SMD	SMD	SMD	SMD
Lifespan (hours at %50 brightness)	>100.000hours	>100.000hours	>100.000hours	>100.000hours
White color calibration (adj.)	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K
Gray scale	>16bits	>16bits	>16bits	>16bits
Brightness control	256 level	256 level	256 level	256 level
Module Specifications				
Module dimensions (mm)	320x160	320x160	320x160	320x160
Refresh frequency	adjustable	adjustable	adjustable	adjustable
Module resolution	192x96px	160x80px	128x64px	104x52px
LED drive method	dynamic	dynamic	dynamic	dynamic
Module material	plastic (PC)	plastic (PC)	plastic (PC)	plastic (PC)
Module type	apparent	apparent	apparent	apparent
PCB type	multilayer	multilayer	multilayer	multilayer
PCB surface coating	humiseal	humiseal	humiseal	humiseal
Panel Specifications				
Panel material	aluminium	aluminium	aluminium	aluminium
Panel paint	ES powder coated	ES powder coated	ES powder coated	ES powder coated
Panel dimensions (mm)[1]	960x960	960x960	960x960	960x960
IP level	IP21 front and rear	IP21 front and rear	IP21 front and rear	IP21 front and rear
Panel weight	<30kg	<30kg	<30kg	<30kg
Panel resolution	576x576px	480x480px	384x384px	312x312px
Pixel density (pcs/sqm)	360.000	250.000	160.000	105.625
Viewing angle (horizontal x vertical)	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°
Minimum viewing distance	>2m	>2m	>3m	>3m
Operating temperature range	-15C ~ +50C	-15C ~ +50C	-15C ~ +50C	-15C ~ +50C
Storage temperature range	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C
Operating humidity	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%
Power input voltage	110 ~ 240 VAC	110~240 VAC	110~240 VAC	110~240 VAC
Power input frequency	50 ~ 60 Hz	50~60 Hz	50~60 Hz	50~60 Hz
Average power per sqm	<120W	<120W	<120W	<120W
Max power per sqm	<600W	<600W	<600W	<600W
Active PFC	YES	YES	YES	YES
Load tolerance[2]	25% min.	25% min.	25% min.	25% min.
Panel installation type	Fixed installation	Fixed installation	Fixed installation	Fixed installation
Cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling
Other				
Max input resolution	>2K	>2K	>2K	>2K
Standard video sources[3]	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI
Other direct video sources	Optional	Optional	Optional	Optional
Brightness adjustment	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual
Death pixel monitoring	Optional	Optional	Optional	Optional
Module monitoring	YES	YES	YES	YES
Temperature monitoring	YES	YES	YES	YES
Smoke monitoring	Optional	Optional	Optional	Optional
Voltage monitoring	YES	YES	YES	YES
Power redundancy	N/A	N/A	N/A	N/A
Signal path backup	YES	YES	YES	YES
Signal transmission	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic
Standby scheduling	YES	YES	YES	YES
Power on/off scheduling	Optional	Optional	Optional	Optional
Power saving mode	YES	YES	YES	YES
Certification	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS
Options				
LED brand[4]	Optional	Optional	Optional	Optional
LED surface color	Black	Black	Black	Black

1- Panel dimensions can change upon customer request
2- That value is the remain capacity of PSU's at 100% brightness and white color content
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Front Access	Lightweight	Slim	Temp Monitoring	Smoke Monitoring	Voltage Monitoring	Remote Control	Easy To Install	Wide Angle	High Refresh Rate	Transparent	Noiseless	Calibration	Pixel Detection	Fanless

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Production level calibration for best color uniformity

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VIENNA / AUSTRIA

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	SMART	SMART	SMART	SMART	SMART	SMART	SMART
	LDSISP01.9GA	LDSISP02.6GA	LDSISP02.9GA	LDSISP03.1GA	LDSISP03.9GA	LDSISP04.8GA	LDSISP05.9GA
General							
Operating environment	indoor	indoor	indoor	indoor	indoor	**semi outdoor**	**semi outdoor**
Pixel pitch	1.9mm	2.6mm	2.9mm	3.1mm	3.9mm	4.8mm	5.9mm
Service type	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access
Calibrated brightness (nits)	>1.000nits	>1.000nits	>1.000nits	>1.000nits	>1.000nits	>4.000nits	>4.000nits
Lamp type	SMD	SMD	SMD	SMD	SMD	SMD	SMD
Lifespan (hours at %50 brightness)	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours
White color calibration (adj.)	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K
Gray scale	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits
Brightness control	256 level	256 level	256 level	256 level	256 level	256 level	256 level
Module Specifications							
Module dimensions (mm)	250x250	250x250	250x500	250x250	250x250	250x500	250x500
Refresh frequency	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable
Module resolution	128x128px	96x96px	84x168px	80x80px	64x64px	52x104px	42x84px
LED drive method	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic
Module material	plastic (PC)	plastic (PC)	plastic (PC)	plastic (PC)	plastic (PC)	plastic (PC)	plastic (PC)
Module type	sealed	sealed	sealed	sealed	sealed	sealed	sealed
PCB type	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer
PCB surface coating	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal
Panel Specifications							
Panel material	aluminium	aluminium	aluminium	aluminium	aluminium	aluminium	aluminium
Panel paint	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated
Panel dimensions (mm)[1]	500x500	500x1.000	500x1.000	500x1.000	500x1.000	500x1000	500x1000
IP level	IP21 front and rear	IP21 front and rear	IP21 front and rear	IP44 front and rear	IP44 front and rear	IP44 front and rear	IP44 front and rear
Panel weight	<12kg	<15kg	<15kg	<15kg	<15kg	<15kg	<15kg
Panel resolution	256x256px	192x384px	168x336px	160x320px	128x256px	104x208px	84x168px
Pixel density (pcs/sqm)	262.144	147.456	112.896	102.400	65.536	43.264	28.224
Viewing angle (horizontal x vertical)	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>160° x 140°
Minimum viewing distance	>2m	>2m	>3m	>3m	>3m	>4m	>5m
Operating temperature range	-15C ~ +50C	-15C ~ +50C	-15C ~ +50C	-15C ~ +50C	-15C ~ +50C	-15C ~ +50C	-20C ~ +50C
Storage temperature range	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-25C ~ +60C
Operating humidity	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%
Power input voltage	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110~240VAC	110 ~ 240 VAC	110 ~ 240 VAC
Power input frequency	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50~60 Hz	50 ~ 60 Hz	50 ~ 60 Hz
Average power per sqm	<120W	<120W	<120W	<120W	<120W	<120W	<120W
Max power per sqm	<600W	<600W	<600W	<600W	<600W	<600W	<600W
Active PFC	YES	YES	YES	YES	YES	YES	YES
Load tolerance[2]	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.
Panel installation type	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation
Cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling
Other							
Max input resolution	>2K	>2K	>2K	>2K	>2K	>2K	>2K
Standard video sources[3]	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI
Other direct video sources	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Brightness adjustment	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual
Death pixel monitoring	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Module monitoring	YES	YES	YES	YES	YES	YES	YES
Temperature monitoring	YES	YES	YES	YES	YES	YES	YES
Smoke monitoring	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Voltage monitoring	YES	YES	YES	YES	YES	YES	YES
Power redundancy	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Signal path backup	YES	YES	YES	YES	YES	YES	YES
Signal transmission	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic
Standby scheduling	YES	YES	YES	YES	YES	YES	YES
Power on/off scheduling	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Power saving mode	YES	YES	YES	YES	YES	YES	YES
Certification	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS
Options							
LED brand[4]	Optional	Optional	Optional	Optional	Optional	Optional	Optional
LED surface color	Black	Black	Black	Black	Black	Black	Black

1- Panel dimensions can change upon customer request
2- That value is the remain capacity of PSU's at 100% brightness and white color content
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Front Access | Lightweight | Slim | Temp Monitoring | Smoke Monitoring | Voltage Monitoring | Remote Control | Easy To Install | Wide Angle | High Refresh Rate | Transparent | Noiseless | Calibration | Pixel Detection | Fanless

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	COMPACT	COMPACT	COMPACT	COMPACT	SMART	SMART	SMART	SMART
	LDCISP01.2UL	LDCISP01.5UL	LDCISP01.9UL	LDCISP02.5UL	LDSISP01.2UL	LDSISP01.4UL	LDSISP01.5UL	LDSISP01.8UL
General								
Operating environment	indoor	indoor	indoor	indoor	indoor	indoor	indoor	indoor
Pixel pitch	1.27mm	1.58mm	1.9mm	2.54mm	1.25mm	1.45mm	1.56mm	1.87mm
Service type	front or rear access	front or rear access	front or rear access	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access
Calibrated brightness (nits)	>700nits	>700nits	>700nits	>700nits	>700nits	>700nits	>700nits	>700nits
Lamp type	SMD	SMD	SMD	SMD	SMD	SMD	SMD	SMD
Lifespan (hours at %50 brightness)	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours
White color calibration (adj.)	3.000K~8.500K	3.000K~8.500K	3.000K~8.500K	3.000K~8.500K	3.000K~8.500K	3.000K~8.500K	3.000K~8.500K	3.000K~8.500K
Gray scale	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits
Brightness control	256 level	256 level	256 level	256 level	256 level	256 level	256 level	256 level
Module Specifications								
Module dimensions (mm)	304.94x343.08	304.94x343.08	304.94x343.08	304.94x343.08	300x168.75	300x168.75	300x168.75	300x168.75
Refresh frequency	>3840Hz	>3840Hz	>3840Hz	>3840Hz	>3800Hz	>3800Hz	>3800Hz	>3840Hz
Module resolution	240x270px	192x216px	160x180px	120x135px	240x135px	206x116px	192x108px	160x90px
LED drive method	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic
Module material	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Module type	apparent	apparent	apparent	apparent	apparent	apparent	apparent	apparent
PCB type	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer
PCB surface coating	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal
Panel Specifications								
Panel material	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Panel paint	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated
Panel dimensions (mm)[1]	609.92x343.08	609.92x343.08	609.92x343.08	609.92x343.08	600x337.5	600x337.5	600x337.5	600x337.5
Diagonal length (inch)	27.5"	27.5"	27.5"	27.5"	27"	27"	27"	27"
Panel weight	<8kg	<8kg	<8kg	<8kg	<7kg	<7kg	<7kg	<7kg
Panel resolution	480x270px	384x216px	320x180px	240x135px	480x270px	412x232px	384x216px	320x180px
Pixel density (pcs/sqm)	628.849	400.000	276.676	154.500	640.000	480.000	409.600	276.676
Viewing angle (horizontal x vertical)	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°
Minimum viewing distance	>1.2m	>1.5m	>1.9m	>2.5m	>1.2m	>1.4m	>1.5m	>1.8m
Operating temperature range	0C ~ +50C	0C ~ +50C	0C ~ +50C	0C ~ +50C	0C ~ +50C	0C ~ +50C	0C ~ +50C	0C ~ +50C
Storage temperature range	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C
Operating humidity	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%
Power input voltage	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC
Power input frequency	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz
Average power per sqm	<120W	<120W	<120W	<120W	<120W	<120W	<120W	<120W
Max power per sqm	<600W	<600W	<600W	<600W	<600W	<600W	<600W	<600W
Active PFC	YES	YES	YES	YES	YES	YES	YES	YES
Load tolerance[2]	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.
Panel installation type	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation
Cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling
Other								
Max input resolution	>2K	>2K	>2K	>2K	>2K	>2K	>2K	>2K
Standard video sources[3]	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI
Other direct video sources	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Brightness adjustment	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual
Death pixel monitoring	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Module monitoring	YES	YES	YES	YES	YES	YES	YES	YES
Temperature monitoring	YES	YES	YES	YES	YES	YES	YES	YES
Smoke monitoring	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Voltage monitoring	YES	YES	YES	YES	YES	YES	YES	YES
Power redundancy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Signal path backup	YES	YES	YES	YES	YES	YES	YES	YES
Signal transmission	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic
Standby scheduling	YES	YES	YES	YES	YES	YES	YES	YES
Power on/off scheduling	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Power saving mode	YES	YES	YES	YES	YES	YES	YES	YES
Certification	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS
Options								
LED brand[4]	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
LED surface color	Black	Black	Black	Black	Black	Black	Black	Black

1- Panel dimensions can change upon customer request
2- That value is the remain capacity of PSU's at 100% brightness and white color content
3- Different types of video input available as option
4- Available LED options are CREE [/CR], NICHIA [/NC], EVERLIGHT [/EV], MULTICOLOR [/MC], NATIONSTAR [/NS]. Please check order code for details.

Front Access · Lightweight · Slim · Temp Monitoring · Smoke Monitoring · Voltage Monitoring · Remote Control · Easy To Install · Wide Angle · High Refresh Rate · Transparent · Noiseless · Calibration · Pixel Detection · Fanless

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TECHNICAL SPECIFICATIONS

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HIGHEST STABILITY, MAXIMUM PERFORMANCE INDOOR LED SCREENS FOR HIGH GRADE & HIGH RESOLUTION LED WALS

ANKARA BROADCAST STUDIO
ANKARA / TURKEY

Ultra quality for ultra high definition requirements

Optimized for broadcast studio installations

Fanless design without noice

Super high gray scale and refresh rate

High reliability and stability for 7/24 operation

Special mask design to reduce moir effect in broadcast studio projects

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	ARMOUR	ARMOUR	ARMOUR	ARMOUR	QUATRO	QUATRO	QUATRO	QUATRO
	LDAISP00.9UL	LDAISP01.2UL	LDAISP01.5UL	LDAISP01.9UL	LDQISP00.9UL	LDQISP01.1UL	LDQISP01.5UL	LDQISP01.9UL
General								
Operating environment	indoor	indoor	indoor	indoor	indoor	indoor	indoor	indoor
Pixel pitch	0.95mm	1.27mm	1.58mm	1.9mm	0.95mm	1.19mm	1.58mm	1.9mm
Service type	front or rear access	front or rear access	front or rear access	front or rear access	front or rear access	front or rear access	front or rear access	front or rear access
Calibrated brightness (nits)	>700nits	>700nits	>700nits	>700nits	>700nits	>700nits	>700nits	>700nits
Lamp type	SMD	SMD	SMD	SMD	SMD	SMD	SMD	SMD
Lifespan (hours at %50 brightness)	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours
White color calibration (adj.)	3.000K~8.500K	3.000K~8.500K	3.000K~8.500K	3.000K~8.500K	3.000K~8.500K	3.000K~8.500K	3.000K~8.500K	3.000K~8.500K
Gray scale	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits
Brightness control	256 level	256 level	256 level	256 level	256 level	256 level	256 level	256 level
Module Specifications								
Module dimensions (mm)	304.94x343.08	304.94x343.08	304.94x343.08	304.94x343.08	304.94x343.08	304.94x343.08	304.94x343.08	304.94x343.08
Refresh frequency	>3840Hz	>3840Hz	>3840Hz	>3840Hz	>3840Hz	>3840Hz	>3840Hz	>3840Hz
Module resolution	320x360px	240x270px	192x216px	160x180px	320x360px	256x288px	192x216px	160x180px
LED drive method	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic
Module material	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Module type	apparent	apparent	apparent	apparent	apparent	apparent	apparent	apparent
PCB type	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer
PCB surface coating	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal
Panel Specifications								
Panel material	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Panel paint	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated
Panel dimensions (mm)[1]	609.92x343.08	609.92x343.08	609.92x343.08	609.92x343.08	609.92x343.08	609.92x343.08	609.92x343.08	609.92x343.08
Diagonal length (inch)	27.5"	27.5"	27.5"	27.5"	27.5"	27.5"	27.5"	27.5"
Panel weight	<8kg	<8kg	<8kg	<8kg	<8kg	<8kg	<8kg	<8kg
Panel resolution	640x360px	480x270px	384x216px	320x180px	640x360px	512x288px	384x216px	320x180px
Pixel density (pcs/sqm)	1.106.704	628.849	400.000	276.676	1.106.704	705.600	400.000	276.676
Viewing angle (horizontal x vertical)	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°
Minimum viewing distance	>1m	>1.2m	>1.5m	>1.9m	>1m	>1.2m	>1.5m	>1.9m
Operating temperature range	0C ~ +50C	0C ~ +50C	0C ~ +50C	0C ~ +50C	0C ~ +50C	0C ~ +50C	0C ~ +50C	0C ~ +50C
Storage temperature range	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C
Operating humidity	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%
Power input voltage	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC
Power input frequency	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz
Average power per sqm	<120W	<120W	<120W	<120W	<120W	<120W	<120W	<120W
Max power per sqm	<600W	<600W	<600W	<600W	<600W	<600W	<600W	<600W
Active PFC	YES	YES	YES	YES	YES	YES	YES	YES
Load tolerance[2]	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.
Panel installation type	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation
Cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling
Other								
Max input resolution	>2K	>2K	>2K	>2K	>2K	>2K	>2K	>2K
Standard video sources[3]	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI
Other direct video sources	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Brightness adjustment	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual
Death pixel monitoring	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Module monitoring	YES	YES	YES	YES	YES	YES	YES	YES
Temperature monitoring	YES	YES	YES	YES	YES	YES	YES	YES
Smoke monitoring	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Voltage monitoring	YES	YES	YES	YES	YES	YES	YES	YES
Power redundancy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Signal path backup	YES	YES	YES	YES	YES	YES	YES	YES
Signal transmission	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic
Standby scheduling	YES	YES	YES	YES	YES	YES	YES	YES
Power on/off scheduling	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Power saving mode	YES	YES	YES	YES	YES	YES	YES	YES
Certification	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS
Options								
LED brand[4]	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
LED surface color	Black	Black	Black	Black	Black	Black	Black	Black

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Front Access | Lightweight | Slim | Temp Monitoring | Smoke Monitoring | Voltage Monitoring | Remote Control | Easy To Install | Wide Angle | High Refresh Rate | Transparent | Noiseless | Calibration | Pixel Detection | Fanless

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	COMPACT	COMPACT	SMART	SMART	COMPACT	COMPACT	SMART	SMART
	LDCISP06.0AR	LDCISP08.0AR	LDSISP06.2AR	LDSISP08.3AR	LDCOSP08.0AR	LDCOSP10.0AR	LDSOSP10.0AR	LDSOSP12.5AR
General								
Operating environment	indoor	indoor	indoor	indoor	outdoor	outdoor	outdoor	outdoor
Pixel pitch	6mm	8mm	6.2mm	8.3mm	8mm	10mm	10mm	12.5mm
Service type	rear access	rear access	front and rear access	front and rear access	rear access	rear access	front and rear access	front and rear access
Calibrated brightness (nits)	>1.500nits	>1.500nits	>1.500nits	>1.500nits	>6.500nits	>6.500nits	>7.000nits	>7.000nits
Lamp type	SMD	SMD	SMD	SMD	SMD	SMD	SMD	SMD
Lifespan (hours at %50 brightness)	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours
White color calibration (adj.)	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K
Gray scale	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits
Brightness control	256 level	256 level	256 level	256 level	256 level	256 level	256 level	256 level
Module Specifications								
Module dimensions (mm)	192x192mm	256x128	200x400	200x400	320x320	320x160	300x300	300x300
Refresh frequency	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable
Module resolution	32x32px	32x16px	32x64px	24x48px	40x40px	32x16px	30x30px	24x24
LED drive method	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic
Module material	plastic (PC)	plastic (PC)	plastic (PC)	plastic (PC)	plastic (PC)	plastic (PC)	plastic (PC)	plastic (PC)
Module type	apparent	apparent	sealed	sealed	apparent	apparent	sealed	sealed
PCB type	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer
PCB surface coating	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal
Panel Specifications								
Panel material	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Panel paint	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated
Panel dimensions (mm)[1]	960x960	1280x896	1200x800	1200x800	960x960	1280x960	1200x900	1200x900
Diagonal length (inch)	IP22 front and rear	IP22 front and rear	IP22 front and rear	IP22 front and rear	IP67 front and IP54 rear	IP67 front and IP54 rear	IP67 front and rear	IP67 front and rear
Panel weight	<40kg	<40kg	<40kg	<40kg	<40kg	<40kg	<40kg	<40kg
Panel resolution	160x160	160x112	192x128	144x96	120x120	128x96	120x90	96x72
Pixel density (pcs/sqm)	27.550	15.625	25.600	14.400	27.550	10.000	10.000	6.400
Viewing angle (horizontal x vertical)	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°
Minimum viewing distance	>6m	>8m	>6m	>8m	>8m	>10m	>10m	>12m
Operating temperature range	0C ~ +50C	0C ~ +50C	0C ~ +50C	0C ~ +50C	-15C ~ +50C	-15C ~ +50C	-15C ~ +50C	-15C ~ +50C
Storage temperature range	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C
Operating humidity	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%
Power input voltage	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC
Power input frequency	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz
Average power per sqm	<120W	<120W	<120W	<120W	<120W	<120W	<120W	<120W
Max power per sqm	<600W	<600W	<600W	<600W	<600W	<600W	<600W	<600W
Active PFC	YES	YES	YES	YES	YES	YES	YES	YES
Load tolerance[2]	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.
Panel installation type	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation
Cooling	Internal fan	Internal fan	Passive cooling	Passive cooling	Internal fan	Internal fan	Passive cooling	Passive cooling
Other								
Max input resolution	>4K	>4K	>4K	>4K	>4K	>4K	>4K	>4K
Standard video sources[3]	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI
Other direct video sources	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Brightness adjustment	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual
Death pixel monitoring	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Module monitoring	YES	YES	YES	YES	YES	YES	YES	YES
Temperature monitoring	YES	YES	YES	YES	YES	YES	YES	YES
Smoke monitoring	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Voltage monitoring	YES	YES	YES	YES	YES	YES	YES	YES
Power redundancy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Signal path backup	YES	YES	YES	YES	YES	YES	YES	YES
Signal transmission	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic
Standby scheduling	YES	YES	YES	YES	YES	YES	YES	YES
Power on/off scheduling	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Power saving mode	YES	YES	YES	YES	YES	YES	YES	YES
Certification	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS
Options								
LED brand[4]	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
LED surface color	Black	Black	Black	Black	Black	Black	Black	Black

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Front Access   Lightweight   Slim   Temp Monitoring   Smoke Monitoring   Voltage Monitoring   Remote Control   Easy To Install   Wide Angle   High Refresh Rate   Transparent   Noiseless   Calibration   Pixel Detection   Fanless

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Lightweight for easy adaptation and low cost framework design

Improved mask structure that increases viewing angle

Special framework design and production available

ISE 2019 LEDECA BOOTH
AMSTERDAM / NETHERLAND

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	COMPACT	COMPACT	COMPACT	SMART	SMART	SMART	SMART	SMART
	LDCISP02.6FF	LDCISP03.2FF	LDCISP04.0FF	LDSISP01.8FF	LDSISP02.5FF	LDSISP03.0FF	LDSISP04.0FF	LDSOSP04.8FF
General								
Operating environment	indoor	indoor	indoor	indoor	indoor	indoor	indoor	outdoor
Pixel pitch	2.66mm	3.2mm	4.0mm	1.8mm	2.5mm	3.0mm	4.0mm	4.8mm
Service type	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access
Calibrated brightness (nits)	>800nits	>800nits	>800nits	>800nits	>800nits	>800nits	>1.000nits	>5.000nits
Lamp type	SMD	SMD	SMD	SMD	SMD	SMD	SMD	SMD
Lifespan (hours at %50 brightness)	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours
White color calibration (adj.)	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K
Gray scale	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits
Brightness control	256 level	256 level	256 level	256 level	256 level	256 level	256 level	256 level
Module Specifications								
Module dimensions (mm)	320x256	320x256	320x256	270x120	240x120	240x120	240x120	230.4x192
Refresh frequency	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable
Module resolution	120x96px	100x80px	80x64px	144x64px	96x48px	80x40px	60x30px	48x40px
LED drive method	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic
Module material	plastic (el.)	plastic (el.)	plastic (el.)	plastic (el.)	plastic (el.)	plastic (el.)	plastic (el.)	plastic (el.)
Module type	freeform	freeform	freeform	freeform	freeform	freeform	freeform	freeform
PCB type	multilayer thin film	multilayer thin film	multilayer thin film	multilayer thin film	multilayer thin film	multilayer thin film	multilayer thin film	multilayer thin film
PCB surface coating	tape film	tape film	tape film	tape film	tape film	tape film	tape film	tape film
Panel Specifications								
Panel material	steel	steel	steel	steel	steel	steel	steel	steel
Panel paint	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated
Panel dimensions (mm)[1]	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable
IP level	IP22 front and rear	IP22 front and rear	IP22 front and rear	IP22 front and rear	IP22 front and rear	IP22 front and rear	IP22 front and rear	IP67 front & IP54 rear
Minimum curving diameter (mm)	840	840	840	350	350	350	350	350
Panel resolution	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable
Pixel density (pcs/sqm)	147.456	97.656	62.500	284.444	160.000	111.111	62.500	43.264
Viewing angle (horizontal x vertical)	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°
Minimum viewing distance	>2.5m	>3m	>4m	>2m	>2m	>3m	>4m	>5m
Operating temperature range	0C ~ +50C	0C ~ +50C	0C ~ +50C	0C ~ +50C	0C ~ +50C	0C ~ +50C	0C ~ +50C	-20C ~ +50C
Storage temperature range	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C
Operating humidity	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%
Power input voltage	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC
Power input frequency	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz
Average power per sqm	<120W	<120W	<120W	<120W	<120W	<120W	<120W	<120W
Max power per sqm	<600W	<600W	<600W	<600W	<600W	<600W	<600W	<600W
Active PFC	YES	YES	YES	YES	YES	YES	YES	YES
Load tolerance[2]	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.
Panel installation type	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation
Cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling
Other								
Max input resolution	>2K	>2K	>2K	>2K	>2K	>2K	>2K	>2K
Standard video sources[3]	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI
Other direct video sources	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Brightness adjustment	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual
Death pixel monitoring	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Module monitoring	YES	YES	YES	YES	YES	YES	YES	YES
Temperature monitoring	YES	YES	YES	YES	YES	YES	YES	YES
Smoke monitoring	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Voltage monitoring	YES	YES	YES	YES	YES	YES	YES	YES
Power redundancy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Signal path backup	YES	YES	YES	YES	YES	YES	YES	YES
Signal transmission	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic
Standby scheduling	YES	YES	YES	YES	YES	YES	YES	YES
Power on/off scheduling	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Power saving mode	YES	YES	YES	YES	YES	YES	YES	YES
Certification	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS
Options								
LED brand[4]	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
LED surface color	Black	Black	Black	Black	Black	Black	Black	Black

1- Panel dimensions can change upon customer request
2- That value is the remain capacity of PSU's at 100% brightness and white color content
3- Different types of video input available as option
4- Available LED options are CREE [/CR], NICHIA [/NC], EVERLIGHT [/EV], MULTICOLOR [/MC], NATIONSTAR [/NS]. Please check order code for details.

Front Access · Lightweight · Slim · Temp Monitoring · Smoke Monitoring · Voltage Monitoring · Remote Control · Easy To Install · Wide Angle · High Refresh Rate · Transparent · Noiseless · Calibration · Pixel Detection · Fanless

Apron Teknoloji AS. reserves the right to change any product specification, discontinue of any product or services without prior notice

LEDECA

STAGE

LED SCREENS FOR STAGE, EVENT AND RENTAL INDUSTRIES

OUTDOOR EVENT
MOSCOW/RUSSIA

Quick maintenance within 20 seconds

Structure that facilitates easy installation

Aluminum structure with passive cooling and fanless design

Reinforced module structure suitable for continuous disassembly and installation

Production level calibration for best color uniformity

All models have 500x500mm panel options

Strong structure supporting +10 and -10 degree curving

INDOOR EVENT
RIYADH / KSA

LEDECA
www.ledeca.com

distributed by **Distribution AG**

	COMPACT	COMPACT	SMART	SMART	SMART	SMART	SMART	SMART
	LDCISP01.9ST	LDCISP02.6ST	LDSISP02.6ST	LDSISP02.9ST	LDSISP03.9ST	LDSOSP03.9ST	LDSOSP04.8ST	LDSOSP05.9ST
General								
Operating environment	indoor	indoor	indoor	indoor	indoor	outdoor	outdoor	outdoor
Pixel pitch	1.9mm	2.6mm	2.6mm	2.9mm	3.9mm	3.9mm	4.8mm	5.9mm
Service type	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access
Calibrated brightness (nits)	>1.000nits	>1.000nits	>1.000nits	>1.000nits	>1.000nits	>4.500nits	>4.500nits	>4.000nits
Lamp type	SMD	SMD	SMD	SMD	SMD	SMD	SMD	SMD
Lifespan (hours at %50 brightness)	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours
White color calibration (adj.)	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K
Gray scale	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits
Brightness control	256 level	256 level	256 level	256 level	256 level	256 level	256 level	256 level
Module Specifications								
Module dimensions (mm)	250x250	250x250	250x500	250x500	250x500	250x500	250x500	250x500
Refresh frequency	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable
Module resolution	128x128px	96x96px	96x192px	84x168px	64x128px	64x128px	52x104px	42x84px
LED drive method	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic
Module material	plastic (PC)	plastic (PC)	plastic (PC)	plastic (PC)	aluminum	aluminum	aluminum	aluminum
Module type	sealed	sealed	sealed	sealed	sealed	sealed	sealed	sealed
PCB type	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer
PCB surface coating	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal
Panel Specifications								
Panel material	aluminum	die-casting aluminum	die-casting aluminum	die-casting aluminum	die-casting aluminum	die-casting aluminum	die-casting aluminum	die-casting aluminum
Panel paint	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated
Panel dimensions (mm)[1]	500x500	500x1.000	500x1.000	500x1.000	500x1000	500x1000	500x1000	500x1000
IP level	IP21 front and rear	IP22 front and rear	IP22 front and rear	IP22 front and rear	IP22 front and rear	IP54 front and rear	IP54 front and rear	IP54 front and rear
Minimum curving diameter (mm)	<15kg	<15kg	<12kg	<12kg	<12kg	<15kg	<15kg	<15kg
Panel resolution	256x256px	192x384px	192x384px	168x336px	128x256px	128x256px	104x208px	84x168px
Pixel density (pcs/sqm)	262.144	147.456	147.456	112.896	65.536	65.536	43.264	28.224
Viewing angle (horizontal x vertical)	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°
Minimum viewing distance	>2m	>2.5m	>2.5m	>3m	>4m	>4m	>5m	>6m
Operating temperature range	-15C ~ +50C	0C ~ +50C	0C ~ +50C	0C ~ +50C	0C ~ +50C	-15C ~ +50C	-15C ~ +50C	-15C ~ +50C
Storage temperature range	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C
Operating humidity	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%
Power input voltage	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC
Power input frequency	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz
Average power per sqm	<120W	<120W	<120W	<120W	<120W	<120W	<120W	<120W
Max power per sqm	<600W	<600W	<600W	<600W	<600W	<600W	<600W	<600W
Active PFC	YES	YES	YES	YES	YES	YES	YES	YES
Load tolerance[2]	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.
Panel installation type	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation
Cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling
Other								
Max input resolution	>2K	>2K	>2K	>2K	>2K	>2K	>2K	>2K
Standard video sources[3]	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI
Other direct video sources	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Brightness adjustment	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual
Death pixel monitoring	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Module monitoring	YES	YES	YES	YES	YES	YES	YES	YES
Temperature monitoring	YES	YES	YES	YES	YES	YES	YES	YES
Smoke monitoring	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Voltage monitoring	YES	YES	YES	YES	YES	YES	YES	YES
Power redundancy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Signal path backup	YES	YES	YES	YES	YES	YES	YES	YES
Signal transmission	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic
Standby scheduling	YES	YES	YES	YES	YES	YES	YES	YES
Power on/off scheduling	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Power saving mode	YES	YES	YES	YES	YES	YES	YES	YES
Certification	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS
Options								
LED brand[4]	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
LED surface color	Black	Black	Black	Black	Black	Black	Black	Black

1- Panel dimensions can change upon customer request
2- That value is the remain capacity of PSU's at 100% brightness and white color content
3- Different types of video input available as option
4- Available LED options are CREE [/CR], NICHIA [/NC], EVERLIGHT [/EV], MULTICOLOR [/MC], NATIONSTAR [/NS]. Please check order code for details.

Front Access Lightweight Slim Temp Monitoring Smoke Monitoring Voltage Monitoring Remote Control Easy To Install Wide Angle High Refresh Rate Transparent Noiseless Calibration Pixel Detection Fanless

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LEDUP

PLUG & PLAY LED SCREEN SOLUTIONS FOR INDOOR AND OUTDOOR PROJECTS

creative splicing display effect

- Key solutions for lower operational cost
- No limit on advertisement content and change all content within 1 second
- Turnkey solution for OOH digital advertisement
- Integrated to centralized content management system
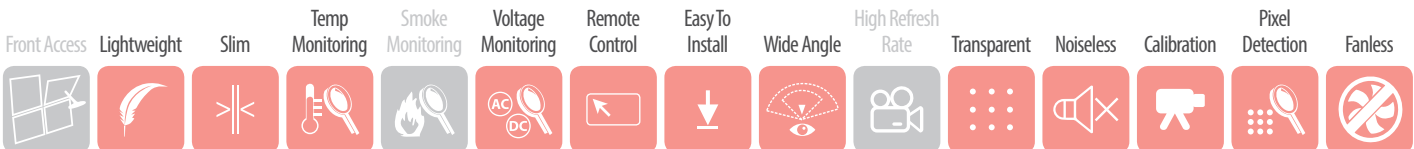- Customization for size, shape and color available upon request

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distributed by **SYS COM TEC** Distribution AG

	LEDUP LDUISP01.6GA	LEDUP LDUISP02.0GA	LEDUP LDUISP02.5GA	LEDUP LDUISP03.0GA	LEDUP LDUOSP03.0CL	LEDUP LDUOSP04.0CL
General						
Operating environment	indoor	indoor	indoor	indoor	**outdoor**	**outdoor**
Pixel pitch	1.66MM	2.0mm	2.5mm	3.07mm	3.0mm	4.0mm
Service type	rear access	rear access	rear access	rear access	rear access	rear access
Calibrated brightness (nits)	>900nits	>900nits	>900nits	>900nits	>4.500nits	>4.500nits
Lamp type	SMD	SMD	SMD	SMD	SMD	SMD
Lifespan (hours at %50 brightness)	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours
White color calibration (adj.)	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K
Gray scale	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits
Brightness control	256 level	256 level	256 level	256 level	256 level	256 level
Module Specifications						
PCB Surface Coating	320x160	320x160	320x160	320x160	320x160	320x160
Refresh Frequency	3840Hz	3840Hz	3840Hz	3840Hz	adjustable	adjustable
Module Resolution	192x96px	160x80px	128x64px	104x52px	104x52px	80x40px
LED Drive Method	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic
Module Material	plastic	plastic	plastic	plastic	plastic	plastic
PCB Type	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer
PCB Surface Coating	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal
Panel Specifications						
Optional Double Side	YES	YES	YES	YES	YES	YES
Product Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Steel & Aluminum
Screen Dimensions (mm)	640x1.920	640x1.920	640x1.920	640x1.920	640x1.920	640x1.920
Frame Width (mm)	2	2	2	2	2	2
Installation stand options	YES	YES	YES	YES	YES	YES
IP Level	IP22/IP44	IP22/IP44	IP22/IP44	IP22/IP44	IP54	IP54
Optional PC Cover (2mm)	YES	YES	YES	YES	-	-
Product Weight (~single/double side)	40kg	40kg	38kg	36kg	46kg	42kg
Product Resolution	384x1152px	320x960px	256x768px	208x624px	208x624px	160x480px
Viewing angle (horizontal x vertical)	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°
Minimum viewing distance	>2m	>2m	>2.5m	>3m	>3m	>4m
Operating temperature range	-5C ~ +45C	-5C ~ +45C	-5C ~ +45C	-5C ~ +45C	-5C ~ +45C	-20C ~ +50C
Storage temperature range	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-25C ~ +60C
Operating humidity	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%
Power input voltage	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC
Power input frequency	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz
Average power per sqm	<120W	<120W	<120W	<120W	<120W	<120W
Max power per sqm	<600W	<600W	<600W	<600W	<600W	<600W
Active PFC	YES	YES	YES	YES	YES	YES
Load tolerance[1]	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.
Cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling
Other						
Internal Player	YES	YES	YES	YES	YES	YES
Combined Screen Function	YES	YES	YES	YES	YES	YES
Installation type	Stand or hanging	Stand or hanging	Stand or hanging	Stand or hanging	Stand or hanging	Stand or hanging
Brightness adjustment	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual
Death pixel monitoring	NA	NA	NA	NA	NA	NA
Module monitoring	YES	YES	YES	YES	YES	YES
Temperature monitoring	YES	YES	YES	YES	YES	YES
Signal path backup	YES	YES	YES	YES	YES	YES
Signal transmission	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic
Standby scheduling	YES	YES	YES	YES	YES	YES
Power on/off scheduling	Optional	Optional	Optional	Optional	Optional	Optional
Power saving mode	YES	YES	YES	YES	YES	YES
Certification	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS
Options						
LED brand[2]	Optional	Optional	Optional	Optional	Optional	Optional
Product color[3]	Optional	Optional	Optional	Optional	Optional	Optional

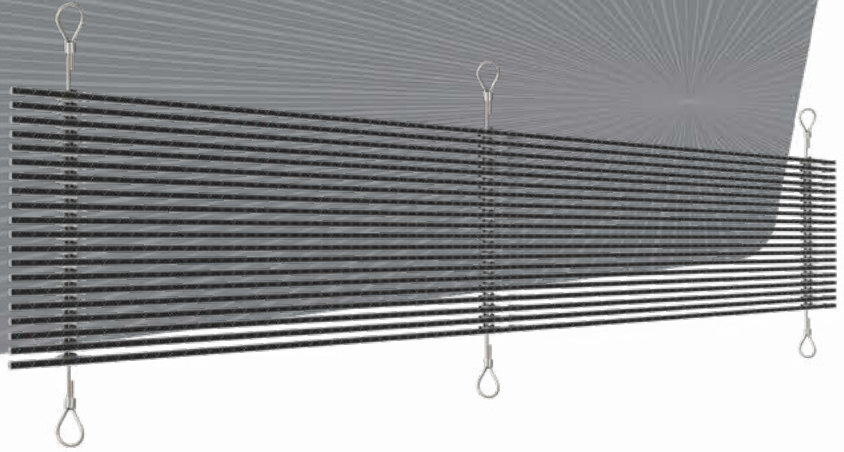**1-** That value is the remain capacity of PSU's at 100% brightness and white color content
2- Available LED options are CREE [/CR], NICHIA [/NC], EVERLIGHT [/EV], MULTICOLOR [/MC], NATIONSTAR [/NS]. Please check order code for details.
3- It's avaliable to change product color with MOQ.

Front Access | Lightweight | Slim | Temp Monitoring | Smoke Monitoring | Voltage Monitoring | Remote Control | Easy To Install | Wide Angle | High Refresh Rate | Transparent | Noiseless | Calibration | Pixel Detection | Fanless

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FACADE

TRANSPARENT LED CURTAIN FOR ARCHITECTURAL FACADE APPLICATIONS

IZMIR MUNICIPALITY
IZMIR / TURKEY

Right choice for facades with front or rear access

Intelligent construction for ultra-thin frame depth

Lightweight for easy adaptation and low cost framework design

The right solution for architectural and facade installations

Improved mask structure that increases viewing angle

SELCUKLU CONGRESS CENTER
KONYA / TURKEY

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distributed by **sys com tec** Distribution AG

	SMART	SMART	SMART	SMART	SMART	ARMOUR	ARMOUR
	LDSISP3.9/7.8FA	LDSISP07.8FA	LDSISP5.2/10.4FA	LDSISP10.4FA	LDSISP15.6FA	LDAOTP25.0FA	LDAOTP42.5FA
General							
Operating environment	indoor and semi outdoor	indoor and semi outdoor	indoor and semi outdoor	indoor and semi outdoor	indoor and semi outdoor	outdoor	outdoor
Pixel pitch	3.9(H)/7.8mm(V)	7.8mm	5.2(H)/10.41mm(V)	10.41mm	15.6mm	25mm	42.5mm
Service type	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access
Calibrated brightness (nits)	>4.500nits	>4.500nits	>4.500nits	>4.500nits	>4.500nits	>5.500nits	>5.500nits
Lamp type	SMD	SMD	SMD	SMD	SMD	DIP	DIP
Lifespan (hours at %50 brightness)	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours
White color calibration (adj.)	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K
Gray scale	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits
Brightness control	256 level	256 level	256 level	256 level	256 level	256 level	256 level
Module Specifications							
Module dimensions (mm)	1.000x500	1.000x500	1.000x500	1.000x500	1.000x500	3.000x10	3.060x10
Refresh frequency	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable
Module resolution	256x64px	128x64px	192x48px	96x48px	64x32px	120x1px	72x1px
LED drive method	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic
Module material	aluminum + epoxy	aluminum + epoxy	aluminum + epoxy	aluminum + epoxy	aluminum + epoxy	aluminum	aluminum
Module type	sealed	sealed	sealed	sealed	sealed	sealed	sealed
PCB type	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer
PCB surface coating	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal
Panel Specifications							
Panel material	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Panel paint	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated
Panel dimensions (mm)[1]	1000x5000	1000x5000	1000x5000	1000x5000	1000x5000	adjustable	adjustable
IP level	IP54 front and rear	IP54 front and rear	IP54 front and rear	IP54 front and rear	IP54 front and rear	IP65 front and rear	IP66 front and rear
Panel weight	20	20	20	20	20	14	9
Panel resolution	48	48	60	60	74	60	76
Pixel density (pcs/sqm)	32.768	16.384	18.432	9.216	4.096	1.600	555
Viewing angle (horizontal x vertical)	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°
Minimum viewing distance	>5m	>7m	>7m	>10m	>15m	>25m	>40m
Operating temperature range	-5C ~ +50C	-5C ~ +50C	-5C ~ +50C	-5C ~ +50C	-5C ~ +50C	-15C ~ +50C	-15C ~ +50C
Storage temperature range	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C
Operating humidity	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%
Power input voltage	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC
Power input frequency	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz
Average power per sqm	<100W	<100W	<100W	<100W	<100W	<100W	<100W
Max power per sqm	<600W	<600W	<600W	<600W	<600W	<600W	<600W
Active PFC	YES	YES	YES	YES	YES	YES	YES
Load tolerance[2]	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.
Panel installation type	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation
Cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling
Other							
Max input resolution	>2K	>2K	>2K	>2K	>2K	>2K	>2K
Standard video sources[3]	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI
Other direct video sources	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Brightness adjustment	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual
Death pixel monitoring	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Module monitoring	YES	YES	YES	YES	YES	YES	YES
Temperature monitoring	YES	YES	YES	YES	YES	YES	YES
Smoke monitoring	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Voltage monitoring	YES	YES	YES	YES	YES	YES	YES
Power redundancy	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Signal path backup	YES	YES	YES	YES	YES	YES	YES
Signal transmission	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic
Standby scheduling	YES	YES	YES	YES	YES	YES	YES
Power on/off scheduling	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Power saving mode	YES	YES	YES	YES	YES	YES	YES
Certification	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS
Options							
LED brand[4]	Optional	Optional	Optional	Optional	Optional	Optional	Optional
LED surface color	Black	Black	Black	Black	Black	Black	Black

1- Panel dimensions can change upon customer request
2- That value is the remain capacity of PSU's at 100% brightness and white color content
3- Different types of video input available as option
**4-** Available LED options are CREE [/CR], NICHIA [/NC], EVERLIGHT [/EV], MULTICOLOR [/MC], NATIONSTAR [/NS]. Please check order code for details.

Front Access | Lightweight | Slim | Temp Monitoring | Smoke Monitoring | Voltage Monitoring | Remote Control | Easy To Install | Wide Angle | High Refresh Rate | Transparent | Noiseless | Calibration | Pixel Detection | Fanless

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CITYLIGHT

VIDEO BASED LED LIGHTING SOLUTION WITH HIGH REFRESH RATE AND HIGH GRAYSCALE
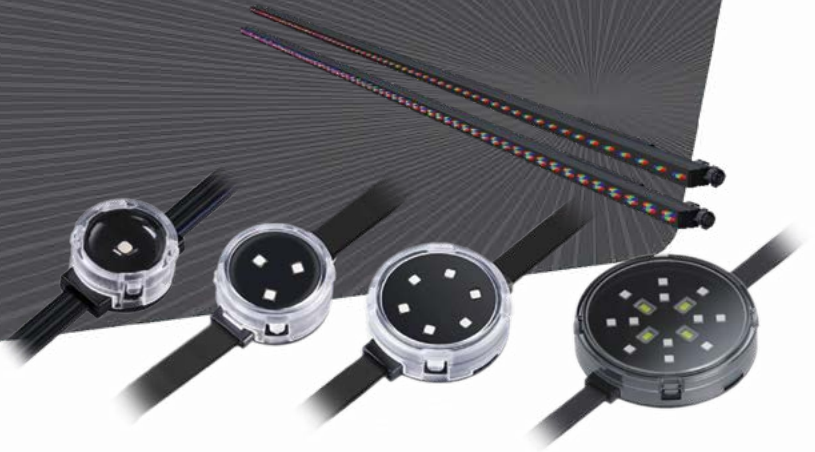
HOLIDAY RESORT
ANTALYA / TURKEY

SMART LINE

"Backup function improves product stability, which is more evident in high-rise building applications"

Minimal installation, adapt to all types of buildings, without damaging the original building facade and structure

Easy to install all kinds of creative shapes

SMART DOT

Separate design of lamp body and cable for easy of on-site maintenance

Easy to install all kinds of creative shape (inner arc, outer arc, shaped...)

Environmentally adaptable, all-weather use

Minimal installation, adapt to all types of buildings, without damaging the original building facade and structure
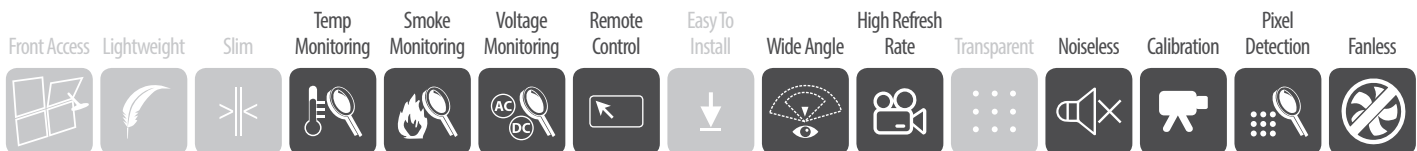
SHOPPING MALL
KAYSERI / TURKEY

	SMART DOT	SMART DOT	SMART DOT	SMART LINE	SMART LINE
	LDSODT20.X1	LDSODT33.X3	LDSODT42.X6	LDSOLN15.X3	LDSOLN25.X10
General					
Operating environment	outdoor	outdoor	outdoor	outdoor	outdoor
Pixel pitch (horizontal)	adjustable	adjustable	adjustable	25mm	25mm
Pixel pitch (vertical)	adjustable	adjustable	adjustable	adjustable	adjustable
Calibrated brightness per dot (nits)	2.5nits	6.5nits	12nits	6.5nits	20nits
Lamp type	SMD	SMD	SMD	SMD or DIP	SMD or DIP
Lifespan (hours at %50 brightness)	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours
White color calibration (adj.)	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K
Gray scale	16bits	16bits	16bits	16bits	16bits
Brightness control	256 level	256 level	256 level	256 level	256 level
Module Specifications					
Dot diameter (mm)	20	33	42	-	-
Line width (mm)	-	-	-	15	25
Module lenght	160 dots max.	320 dots max.	320 dots max.	3000mm max.	4000mm max.
Refresh frequency	>1920Hz	>1920Hz	>1920Hz	>1920Hz	>1920Hz
Module material	aluminum and PC	aluminum and PC	aluminum and PC	aluminum	aluminum
Module type	sealed	sealed	sealed	sealed	sealed
PCB type	multilayer	multilayer	multilayer	multilayer	multilayer
PCB surface coating	humiseal	humiseal	humiseal	humiseal	humiseal
IP level	IP67	IP67	IP67	IP67	IP67
Weight (~kg/sqm)	3	4	5	6	8
Transparency ratio (%)	94	92	90	92	86
Viewing angle (horizontal x vertical)	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°
Operating temperature range	-5C ~ +50C	-5C ~ +50C	-5C ~ +50C	-5C ~ +50C	-5C ~ +50C
Storage temperature range	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C
Operating humidity	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%
Power input voltage	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC
Power input frequency	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz
Average power per meter	<4W	<6W	<8W	<8W	<9W
Max power per meter	<6W	<8W	<10W	<10W	<12W
Active PFC	YES	YES	YES	YES	YES
Load tolerance[1]	25% min.	25% min.	25% min.	25% min.	25% min.
Panel installation type	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation
Cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling
Other					
Max input resolution	>2K	>2K	>2K	>2K	>2K
Standard video sources[2]	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI
Other direct video sources	Optional	Optional	Optional	Optional	Optional
Brightness adjustment	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual
Control Box Specifications					
Maximum power cable lenght	15 mt.	15 mt.	15 mt.	15 mt.	15 mt.
Death pixel monitoring	Optional	Optional	Optional	Optional	Optional
Module monitoring	YES	YES	YES	YES	YES
Temperature monitoring	YES	YES	YES	YES	YES
Smoke monitoring	Optional	Optional	Optional	Optional	Optional
Voltage monitoring	YES	YES	YES	YES	YES
Power redundancy	Optional	Optional	Optional	Optional	Optional
Signal path backup	YES	YES	YES	YES	YES
Signal transmission	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic
Standby scheduling	YES	YES	YES	YES	YES
Power on/off scheduling	Optional	Optional	Optional	Optional	Optional
Power saving mode	YES	YES	YES	YES	YES
Certification	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS
Options					
LED brand[3]	Optional	Optional	Optional	Optional	Optional
Product color[4]	Optional	Optional	Optional	Optional	Optional

1- That value is the remain capacity of PSU's at 100% brightness and white color content
2- Different types of video input available as option
3- Available LED options are CREE [/CR], NICHIA [/NC], EVERLIGHT [/EV], MULTICOLOR [/MC], NATIONSTAR [/NS]. Please check order code for details.
**4-** It's avaliable to change product color with MOQ.

Front Access | Lightweight | Slim | Temp Monitoring | Smoke Monitoring | Voltage Monitoring | Remote Control | Easy To Install | Wide Angle | High Refresh Rate | Transparent | Noiseless | Calibration | Pixel Detection | Fanless

Apron Teknoloji AS. reserves the right to change any product specification, discontinue of any product or services without prior notice

LEDECA

DOOH

PROFESSIONAL PLUG & PLAY
DIGITAL-OUT-OF-HOME PRODUCTS
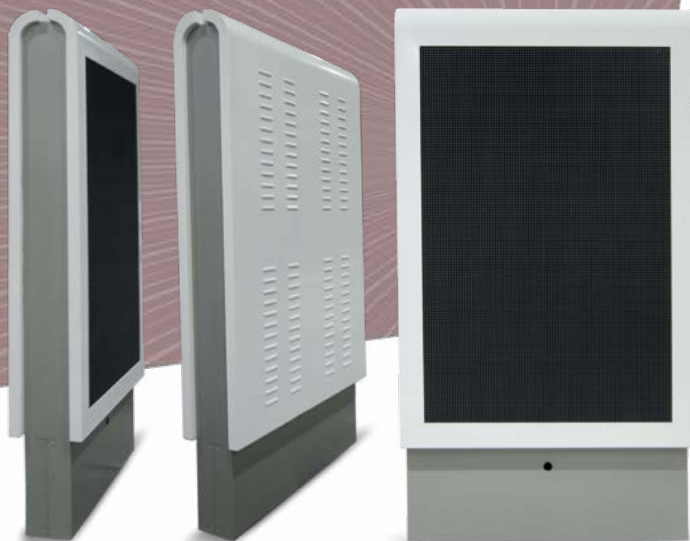
SHELL FUEL STATION
ANKARA/TURKEY

Centralized content management and lower operational cost

Llimitless advertisement content management

Turnkey solution for DOOH digital advertisement

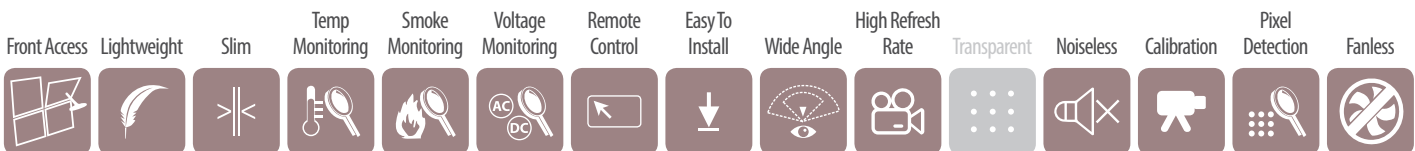Customization for size, shape and color availability on request

BUS SHELTER MOCKUP
IASHI/ROMANIA

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	DOOH POSTER	DOOH POSTER	DOOH POSTER	DOOH POSTER	DOOH MEGALIGHT	DOOH MEGALIGHT
	DOHOSP03.0CL	DOHOSP04.0CL	DOHOSP04.8RB-4	DOHOSP04.8RB-5	DOHOSP04.8RB-MG	MGLOSP05.9RB-MG
General						
Operating environment	outdoor	outdoor	outdoor	outdoor	outdoor	outdoor
Pixel pitch	3.0mm	4.0mm	4.8mm	4.8mm	4.8mm	5.9mm
Service type	rear access	rear access	front and rear access	front and rear access	front and rear access	front and rear access
Calibrated brightness (nits)	>4.500nits	>4.500nits	>6.000nits	>6.000nits	>6.000nits	>6.500nits
Lamp type	SMD	SMD	SMD	SMD	SMD	SMD
Lifespan (hours at %50 brightness)	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours
White color calibration (adj.)	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K
Gray scale	>16bits	>16bits	>16bits	>16bits	>16bits	>16bits
Brightness control	256 level	256 level	256 level	256 level	256 level	256 level
Module Specifications						
Module Dimensions (mm)	320x160	320x160	250x250	250x250	250x250	250x250
Refresh Frequency	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable
Module Resolution	104x52px	80x40px	52x52px	52x52px	52x52px	42x42px
LED Drive Method	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic
Module Material	plastic	plastic	plastic (PC+FG)	plastic (PC+FG)	plastic (PC+FG)	plastic (PC+FG)
PCB Type	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer
PCB Surface Coating	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal
Product Specifications						
Optional Double Side	YES	YES	YES	YES	YES	YES
Product Material	Aluminum	Steel & Aluminum	Steel & Aluminum	Steel & Aluminum	Steel & Aluminum	Steel & Aluminum
Screen Dimensions (mm)	960x1.760	960x1.760	1.000x1.750	1.250x1.750	3.250x2.500	3.250x2.500
Frame Width (mm)	2	2	12	12	12	12
Installation stand options	YES	YES	YES	YES	YES	YES
IP Level	IP54	IP54	IP65/IP54	IP65/IP54	IP65/IP54	IP65/IP54
Optional PC Cover (2mm)	-	-	-	-	-	-
Product Weight (~single/double side)	112kg	108kg	160kg/245kg	187kg/255kg	1.094kg/1.425kg	1.085kg/1.410kg
Product Resolution	312x572px	240x440px	208x364px	260x364px	676x520px	546x420px
Viewing angle (horizontal x vertical)	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°	>120° x 120°
Minimum viewing distance	>3m	>4m	>4m	>4m	>4m	>5m
Operating temperature range	-5C ~ +45C	-20C ~ +50C	-20C ~ +50C	-20C ~ +50C	-20C ~ +50C	-20C ~ +50C
Storage temperature range	-20C ~ +60C	-25C ~ +60C	-25C ~ +60C	-25C ~ +60C	-25C ~ +60C	-25C ~ +60C
Operating humidity	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%
Power input voltage	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC
Power input frequency	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz
Average power per sqm	<120W	<120W	<120W	<120W	<120W	<120W
Max power per sqm	<600W	<600W	<600W	<600W	<600W	<600W
Active PFC	YES	YES	YES	YES	YES	YES
Load tolerance[1]	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.
Cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling
Other						
Internal Player	YES	YES	Optional	Optional	Optional	Optional
Combined Screen Function	YES	YES	Optional	Optional	Optional	Optional
Installation type	Stand or hanging	Stand or hanging	Stand or hanging	Stand or hanging	Stand	Stand
Brightness adjustment	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual
Death pixel monitoring	NA	NA	Optional	Optional	Optional	Optional
Module monitoring	YES	YES	YES	YES	YES	YES
Temperature monitoring	YES	YES	YES	YES	YES	YES
Signal path backup	YES	YES	YES	YES	YES	YES
Signal transmission	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic
Standby scheduling	YES	YES	YES	YES	YES	YES
Power on/off scheduling	Optional	Optional	Optional	Optional	Optional	Optional
Power saving mode	YES	YES	YES	YES	YES	YES
Certification	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS
Options						
LED brand[2]	Optional	Optional	Optional	Optional	Optional	Optional
Product color[3]	Optional	Optional	Optional	Optional	Optional	Optional

1- That value is the remain capacity of PSU's at 100% brightness and white color content
2- Available LED options are CREE [/CR], NICHIA [/NC], EVERLIGHT [/EV], MULTICOLOR [/MC], NATIONSTAR [/NS]. Please check order code for details.
3- It's avaliable to change product color with MOQ.

Front Access	Lightweight	Slim	Temp Monitoring	Smoke Monitoring	Voltage Monitoring	Remote Control	Easy To Install	Wide Angle	High Refresh Rate	Transparent	Noiseless	Calibration	Pixel Detection	Fanless

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FIDS

PROFESSIONAL SOLUTION WITH HIGH STABILITY & HIGH RELIABILITY FOR 7/24 AIRPORT OPERATIONS

ISTANBUL GRAND AIRPORT
ISTANBUL/TURKEY

High stability and reliability for 7/24 operation

Production level calibration for best color uniformity

Intelligent structure for remote monitoring

Real-Time monitoring system and led failure detection support

Redundant PSU and panel controllers

ISTANBUL GRAND AIRPORT
ISTANBUL/TURKEY

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distributed by SYS COM tec Distribution AG

	ARMOUR	ARMOUR	ARMOUR	ARMOUR	ARMOUR	ARMOUR
	LDAISP01.6AR	LDAISP01.8AR	LDAISP02.5AR	LDAOSP05.9AR	LDAOSP07.8AR	LDAOSP10.4AR
General						
Operating environment	indoor	indoor	indoor	outdoor	outdoor	outdoor
Pixel pitch	1.66mm	1.87mm	2.5mm	5.95mm	7.81mm	10.41mm
Service type	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access	front and rear access
Calibrated brightness (nits)	>1.500nits	>1.500nits	>1.500nits	>8.000nits	>8.000nits	>8.000nits
Lamp type	SMD	SMD	SMD	SMD	SMD	SMD
Lifespan (hours at %50 brightness)	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours
White color calibration (adj.)	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K	3.500K~8.500K
Gray scale	16bits	16bits	16bits	16bits	16bits	16bits
Brightness control	256 level	256 level	256 level	256 level	256 level	256 level
Module Specifications						
Module dimensions (mm)	240x240	240x240	240x240	250x250	250x250	250x250
Refresh frequency	adjustable	adjustable	adjustable	adjustable	adjustable	adjustable
Module resolution	144x144px	128x128px	96x96px	42x42px	32x32px	24x24px
LED drive method	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic
Module material	aluminum	aluminum	aluminum	plastic (PC+FG)	plastic (PC+FG)	plastic (PC+FG)
Module type	sealed	sealed	sealed	sealed	sealed	sealed
PCB type	multilayer	multilayer	multilayer	multilayer	multilayer	multilayer
PCB surface coating	humiseal	humiseal	humiseal	humiseal	humiseal	humiseal
Panel Specifications						
Panel material	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Panel paint	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated
Panel dimensions (mm)	480x480	480x480	480x480	1000x1000	1000x1000	1000x1000
IP level	IP21 front and rear	IP21 front and rear	IP21 front and rear	IP67 front, IP65 rear	IP67 front, IP65 rear	IP67 front, IP65 rear
Panel weight	<15kg	<15kg	<15kg	<45kg	<45kg	<45kg
Panel resolution	288x288px	256x256px	192x192px	168x168px	128x128px	96x96px
Pixel density (pcs/sqm)	362.404	286.225	160.000	28.224	16.384	9.216
Viewing angle (horizontal x vertical)	>120° x 120°	>120° x 120°	>120° x 120°	>160° x 140°	>160° x 140°	>160° x 140°
Minimum viewing distance	>1.5m	>2m	>2.5m	>5m	>7m	>10m
Operating temperature range	-10C ~ +45C	-10C ~ +45C	-10C ~ +45C	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C
Storage temperature range	-20C ~ +60C	-20C ~ +60C	-20C ~ +60C	-25C ~ +60C	-25C ~ +60C	-25C ~ +60C
Operating humidity	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%
Power input voltage	110~240 VAC	110~240 VAC	110~240 VAC	110 ~ 240 VAC	110 ~ 240 VAC	110 ~ 240 VAC
Power input frequency	50~60 Hz	50~60 Hz	50~60 Hz	50 ~ 60 Hz	50 ~ 60 Hz	50 ~ 60 Hz
Average power per sqm	<120W	<120W	<120W	<120W	<120W	<120W
Max power per sqm	<600W	<600W	<600W	<600W	<600W	<600W
Active PFC	YES	YES	YES	YES	YES	YES
Load tolerance[1]	25% min.	25% min.	25% min.	25% min.	25% min.	25% min.
Panel installation type	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation	Fixed installation
Cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling	Passive cooling
Other						
Max input resolution	>2K	>2K	>2K	>2K	>2K	>2K
Standard video sources[2]	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI	DVI, HDMI
Other direct video sources	Optional	Optional	Optional	Optional	Optional	Optional
Brightness adjustment	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
Death pixel monitoring	YES	YES	YES	YES	YES	YES
Module monitoring	YES	YES	YES	YES	YES	YES
Temperature monitoring	YES	YES	YES	YES	YES	YES
Smoke monitoring	YES	YES	YES	YES	YES	YES
Voltage monitoring	YES	YES	YES	YES	YES	YES
Power redundancy	YES	YES	YES	YES	YES	YES
Signal path backup	YES	YES	YES	YES	YES	YES
Signal transmission	F/O	F/O	F/O	F/O	F/O	F/O
Data redundancy	YES	YES	YES	YES	YES	YES
Power on/off scheduling	YES	YES	YES	YES	YES	YES
Power saving mode	YES	YES	YES	YES	YES	YES
Certification	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS	CE-EMC, CE-LVD, RoHS
Options						
LED brand[3]	Optional	Optional	Optional	Optional	Optional	Optional
Panel sizes	Optional	Optional	Optional	Optional	Optional	Optional

1- That value is the remain capacity of PSU's at 100% brightness and white color content
2- Different types of video input available as option
3- Available LED options are CREE [/CR], NICHIA [/NC], EVERLIGHT [/EV], MULTICOLOR [/MC], NATIONSTAR [/NS]. Please check order code for details.

Front Access · Lightweight · Slim · Temp Monitoring · Smoke Monitoring · Voltage Monitoring · Remote Control · Easy To Install · Wide Angle · High Refresh Rate · Transparent · Noiseless · Calibration · Pixel Detection · Fanless

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TRAFFIC

DIGITAL VARIABLE MESSAGE AND TRAFFIC SIGNS FOR TRAFFIC INDUSTRY

EN12966 COMPLIANT

VARIABLE MESSAGE SIGN
KONYA / TURKEY

EN 12966 compliance

Intelligent structure for remote monitoring

SMD LED with Optical Lens design

Supports LED failure detection

Real-Time monitoring system and feedback system support

Power supply redundant support

Optical lens made of anti-UV PC material, avoiding yellowing on the lens

No louver design, preventing snow from piling up in bad weather

VARIABLE MESSAGE SIGN
BURSA / TURKEY

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distributed by **Distribution AG**

	ARMOUR LDAOTP10.0XT	ARMOUR LDAOTP12.0XT	ARMOUR LDAOTP15.0CL	ARMOUR LDAOTP20.0XT	ARMOUR LDAOTP30.0XT
General					
Operating environment	outdoor	outdoor	outdoor	outdoor	outdoor
Pixel pitch	10mm	12mm	15mm	20mm	30mm
Service type	rear access	rear access	rear access	front and rear access	rear access
Calibrated brightness (nits)	L3	L3	L3	L3	L3
Lamp type	SMD	SMD	SMD	SMD	SMD
Lifespan (hours at %50 brightness)	>100.000hours	>100.000hours	>100.000hours	>100.000hours	>100.000hours
Color coordinates	C2	C2	C2	C2	C2
Contrast ratio	R3	R3	R3	R3	R3
Beam Width	B6	B6	B6	B6	B6
Brightness control	100 level	100 level	100 level	100 level	100 level
Module Specifications					
Module dimensions (mm)	240x120	240x180	120x240	160x320	240x240
Refresh frequency	adjustable	adjustable	adjustable	adjustable	adjustable
Module resolution	24x12px	20x15px	8x16px	8x16px	8x8px
LED drive method	static	static	static	static	static
Module material	PC&Fiberglass	PC&Fiberglass	PC&Fiberglass	PC&Fiberglass	PC&Fiberglass
Module type	sealed	sealed	sealed	sealed	sealed
PCB type	multilayer	multilayer	multilayer	multilayer	multilayer
PCB surface coating	humiseal	humiseal	humiseal	humiseal	humiseal
Panel Specifications					
Panel material	aluminum	aluminum	aluminum	aluminum	aluminum
Panel paint	ES powder coated	ES powder coated	ES powder coated	ES powder coated	ES powder coated
Panel dimensions (mm)*	adjustable	adjustable	adjustable	adjustable	adjustable
IP level	P3	P3	P3	P3	P3
Panel weight	adjustable	adjustable	adjustable	adjustable	adjustable
Panel resolution	adjustable	adjustable	adjustable	adjustable	adjustable
Pixel density (pcs/sqm)	10.000	6.889	4.356	2.500	1089
Communication way	RS485,RS232,RJ45,ProfiBus	RS485,RS232,RJ45,ProfiBus	RS485,RS232,RJ45,ProfiBus	RS485,RS232,RJ45,ProfiBus	RS485,RS232,RJ45,ProfiBus
Communication protocol	NTCIP	NTCIP	NTCIP	NTCIP	NTCIP
Operating temperature range	T3	T3	T3	T3	T3
Storage temperature range	-40C ~ +60C	-40C ~ +60C	-40C ~ +60C	-25C ~ +60C	-40C ~ +60C
Operating humidity	10% ~ 95%	10% ~ 95%	10% ~ 95%	10% ~ 95%	10% ~ 95%
Power input voltage	100~260 VAC	100~260 VAC	100~260 VAC	100~260 VAC	100~260 VAC
Power input frequency	50~60 Hz	50~60 Hz	50~60 Hz	50~60 Hz	50~60 Hz
Average power per sqm	<350W	<350W	<350W	<350W	<350W
Max power per sqm	<650W	<650W	<650W	<650W	<650W
Active PFC	YES	YES	YES	YES	YES
Load tolerance[2]	25% min.	25% min.	25% min.	25% min.	25% min.
Cooling	passive cooling	passive cooling	passive cooling	passive cooling	passive cooling
Compliancy	EN12966	EN12966	EN12966	EN12966	EN12966
Other					
Max input resolution	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable
Standard video sources[3]	NA	NA	NA	NA	NA
Other direct video sources	NA	NA	NA	NA	NA
Brightness adjustment	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual	Automatic & manual
Death pixel monitoring	YES	YES	YES	YES	YES
Module monitoring	YES	YES	YES	YES	YES
Temperature monitoring	YES	YES	YES	YES	YES
Smoke monitoring	Optional	Optional	Optional	Optional	Optional
Voltage monitoring	YES	YES	YES	YES	YES
Power redundancy	YES	YES	YES	YES	YES
Signal path backup	YES	YES	YES	YES	YES
Signal transmission	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic	CAT or Fiber Optic
Standby scheduling	YES	YES	YES	YES	YES
Power on/off scheduling	YES	YES	YES	YES	YES
Power saving mode	YES	YES	YES	YES	YES
Certification	CE-EMC, CE-LVD, RoHS, TUV, EN12966	CE-EMC, CE-LVD, RoHS, TUV, EN12966	CE-EMC, CE-LVD, RoHS, TUV, EN12966	CE-EMC, CE-LVD, RoHS, TUV, EN12966	CE-EMC, CE-LVD, RoHS, TUV, EN12966
Options					
LED brand[4]	Optional	Optional	Optional	Optional	Optional
LED surface color	Black	Black	Black	Black	Black

1- Panel dimensions can change upon customer request
2- That value is the remain capacity of PSU's at 100% brightness and white color content
3- Different types of video input available as option
4- Available LED options are CREE [/CR], NICHIA [/NC], EVERLIGHT [/EV], MULTICOLOR [/MC], NATIONSTAR [/NS]. Please check order code for details.

Front Access | Lightweight | Slim | Temp Monitoring | Smoke Monitoring | Voltage Monitoring | Remote Control | Easy To Install | Wide Angle | High Refresh Rate | Transparent | Noiseless | Calibration | Pixel Detection | Fanless

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DATACOLLECTION**TERMINAL**
LT**210**

It is a data collection and monitoring device used to monitor, record, and control the environmental variables (temperature, humidity, smoke, air flow, water leak etc.) of the LED WALL to be monitored. LTS 210 does not need any PC / Server connection to work. Easy to install, flexible and reliable service.
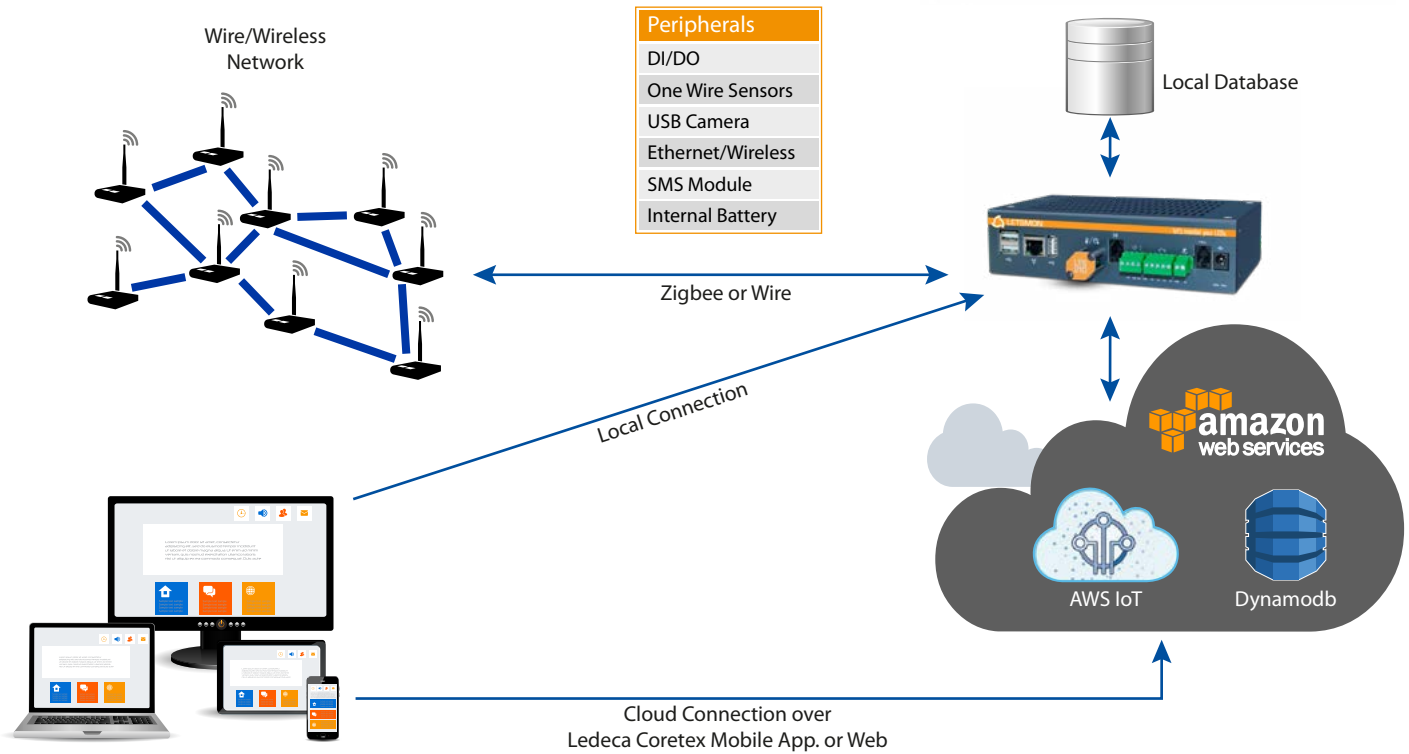
You can remote monitoring with safety Web access from anywhere in the world with LETSMON EMS. You will be immediately notified of alarm notifications from many ways such as E-mail, SMS, Phone call,

SNMP trap. All data collected from sensors can be saved, used for reporting and analysis.

The data collected by the Data Collection Terminal and the connection established with the user are secured by advanced encryption algorithms. You can live view from the remote by connecting a compatible IP Camera or a compatible USB WebCam to the terminal. You can send a photo of your choice to an email address that you specify.

	TECHNICAL SPECIFICATIONS
Integrated Temperature and Humidity Sensor	YES (1 Pcs)
Integrated Temperature Sensor Measurement Range	0/+60 °C
Integrated Temperature Sensor Sensitivity	Precision < %0.5
Integrated Humidity Sensor Measurement Range	Relative Humidity 0 - 100
Integrated Humidity Sensor Sensitivity	Precision < %3
Integrated Water Fugitive Sensor	YES (1 Pcs)
RJ9-Digital Sensor Port (1-Wire)	1 Port (Max. 16 Port 1-Wire Sensor)
Max. 1-Wire Sensor Distance	50 m
Digital Input	4 Inputs (5 - 24 VDC)
Digital Output	2 Outputs (Max. 250 VAC/ 30 VDC)
USB 2.0 Port	4 Ports
HDMI Output	1 Output
Integrated IR Port (Air Conditioning Control)	LETSMON IR with Module
External HDD, Keyboard, Mouse Connection	USB
Supply Voltage	5,8 V (DC) 3 A
10/100 Ethernet	1 Ethernet Port
Power Consumption	10 W
Operating Temperature Range	0-60 °C
Operating Humidity Range	%10 - %90 (non-Condensing)
Physical Measures	170mm x 94,5mm x 44.4mm
Weight	522 gr
EMC Certificate	IEC 61000-6-4 / IEC 61000-6-2
Product Warranty	2 Years
Network Protocols	HTTP, SNMP Traps, TCP Socket IO, MQTT, Modbus TCP, Modbus RTU, WEIGAND (Lock Settings), FTP, SSH, TELNET

Wire/Wireless Network

Peripherals
DI/DO
One Wire Sensors
USB Camera
Ethernet/Wireless
SMS Module
Internal Battery

Local Database

Zigbee or Wire

Local Connection

amazon web services

AWS IoT   Dynamodb

Cloud Connection over
Ledeca Coretex Mobile App. or Web

LETSMON

Let's monitor your system! Environmental monitoring system, to keep under control for everything you want. It is a system that control, analyze and watch the significant environmental factors such as temperature, humidity, light, smoke, air conditioning. The sensors help the system to collect and save the data, then you can easily access your reports. This system can create performance graphics and identify the resource needs.

CONNECTIVITY

let's monitor your LEDs

LTS 210

DEVICES
- PDU
- Generator
- UPS
- Air Conditioner
- Energy Analyser
- IP Camera

PERIPHERALS
- Phone Caller
- Monitor
- Backup Battery
- SMS Module
- 3G Modem

SENSORS
- TEMPERATURE
- HUMIDITY
- LIGHT
- FLOOD SENSOR
- DOOR OPEN
- MOTION DETECTION
- FIRE
- ELECTRICITY
- SMOKE

FRAMEWORK DESIGN AND PRODUCTION

Turnkey Frameworks and scaffolding for any conceivable LED screen application. We start by listening to our clients and determine project requirements. We determine the optimum and sustainable solution for our client
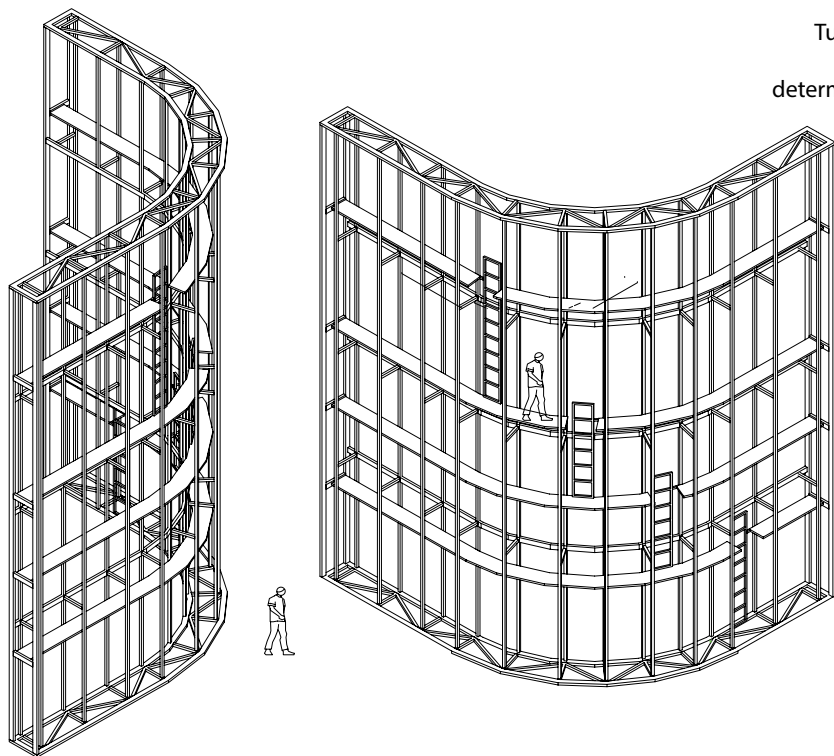
Our pre-sales team outlines the project. Our aim is to provide the solution at the best price, without compromising engineering and esthetic principles. Our priority is to make the project differentiate from competitors and provide an advantage to our client

All production is made by us in our 40.000 sqm factory, and installation is done by our own personnel. We have local installation teams situated around Europe. All required electricity communication and management infrastructure are provided by us. You just need to turn "ON"
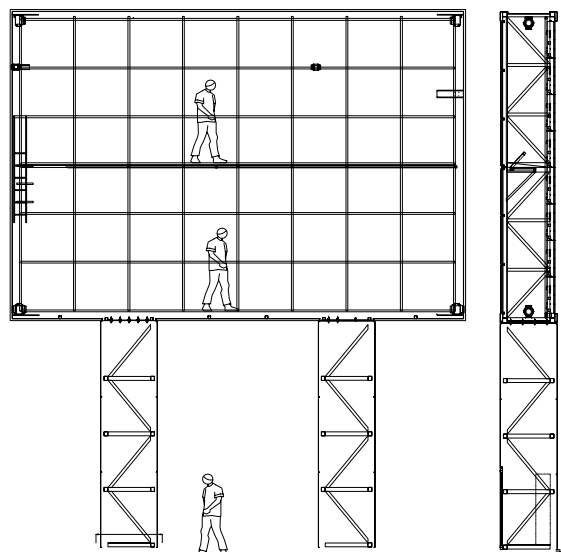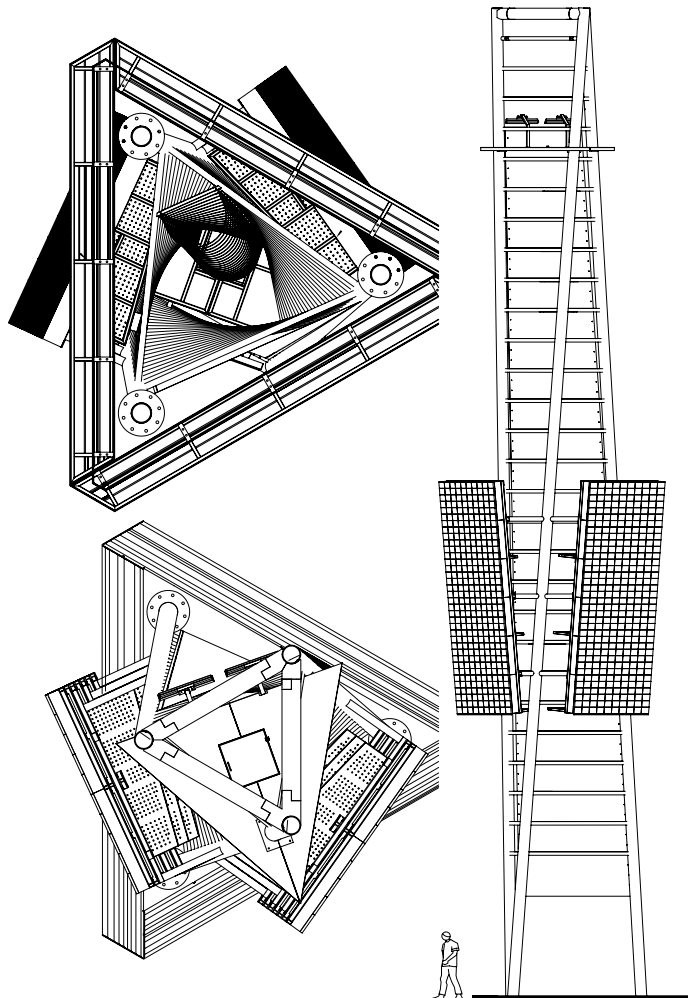
Our design team models the project in 3D and presents it for the client's approval and for static validation.

LIMITLESS IMAGINATION WITH REAL 3D EFFECT*

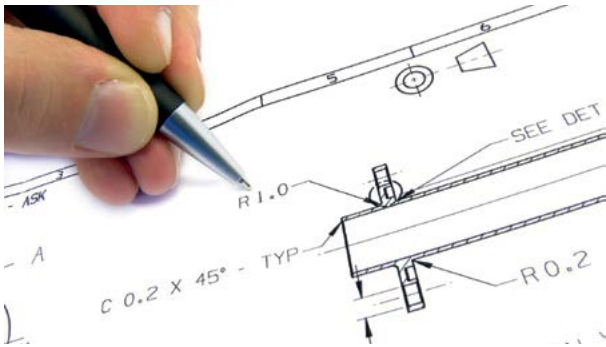| TECHNICAL SPECIFICATIONS |
|---|
| Loading capacity up to 4K×1K in 3D mode per device |
| You could experience super-large 3D image on your LED display with 3D glasses |
| Easily enjoy the immersive 3D experience with long battery life active-shutter 3D glasses, supporting various video inputs |
| Multiport charging station for 3D glasses |
| One-click switching between 2D and 3D mode |
| 3D control device supports maximum 30 meters communication distance for each 3D glasses |
| (*) Please contact LEDECA to ask supported LED screen specifications |

Apron Teknoloji AS. reserves the right to change any product specification, discontinue of any product or services without prior notice

NOTAN**OEM**BUT**A**REAL**MANUFACTURER**

We have our own factory and we manufacture our own products. This gives us the flexibility to create the product we want, in contrast to rebranding the product that is available. It also gives us total control over quality, in all phases of manufacture.

OFF-THE-**SHELF**STANDARDIZED**PRODUCTS**

We provide standardized, off-the-shelf products that are optimized for application. Thus, we can offer the most suitable product per application, achieve standardization of quality, and provide fast turn around to inquiries.
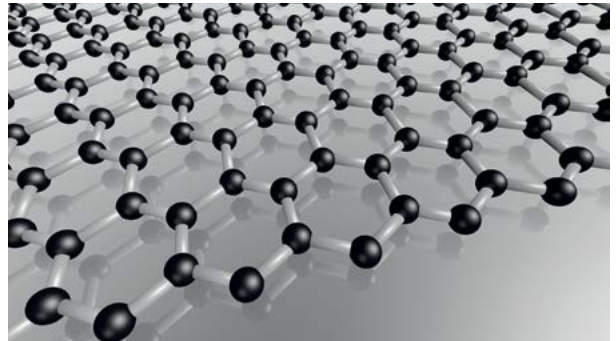
QUALITY

We use components and manufacturing standards suitable for industrial operation and the requirements of the application, even inside our most cost effective product, is one of our main principles. All our products have CE certificate.

CUSTOMDESIGN**FREEFORM**PRODUCTS

The fact that we have a standardized product portfolio, does not mean we are not unresponsive to special requests. We are able to design and manufacture any size, shape and LED video product for custom, non-standard requirements.

NOTJUST**PRODUCT**BUT**SOLUTION**

We do not just install the screen and leave. We also design where required, any necessary supplementary system, such as the video distribution and processing network, or the content management solution.

distributed by

SERVICES

Our approach to customer management is based on total solution rather than simple equipment sales. Our optional services include calibration, content design, remote monitoring and direct operation of the system.

ADVANCEDCONSTRUCTION**TECHNOLOGY**

Using the skills and experience of our parent company which is dedicated & specialized in metal construction , we are able to handle the design and implementation of complex and difficult constructions, that are beyond the skills of most LED installers.

SOLUTIONSFOR**MULTIPLE**VERTICAL**MARKETS**

The extensive professional experience of our team and our group companies, allows us to produce solutions for most vertical markets where LED display solutions are required, ranging from sports to event rentals, open air advertising to highways, broadcast to retail. Solution partners that work with us, are never left without solution.

CONFIDENCEOF**GLOBAL**BRANDS

SHELL, TOTAL, BP, GULF, OPEL, MERCEDES, DAEWOO, VODAFONE and many other such global brands trust us. And we start each day trying to live up to that trust.
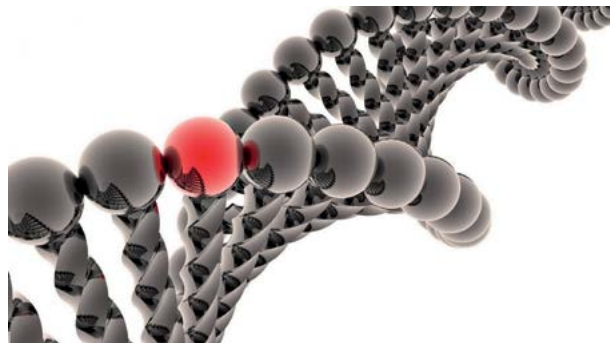
COMPETITIVENESS

We work with a team that is small compared to its achievements. We constantly follow new technologies and improve our methods. We have the cutting edge in competitiveness, in the price-performance range that we provide. Contact us and let us demonstrate it to you as well.

APRON TEKNOLOJI AS.

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