



Displays for cities

smartcitydisplays.com

 **DYSTEN**

Park Drezera 05



linia
route

kierunek
destination

14 METRO WILANOWSKA
10 WYŚCIGI
35 WYŚCIGI
14 METRO WILANOWSKA
18 PKP SŁUŻEWIEC
WYŚCIGI



WHY DYSTEN?

Polish manufacturer of displays in LED, LCD TFT, E-paper technology



20 YEARS OF EXPERIENCE

After 20 years we know the long-term consequences of any technology decision. We have all key factors under control – large R&D department, with smart engineers, our own extensive production hall, and we design the devices by ourselves.



CUSTOMISATION & OPTIMISATION

Detailed customisation to clients' needs and location requirements. Our engineers have developed solutions to increase reliability and reduce power consumption.



OPEN PROTOCOLS

Dysten devices use open protocols that are easy to integrate into any system.



SUPPORT

Technical support and service team available to meet clients' needs in every phase. Technicians can assist you during installation, set-up, repairs and maintenance.



ISO 9001

Each new product undergoes 5 stages: Feasibility Study, Concept and Custom Design, Project, Prototype, Production. We work in a repetitive manner, based on projects and procedures.

AWARDED INNOVATIONS



Best Smart City & Railway Information Displays Manufacturer Europe 2019



Smart City Poland Award 2019



Global Light Rail Awards Best Customer Initiative London 2018



Best Railway Passenger Information Displays Manufacturer in Europe 2018



Global Light Rail Awards Technical Innovation of the Year London 2018



Good Design Finalist of the Competition E-paper

PLATFORM PASSENGER INFORMATION DISPLAYS
Full colour LED RGB



PLATFORM PASSENGER INFORMATION DISPLAYS
Monochromatic LED amber



PLATFORM PASSENGER INFORMATION DISPLAYS
Full colour LCD TFT



MAIN PASSENGER INFORMATION DISPLAYS
Full colour LED RGB
Monochromatic LED amber

PLATFORM, BUS STOP PASSENGER INFORMATION DISPLAYS
Monochromatic E-paper

DESTINATION DISPLAYS
for vehicles

PARKING DISPLAYS

PAGE 17



VARIABLE MESSAGE SIGNS

PAGE 21



PAGE 23

SMART CITY DISPLAYS

LED Totems | LCD info-kiosks



PAGE 24

VIDEOWALL SOLUTIONS



PAGE 25

PA SYSTEM

TEATR
GULIWER



Morskie Oko 03

09:06

linia
route

kierunek
destination

odjazd (min)
departure in

14 METRO WILANOWSKA



18 PKP SŁUŻEWIEC

3

4 WYŚCIGI

4

10 WYŚCIGI

4

35 WYŚCIGI

5

10 WYŚCIGI

6



14 METRO
WILANOWSKA

3810

PLATFORM PASSENGER INFORMATION DISPLAYS

Technologies: full-colour LED RGB, monochromatic LED amber, LCD-TFT, E-paper

Dysten Ltd manufactures Platform Passenger Information Displays in all available modern technologies: LED, LCD-TFT, E-paper. The company's mission is to customise Passenger Information Displays in order to develop a perfect combination tailored to your needs, location requirements and budget. After 20 years our **knowledge** and **experience** have allowed us to learn about the long-term consequences of all choices. Dysten's passenger information displays use dynamic information with real time arrivals and departures. The devices can be additionally equipped with a surveillance camera. The boards may display warnings and read loudly information for the disabled from the screen (text-to-speech option). The system limits the device's luminance at night, using sensor data. The key advantage – apart from customisation, durability and quality – is an **easy integration** of devices with any system, reading direction and language thanks to thoughtful solutions and open protocols. Dysten's team can help you choose the best combination of features and technology. Let's start a technical dialogue now.

Platform displays

Bus stop

Tram stop

Metro

LED



LOW POWER CONSUMPTION

8 hours of operation without power



INVOICES FOR ELECTRICITY

four times lower than in the case of LCDs



THE BRIGHTEST POSSIBLE CONTENT

up to 5000 nits



FULL-COLOUR

or monochromatic amber display



15-YEAR LIFETIME

The longest possible lifecycle
100,000 MTBF hours



PROTECTION LEVEL

IP 54 to IP65, IK07 to IK09,
many possible sensors and options

LCD-TFT



HIGH RESOLUTION

detailed matrix screen



GOOD BRIGHTNESS

up to 3500 nits



COLOUR

The best solution for impressive, detailed,
dynamic content in vivid colours



5-YEAR LIFETIME

MTBF 50,000 hours



PROTECTION LEVEL

IP 54 to IP65, IK07 to IK09,
many possible sensors and options

E-PAPER



GOOD READABILITY

Viewing comfort – just like reading a book



FORGET ABOUT ELECTRICITY INVOICES

E-paper can use green energy



QUICK INSTALLATION

The quickest solution to expand your network



MONO

Black and white display in grey scale.
Good for a timetable



FLEXIBLE

Various sizes, colours and configurations,
additional buttons, special options



PROTECTION LEVEL

IP 54 to IP65, housing customisation

MAIN PASSENGER INFORMATION DISPLAYS

Technologies: full-colour LED RGB, monochromatic LED amber

Dysten manufactures Main Passenger Information Displays in outdoor and indoor versions. The larger, mostly one-sided boards are mounted on the wall or pole and display more information about departures and arrivals than typical platform displays. There are two types of main passenger information boards: full-colour LED RGB and monochromatic LED amber.

Main displays



Bus station



Metro station



Interchange node



FULL-COLOUR LED RGB



LOW POWER CONSUMPTION

8 hours of operation without power



INVOICES FOR ELECTRICITY

four times lower than in the case of LCDs



THE BRIGHTEST DISPLAY

up to 5000 nits



FULL-COLOUR

LED RGB



15-YEAR LIFETIME

The longest possible lifecycle 100,000 MTBF hours



PROTECTION LEVEL AND IMPACT RESISTANCE

IP 54 to IP65, IK07 to 09, many possible sensors and options

MONOCHROMATIC LED AMBER



LOW POWER CONSUMPTION

8 hours of operation without power



INVOICES FOR ELECTRICITY

four times lower than in the case of LCDs



THE BRIGHTEST DISPLAY

up to 5000 nits



MONOCHROMATIC

One-colour amber display



15-YEAR LIFETIME








The longest possible lifecycle 100,000 MTBF hours



PROTECTION LEVEL AND IMPACT RESISTANCE

IP 54 to IP65, IK07 to 09, many possible sensors and options

LED PASSENGER INFORMATION DISPLAYS

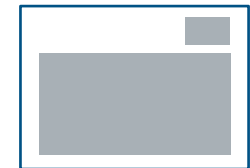
PLATFORM LED DISPLAYS						MAIN LED DISPLAYS	
TYPE	Platform P3 RGB	Platform P4 RGB	Platform P6 RGB	Platform P4 amber	Platform P6 amber	Main P4 RGB	Main P6 amber
							
Technology	LED RGB full colour	LED RGB full colour	LED RGB full colour	Monochromatic LED SMD amber	Monochromatic LED SMD amber	LED RGB full colour	Monochromatic LED SMD amber
Resolution of single LED module (pix*)	64x64	32x32	16x32	16x32	16x32	32x32	16x32
Pixel pitch (mm)	3	4	6	4	6	4	6
Luminance [nits]	4000	4000	4000	4500	4500	4500	4000
Number of rows	Customised	Customised	Customised	Customised	Customised	Customised	Customised
IP protection	IP54 / IP65	IP54 / IP65	IP54 / IP65	IP54 / IP65	IP55 / IP65	IP54 / IP65	IP22 / IP54 / IP65
Temperature [°C]	-25°/+50°	-25°/+50°	-25°/+50°	-25°/+50°	-25°/+50°	-25°/+50°	-25°/+50°
MTBF [h]	100000	100000	100000	100000	100000	100000	100000
Vac supply	230 V 50 Hz	230 V 50 Hz	230 V 50 Hz	230 V 50 Hz	230 V 50 Hz	230 V 50 Hz	230 V 50 Hz
Anti-vandalism	✓	✓	✓	✓	✓	✓	✓
Brightness sensor	✓	✓	✓	✓	✓	✓	✓
Glass break sensor	✓	✓	✓	✓	✓	✓	✓
Case opening sensor	✓	✓	✓	✓	✓	✓	✓
Shock sensor	✓	✓	✓	✓	✓	✓	✓
Anti-reflective glass	✓	✓	✓	✓	✓	✓	✓
Control system	DVI, HDMI, LAN, serial,	DVI, HDMI, LAN, serial,	DVI, HDMI, LAN, serial,	DVI, HDMI, LAN, serial,	DVI, HDMI, LAN, serial,	DVI, HDMI, LAN, serial,	DVI, HDMI, LAN, serial
Options	Digital/analog clock, Camera, Emergency alert, Double-sided Emergency SOS, Text-to-speech	Digital/analog clock, Camera, Emergency alert, Double-sided Emergency SOS, Text-to-speech	Digital/analog clock, Camera, Emergency alert, Double-sided Emergency SOS, Text-to-speech	Digital/analog clock, Camera, Emergency alert, Double-sided Emergency SOS, Text-to-speech	Digital/analog clock, Camera, Emergency alert, Double-sided Emergency SOS, Text-to-speech	Digital/analog clock, Camera, Emergency alert, Double-sided Emergency SOS, Text-to-speech	Digital/analog clock, Camera, Emergency alert, Double-sided Emergency SOS, Text-to-speech
Total size [mm]	1200 x 750	1352 x 976	1258 x 409 x 322	884 x 510 x 192	1080 x 557	2500 x 1500	1524 x 798 x 228

*Total resolution equals the multiplicity of single units resolution

PLATFORM LCD TFT PASSENGER INFORMATION DISPLAYS

PLATFORM LCD TFT DISPLAYS

TYPE	Platform LCD 32	Platform LCD 42	Platform LCD 46	Platform LCD 49	Platform LCD 55
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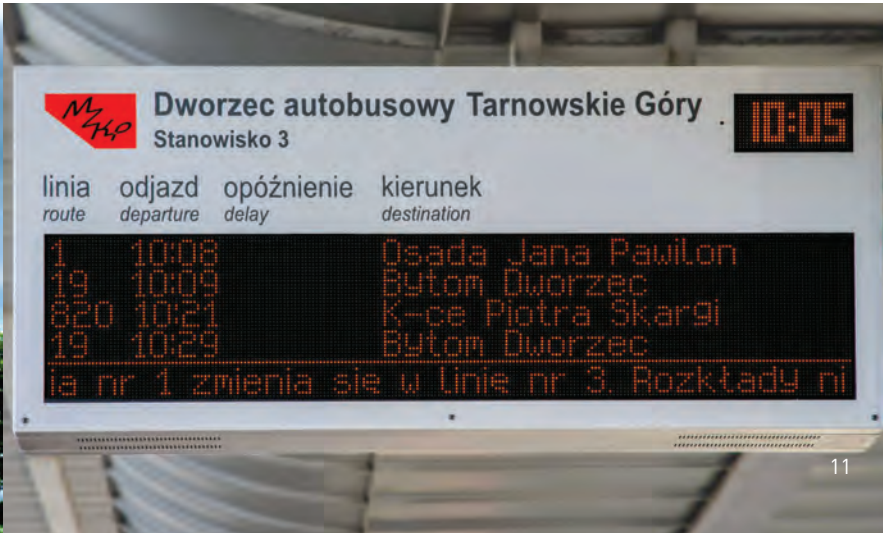
Technology	LCD TFT	LCD TFT	LCD TFT	LCD TFT	LCD TFT
Resolution	1920x1080	1920x1080	1920x1080	1920x1080	1920x1080
Screen size (inch)	32"	42"	46"	49"	55"
Luminance [nits]	500-2500	500-2500	500-2500	500-2500	500-2500
IP protection	IP55 / IP65	IP55 / IP65	IP55 / IP65	IP55 / IP65	IP55 / IP65
Temperature [°C]	-25°C / +50°C	-40°C / +45°C	-25°C / +50°C	-10°C / +45°C	-10°C / +45°C
MTBF [h]	50 000	50 000	50 000	50 000	50 000
Vac supply	230 V 50 Hz	230 V 50 Hz	230 V 50 Hz	230 V 50 Hz	230 V 50 Hz
Anti-vandalism	✓	✓	✓	✓	✓
Brightness sensor	✓	✓	✓	✓	✓
Glass break sensor	✓	✓	✓	✓	✓
Case opening sensor	✓	✓	✓	✓	✓
Shock sensor	✓	✓	✓	✓	✓
Anti-reflective glass	✓	✓	✓	✓	✓
Control system	DVI, HDMI, LAN, serial	DVI, HDMI, LAN, serial	DVI, HDMI, LAN, serial	DVI, HDMI, LAN, serial	DVI, HDMI, LAN, serial
Options	Digital/analog clock, Camera, Redundant power supply	Digital/analog clock, Camera, Redundant power supply	Digital/analog clock, Camera, Redundant power supply	Digital/analog clock, Camera, Redundant power supply	Digital/analog clock, Camera, Redundant power supply
Total size [mm]	540x820x312 (±30)	1116x698x501 (±30)	750x1200 (±30)	1350x800x500 (±30)	1400x1000x200 (±30)

OPTIONS FOR PASSENGER INFORMATION DISPLAYS

TYPE	Emergency panel	Text-to-speech button	Hidden camera	Standard camera
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Functions	SOS & TTS	TTS only	Monitoring	Monitoring
Mounting options	Pole, shelter	Pole, shelter	Built-in	Pole
IP Protection	IP54	IP54	IP54	IP67
Total size (mm)	106x250	ø 85	10x10	ø 141





REAL TIME INFORMATION

arrivals, departures, warnings, tourist or city information



VARIOUS SIZES AND ADDITIONAL BUTTONS

emergency panel, text-to-speech option



EASY REMOTE MANAGEMENT

of a single device or group of devices



RESISTANT

to severe conditions, vandal-proof IP65 and IK08



E-PAPER SOLUTIONS

Future independent of power grid

Timetable in E-paper technology displays sharp, readable content that does not flicker, is easy to read at wide angles and clearly visible even in full sun. Electronic paper is the energy-saving master: power is mainly consumed when updating the timetable and can be provided by a solar panel. This is a good solution wherever the power grid is not easily accessible. The image is displayed in black, white and grey scale. The housing can be made of steel, aluminium or a special non-flammable material of high vandal resistance. The device works 24 hours a day, 365 days a year. The update of passenger information is carried out via a 3G network and is centrally managed. There are many other options. You will be happy – forget about invoices for electricity.

Smart City
Platform displays



Low power




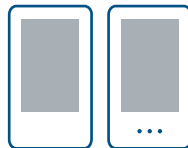


Bus stop



Tram stop



TYPE	EP13	EP13x2	EP32	EP42
				
Technology	E-paper	E-paper	E-paper	E-paper
Color of content	Monochrome	Monochrome	Monochrome	Monochrome
Color scale	16 shades of gray	16 shades of gray	16 shades of gray	16 shades of gray
Control system	LAN, internet, GSM	LAN, internet, GSM	LAN, internet, GSM	LAN, internet, GSM
IP Protection	IP 65	IP 65	IP 65	IP 65
IK class	IK 08	IK 08	IK 08	IK 08
Temperature [°C]	-20°C – 50°C	-20°C – 50°C	-20°C – 50°C	-20°C – 50°C
Supply	12V	12V	12V	12V
Resolution [pix]	1600 x 1200	1600 x 1200	2560 x 1440	2880x2160
Buttons	optional/depending on the application	optional/depending on the application	optional/depending on the application	optional/depending on the application
Options	TTS	TTS	TTS	TTS
Backlight	✓	✓	✓	✓
Anti-glare	✓	✓	✓	✓
Casing	Acrylic + stainless steel in RAL color	Acrylic + stainless steel in RAL color	Acrylic + stainless steel in RAL color	Acrylic + stainless steel in RAL color
Working time	24/7	24/7	24/7	24/7
Total size [mm]	350x500x50	350x800x50	570x840x62	663x1140x80



820

Katowice
Piotra Skargi



203



SOLARIS





PL SK 185HV


ELECTRONIC DESTINATION DISPLAYS FOR PUBLIC TRANSPORT VEHICLES


Technologies: LED, LCD, TFT


Simplify passenger mobility and provide clear reliable information thanks to destination displays.
Electronic destination boards for public transport vehicles usually display the route number, destination, or the route number and name from the transit system. Dysten manufactures front, side and rear displays.

Destination displays 





Bus 

Tram 

Trolleybus 

Light Rail 

DESTINATION DISPLAYS

DESTINATION DISPLAYS FOR TRAMS, BUSES, LIGHT RAILWAY				
TYPE	Front vehicle board	Side vehicle board	Rear vehicle board	Internal displays
				
Technology	LED RGB or amber	LED RGB or amber	LED RGB or amber	LCD TFT
Pixel pitch (mm)	6, 8, 10	6, 8, 10	6, 8, 10	-
Resolution (pix)	from 16x112	from 16x80	from 16x16	1920x1080
IP Protection	IP54	IP54	IP54	IP54
Temperature	-25°C / +50°C	-25°C / +50°C	-25°C / +50°C	-25°C / +50°C
MTBF (h)	80000	80000	80000	50000
Brightness sensor	✓	✓	✓	✓
Glass break sensor	✓	✓	✓	✓
Case opening sensor	✓	✓	✓	✓
Anti-reflective glass	✓	✓	✓	✓
Control system	DVI, HDMI, LAN, serial	DVI, HDMI, LAN, serial	DVI, HDMI, LAN, serial	DVI, HDMI, LAN, serial
Total size [mm]	110x700 / 135x900 / 170x120	110x500 / 135x700 / 170x90	110x110 / 135x135 / 170x170	According to clients needs

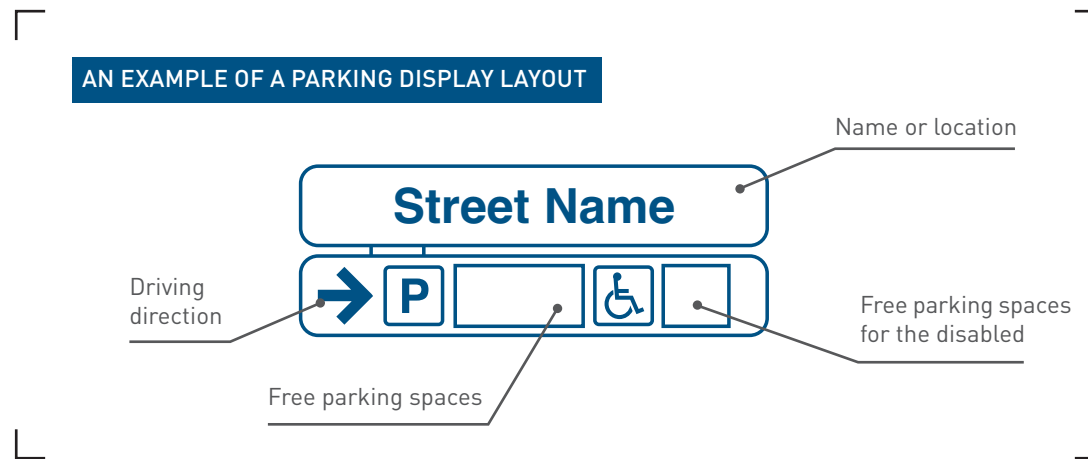


PARKING DISPLAYS

Technology: full colour LED RGB



Accurate information is very important for motorists searching for a parking space in towns, cities, at airports. Parking display helps locating free parking spaces as well as reducing traffic, vehicle exhaust emissions, noise, and fuel consumption. DYSTEN is a manufacturer of dynamic parking information boards, so the company can design and create a LED parking display in any shape and colour, and include information about parking spaces according to clients' needs.



FLEXIBLE

- the colour of the housing, shape, order of information and many other parameters can be customised



EASY INSTALLATION

On existing structures, such as street lamp posts, information signs over the road. On the pole supplied with the device. On other construction adapted to the city architecture



MONITORING

- is an option



REAL TIME

Display available parking space counts in real-time



VISIBILITY

Outstanding visibility at all weather conditions



LOW POWER

consumption



RESISTANT

Robust construction with adequate mechanical protection for indoor and outdoor use



EU NORMS




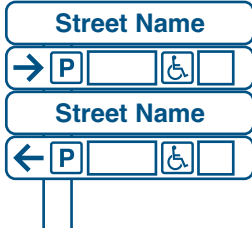
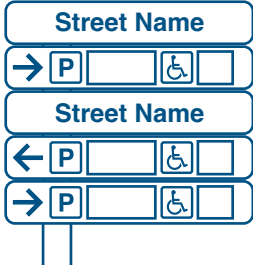
The device is compliant with European norms and regulations



FULLY SEALED

electronics

PARKING DISPLAYS

Number of modules	1	2	3	4	5
					
Type	LED RGB full colour	LED RGB full colour	LED RGB full colour	LED RGB full colour	LED RGB full colour
Technology	LED SMD	LED SMD	LED SMD	LED SMD	LED SMD
Number of displays	2 (3 and 2 digits)	2 (3 and 2 digits)	2 (3 and 2 digits)	2 (3 and 2 digits)	2 (3 and 2 digits)
Pixel pitch	6	6	6	6	6
Luminance [nits]	2500	2500	2500	2500	2500
Number of rows	1	1	1	1	1
IP protection	IP54	IP54	IP54	IP54	IP54
Temperature [°C]	-30°/+50°	-30°/+50°	-30°/+50°	-30°/+50°	-30°/+50°
MTBF [h]	100000	100000	100000	100000	100000
Vac supply	230 V 50 Hz	230 V 50 Hz	230 V 50 Hz	230 V 50 Hz	230 V 50 Hz
Anti-vandalism	✓	✓	✓	✓	✓
Brightness sensor	✓	✓	✓	✓	✓
Glass break sensor	✓	✓	✓	✓	✓
Case opening sensor	✓	✓	✓	✓	✓
Shock sensor	✓	✓	✓	✓	✓
Anti-reflective glass	✓	✓	✓	✓	✓
Control system	DVI, HDMI, LAN, serial,	DVI, HDMI, LAN, serial,	DVI, HDMI, LAN, serial,	DVI, HDMI, LAN, serial,	DVI, HDMI, LAN, serial,
Options	Surveillance camera	Surveillance camera	Surveillance camera	Surveillance camera	Surveillance camera
Total size [mm]	1450x250	1450x500	1450x750	1450x1000	1450x1250

ul. Barlickiego
ul. Wybrzeże Armii Krajowej

↑ P 61 ♿ 9

ul. Zwycięstwa przy DTŚ

← P 71 ♿



Nie dotyczy
służb miejskich

ul. Wybrzeże Armii Krajowej

↑ P 25 ♿ 2

ul. Barlickiego

→ P 14 ♿

← P 21 ♿ 2

ul. Konopnickiej
ul. Sienkiewicza

→ P 53 ♿

Plac Inwalidów Wojennych

↑ P 9 ♿ 3

ul. Studzienna

→ P 2 ♿ 0



PRZEBUDOWA SKRZYŻOWANIA
TOSZECKA - MYŚLIWSKA -
PIONIERÓW



VARIABLE MESSAGE SIGNS

Technology: full colour LED RGB

Everyone entering the city by car dreams about easy journey without traffic jams, car accidents, inhalation of exhaust fumes, or road repairs. Variable Message Signs are a solution that can increase traffic flow and reduce the impact of unwanted phenomena. That is why the number of VMS systems is growing rapidly. The Dysten company can manufacture any type of Variable Message Signs. Boards and signs with variable messages are compatible with European standards and guidelines for boards and variable message signs (EN-PN 12966). Our engineering solutions extend the VMS lifecycle up to 15 years thanks to specially selected components. The devices are energy efficient and can emit multiple signals depending on traffic conditions and the needs of road administration. Their excellent visibility on the road, regardless of the season or weather conditions, remote control via LAN or GSM with TCP/IP protocol, and our own management software are the advantages of Dysten VMS solutions.

Smart City 

VMS 

Streets
Roads
Motorways 

SIGNS WITH VARIABLE CONTENT

made in the LED technology enable:



INFORMING MOTORISTS
about current traffic conditions



WARNING
about threats



SUGGESTING DETOURS
in the event of traffic problems






DIRECTING MOTORISTS TO THE RIGHT LANE
on the motorway



INFORMING
about road conditions



DISPLAYING ROAD SIGNS
- change of the speed limit etc.

TYPE	VMS 192x128	VMS 448x128	VMS 128x64
			
Technology	LED RGB	LED RGB	LED RGB
Resolution (pix)	192x128	448x128	128x64
Pixel pitch (mm)	16	16	12
Optical parameters	R 3 / B 6 / L 3	R 3 / B 6 / L 3 / C2	R 3 / B6 / L3 / C2 / P3 / T1+T2+T3
Min. active area (mm)	3072x2048	2048 x 7168	1536 x 768
LED lifetime	150000	150000	150000
IP protection	IP54	IP56	IP56
Temperature [°C]	-40° / +60°	-40° / +60°	-40° / +60°
Max power consumption (W)	4000	11500	3500
Vac supply	230V 50Hz	230V / 400V 50Hz	230V 50Hz
Brightness sensor EN PN 12966 CE Failure detection	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓
Control system	TCP/IP: LAN Ethernet, GSM	TCP/IP: LAN Ethernet, GSM	TCP/IP: LAN Ethernet, GSM
Total size without construction [mm]	3400x2400	7288x2168	1660x880



Welcome
to the City

- First trip
- Top attractions
- Sightseeing
- Travel tips

Warnings Accommodation Shopping Help






SMART CITY TOTEMS AND INFO KIOSKS

Technologies: full-colour LED RGB or LCD TFT

Smart city displays like totems and info kiosks are a universal way to easily present important information to passengers and tourists. This is a proven solution in high-traffic areas, city centres, at stations, shopping malls, airports, crowded squares and outside large cultural facilities. They can be equipped with touch functions, LCD or LED screen, and buttons. Free-standing interactive devices are manufactured in one- or two-sided version and tailored to customer needs.



TYPE	Smartcity LED totem	Info-kiosk INF46	Info-kiosk INF32
			
Technology	LED	LCD TFT	LCD TFT
Resolution (pix)	224x384	1920x1080	1920x1080
Screen size (inch)	-	46"	32"
Pixel pitch (mm)	4	-	-
Luminance [nits]	4500	500-3000	500-3000
IP protection	IP54 / IP65	IP55 / IP65	IP55 / IP65
Temperature [°C]	-20°/+50°	-40°/+55°	-40°/+55°
MTBF [h]	100 000	50 000	50 000
Vac supply	230V 50Hz	230V 50Hz	230V 50Hz
Anti-vandalism	✓	✓	✓
Brightness sensor	✓	✓	✓
Glass break sensor	✓	✓	✓
Case opening sensor	✓	✓	✓
Shock sensor	✓	✓	✓
Anti-reflective glass	✓	✓	✓
Control system	DVI, HDMI, LAN, serial	DVI, HDMI, LAN, serial	DVI, HDMI, LAN, serial
Options	Double-sided, digital or analog clock, camera, emergency alert	Double-sided, digital or analog clock, camera redundant power supply, emergency alert	Double-sided, digital or analog clock, camera redundant power supply, emergency alert
Total size [mm]	1090x2633x280 (+-30)	2210x907x298 (+-30)	1040x1900x290 (+-30)

VIDEOWALL SOLUTIONS

Technologies: DLP, LCD TFT

Videowall is a solution using multiple displays set to work as a large common screen of big resolution. It is possible to implement it using different technologies, depending on crucial features expected by an end user. The control system enables presenting images from multiple sources at the same time.

MODULAR SYSTEM

Modular system, customised according to the amount of information you need to display. You can decide how much information is required. You can expand your display in future according to increasing demand. A single display is available from 46 up to 80 inches of the diagonal size.



LOW POWER CONSUMPTION

Possible solutions with power consumption less than 100 W per display.



BRIGHTNESS UP TO 800 NITS

All displays are designed for comfortable indoor use. Adjustable brightness enables creating an ergonomic tool for 24/7 operation.



PERFECT CONTRAST

All the available technologies provide crystal clear image with 1500:1 contrast or higher.



LONG LIFETIME

Depending on the display technology, we can provide up to 130.000 hours service in 24/7 operation.



HIGH RESOLUTION

For each display we can present native resolution up to 1920x1080 pixels and this value is multiplied by the number of screens, providing a large area to use with SCADA, GIS or any application used by your dispatchers.



EASY INTEGRATION

Easy integration with any system and image source - just connect your device to the videowall controller and you can view and manage it from your desk.

VIDEOWALL DISPLAYS		
TYPE	Rear projection	Narrow bezel LCD
Technology	DLP	LCD TFT
Resolution (pix) / unit	1024x768 up to 1920 x 1200	1920x1080
Screen size (inch) / unit	50" up to 80"	46" to 55"
Contrast ratio	1500:1	1200:1 - 3500:1
Brightness [nits]	up to 1580	450 - 700
Accessibility	Front / rear	Front / rear
Temperature [°C]	indoor use	indoor use
MTBF [h]	up to 130.000 (light source)	50 000
Vac supply	230V 50Hz	230V 50Hz
Redundancy	Light source	Power supply
Input signals	DVI, HDMI, LAN	DVI, HDMI, LAN
Total size [mm]	Customised	Customised



DYSTEN PA SYSTEM

Vehicle noise, horns, loud ambient sounds, electromagnetic interference and human distraction are typical operating conditions that Dysten engineers took into account when developing the new PA System. Devices such as the PUMI-1819-2 microphone set and DYSTO – the system audio controller – are very durable and work reliably in the most severe conditions. The loudspeakers are selected after the advanced computer analysis of the project data or acoustic measurements.



MICROPHONE SET

Durable aluminium housing, high mechanical resistance

Quick installation, easy operation

Reliable operation at low and high temperatures

High quality, directional condenser gooseneck microphone

Many protocols supported

Ready for uninterrupted work 24/7

Built-in gong

Low distortion, perfect intelligibility



DYSTO AUDIO CONTROLLER

The PA System controller is a device that provides all control and supervision functions, audio signal processing and routing for all IN/OUT interfaces in the system.

Supports many protocols, including TCP/IP

Efficient class D power amplifiers
Up to 8 AB zones for loudspeaker lines

Possible power extension

Flexible module configuration

Easy scalability

Digital audio stream transmission

Reach choice of loudspeaker types for perfect match conditions or architectural environment

Durability and reliability

Superior intelligibility

Perfect price/quality ratio

PA SYSTEM		
	Microphone set	Audio controller
TYPE	PUMI1819-2	Dysto
IP Protection	IP30	–
ANC	–	✓
IK Level	IK07	–
Power amplifiers	–	4 + 3
VAC Supply	12 V DC (Included)	230 V AC
Max power consumption (W)	20	3600 + 2800
Temperature [°C]	-10° / +40°	-5° / +55°
Ethernet	10/100 Mbps, RJ45	10/100 Mbps, RJ45
Protocols	SIP, VoIP, TCP/IP, UDP, DHCP, SNMP, RTP, SIP	SIP, VoIP, TCP/IP, UDP, DHCP, RTP, SIP, MP3, AAC, WMA, PCM G.711, ADPCM G.726, OGG Vorbis, Opus; NTP/SNTP, SSH, On Board Web, SNMP (trap, get/set) v2, v3; optional - DTFM i ISDN
Audio inputs	–	4
Additional equipment	gooseneck condenser microphone	–
Signal/noise ratio (dB A)	>60	>60
Frequency response (Hz)	80 – 20000	40 – 20000
THD	<1% @ 1kHz	<1% @ 1kHz @ 0dB
Audio monitor	built-in	–
Ports		4 USB 2.0, 4 RS
Weight (kg)	3	50
Size	250 x 171 x 61 mm	Rack 16U
Additional features	Limiter, volume control, Gong	Failure detection
In accordance with standards	PN-EN 60068-2-1:2009 PN-EN 60068-2-2:2009 IP PN-EN 60529:2003 IK PN-EN 50102:2001 PN-EN 55016-2-1:2014-09 PN-EN 55016-2-3:2010 +A1:2010+Ap1:2013=06 +AC:2013-06+A2:2014-09	PN-EN 60068-2-1:2009; PN-EN 60068-2-2:2009 PN-EN 60068-2-30:2009; PN-EN 60068-2-6:2008 PN-EN 60529:2003; PN-EN 55016-2-1:2014-09 PN-EN 55016-2-3:2010+A1:2010+Ap1:2013=06 +AC:2013-06+A2:2014-09; PN-EN 61000-4-2:2011 PN-EN 61000-4-3:2007 +A1:2008+IS1:2009+A2:2011 PN-EN 61000-4-4:2013:05; PN-EN 61000-4-5:2014-10 PN-EN 61000-4-6:2014-04

"The Dysten company designed, manufactured, delivered and installed a Dynamic Passenger Information System (...) along with a sound system (...). The equipment installed represents high-end quality and reliability, and the DYSTEN employees who implemented the system demonstrated exceptional professional skills."

Henryk Szudy,

Board Chairman of the Inter-Communal Association
of Passenger Transportation

"Dysten's reliable technology and services offer incredible value and provide continued success to Intelligent Transport System area."

Iqube GMBH, Germany

"Boards provided by Dysten were made in accordance with the specification, and employees demonstrated professionalism and flexibility during implementation. The boards are of high quality and work reliably."

Trapeze Switzerland GmbH





"Dysten is a reliable partner and the offered products are very high quality and technologically advanced."

GMV Innovating Solutions

"WASKO has been cooperating with Dysten for several years in the field of devices for Intelligent Transport Systems based on LED technology. The devices are technologically advanced and are always characterized by high quality workmanship."

WASKO SA

"Over the past 5 years, the company has proven itself to be a reliable and reliable partner, and the technical solutions offered meet high technical and quality standards. At that time, the company made and delivered specialized LED screens for the presentation of stock exchange listings for the Warsaw Stock Exchange."

Warsaw Stock Exchange





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Dysten Sp. z o.o. reserves the right to made changes to its product without notice. All information is subject to change.



European Union
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