

Yachting / Business / Architectural



Professional Audio Video
Light Engineering and Comfort

Entertainment
IT Networking



LIGHTING DESIGN CAMPUS PALAGI MARINE LIGHTS

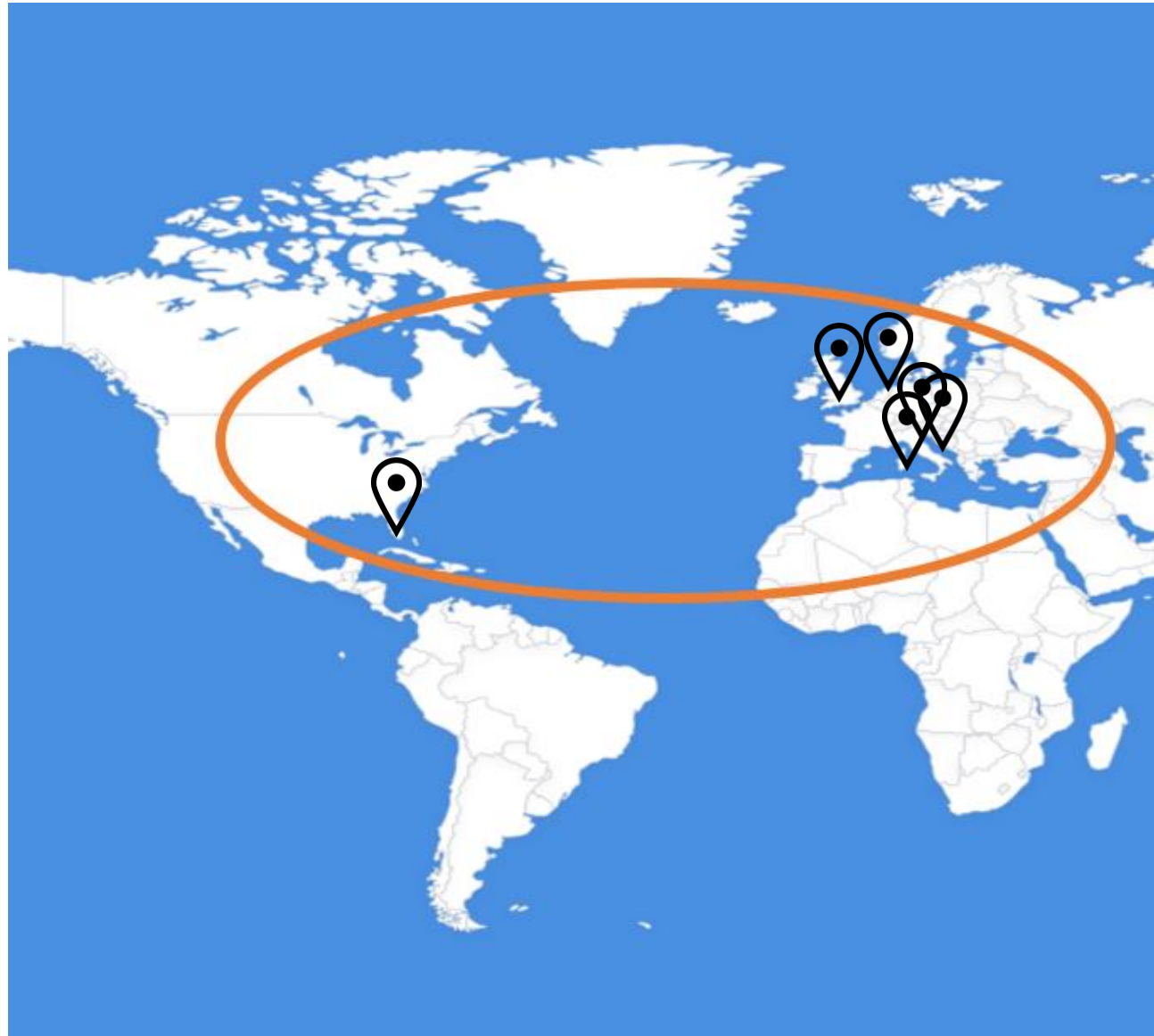
YBA

Yachting / Business / Architectural

- 20 YEARS OF EXPERIENCE
- 6 OFFICES
- 18 ASSISTANCE POINTS
- 700+ PROJECTS
- ESTABLISHED IN 1998
- AMERICAN & EUROPEAN COVERAGE
- GLOBAL SERVICE
- EXPERIENCED

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WHERE WE ARE



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- US and Caribbean

London (UK)

- North-East Atlantic

Aalsmeer (NL)

- NL and Northern Europe

Viareggio (IT)

- West Mediterranean

Ancona (IT)

- East Mediterranean

Milan (IT)

- North (business unit)

VIDEOWORKS WORLDWIDE

Professional Audio Video
Light Engineering and Comfort

Entertainment
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WHY ARE WE DIFFERENT

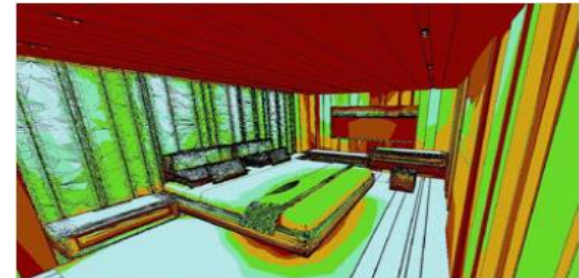


We are certified partners with Cisco, Crestron, Lutron, and we are the only Lloyd's registered System Integrator in the yachting industry.

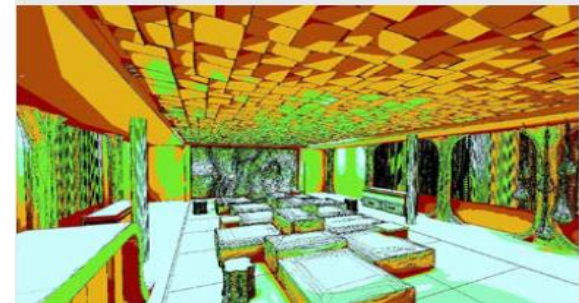


We can design apps for IOS and Android.

We do light design and **light engineering**.



Example of light engineering



LLOYD'S REGISTER

Videoworks is the only Lloyd's registered System integrator in the Superyacht industry.

We care about our clients and their cyber safety.



VIDEOWORKS S.p.A.

Via Albertini, 36 –

blocco E13

60131 Ancona - Italy

Lloyd's Register EMEA
Trieste Technical Support Centre
Galleria A. Protti, 1
34121 TRIESTE
ITALY
tel. +39 040 6706111
<http://www.lr.org>

FACTUAL STATEMENT VIDEOWORKS S.p.A. – CYBER ENABLED SYSTEM

Lloyd's Register EMEA carried out the assessment of the Videoworks S.p.A.

AV ENTERTAINMENT, CABIN AUTOMATION, CCTV, IT SYSTEMS

In accordance to the LR Cyber Enabled Ships ShipRight Procedures assignment for cyber descriptive notes for autonomous & remote access ships version 2.0, December 2017.

The system has been considered as capable to have an Accessibility Level ALS (Access for remote monitoring and control with onboard permission not required and onboard override not possible).

The assessment has identified that an appropriate cyber risk management governance system is in place to mitigate the risk of introducing vulnerabilities to cyber-attack, or other unauthorised access, during the design, procurement, construction and installation of the named systems.

Paolo Scialla
Lead Specialist Electrotechnical Systems
Lloyd's Register EMEA
T: +39 0406706111
E: paolo.scialla@lr.org

VISION

Vision

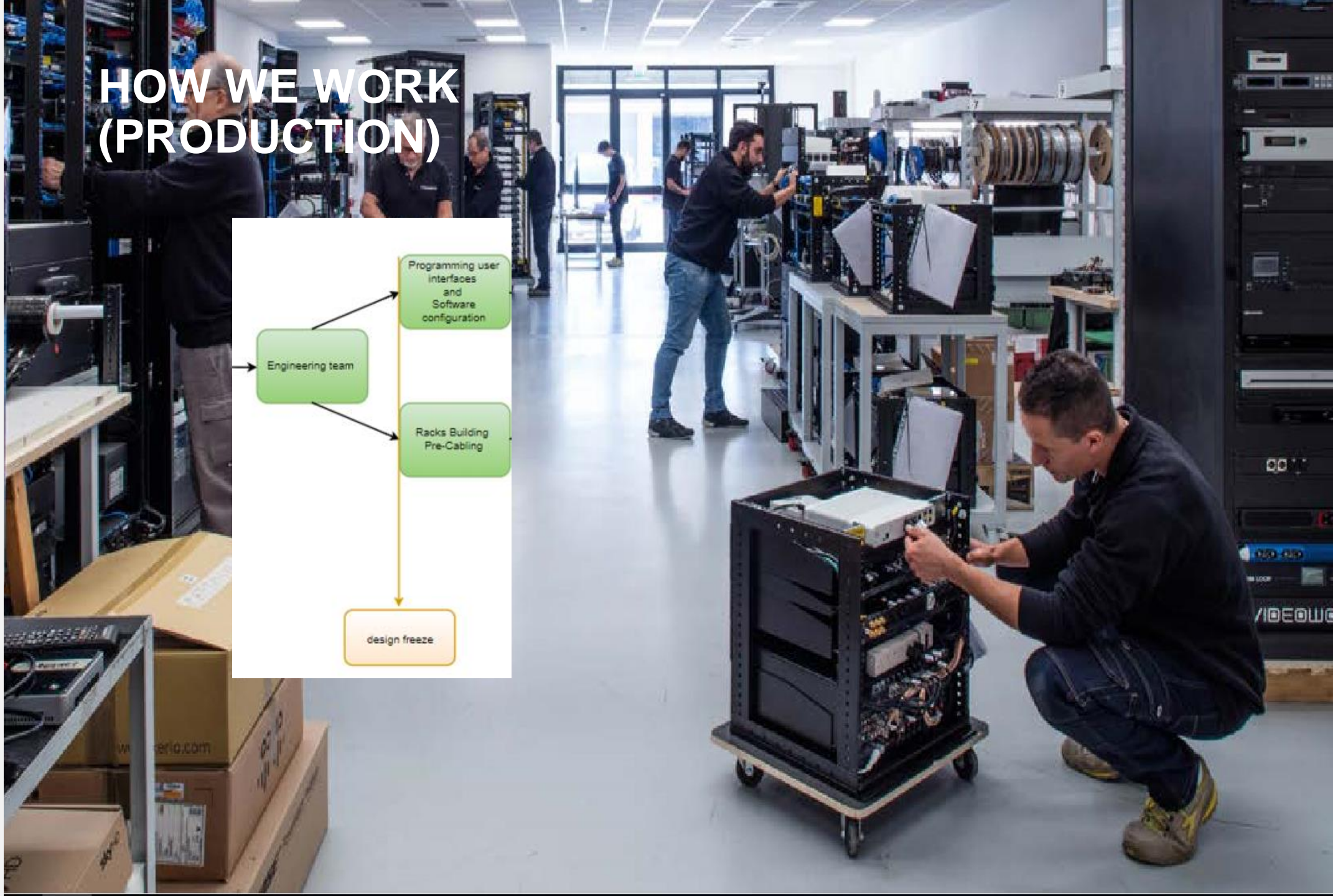
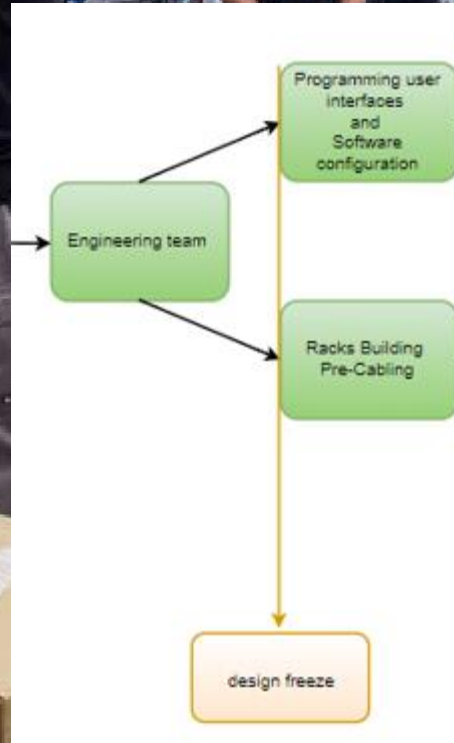
To be the global Audio/Video and IT leader that adds value to its clients' business and leisure, using cutting edge technologies and the finest European craftsmanship.



HOW WE WORK (PRODUCTION)

Professional Audio Video
Light Engineering and Comfort

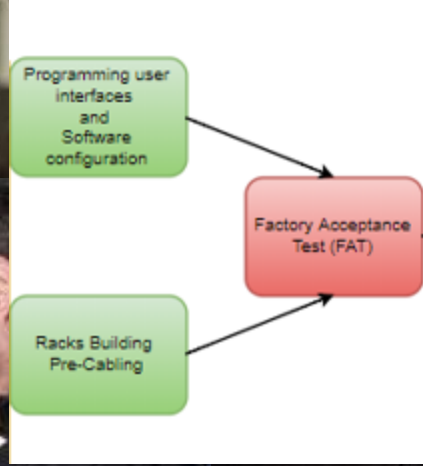
Entertainment
IT Networking



HOW WE WORK (FAT)

Professional Audio Video
Light Engineering and Comfort

Entertainment
IT Networking



OUR WORK



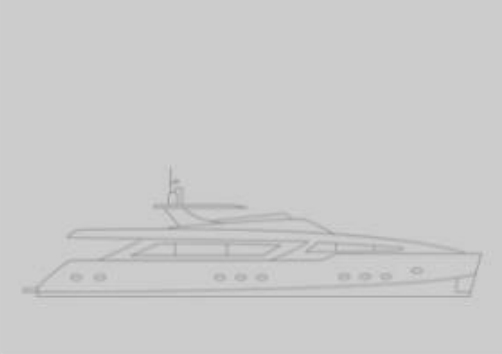
ADMIRAL - NCA571-IP
38m / Sage



BAGLIETTO - 10227
48m

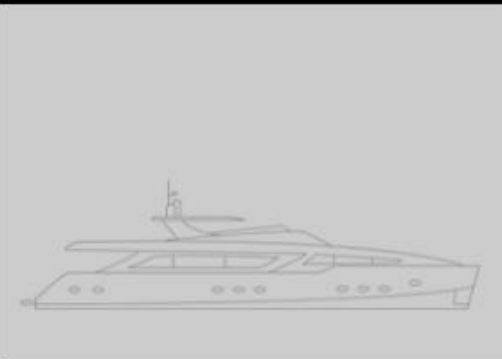


BAGLIETTO - MV0019
19m

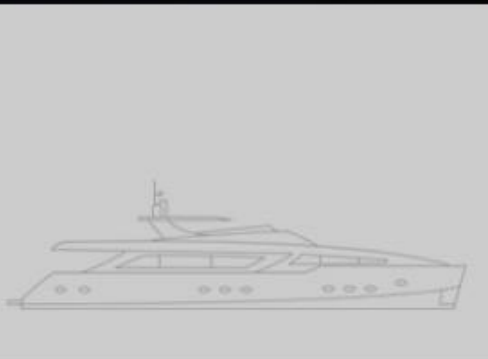


BENETTI - FB269
70m

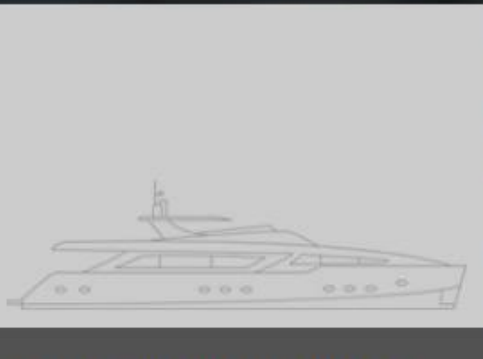
2017



BENETTI - FB272
99m



BENETTI - FB277
107m



CERRI CANTIERI NAVALI - CS5001
50m / AZUL



CDM - NAUTA AIR 111#15
34m



COLUMBUS - C04
79.5m



ROSSI NAVI - FR035
49m



SOUTHERN WIND - 105'
32m



VS Y - C003
64m



WIDER - 165.01
50m



PERINI - 2227
70m / SYBARIS

OUR WORK



FEADSHIP - 813
73m



ISA PALUMBO - 120.11
36m



PERINI - 2232
60m



PERSHING - 70
21m



PERSHING - 82
25m



PERSHING - 108
33m



RIVA - 76
23m / PERSEO



ROSSI NAVI - FR030
48m



ROSSI NAVI - FR031
63m



ROSSI NAVI - FR034
43m



CRN - 131
74m



CRN - 135
79m



CRN - 136 SUPERCONERO
50m



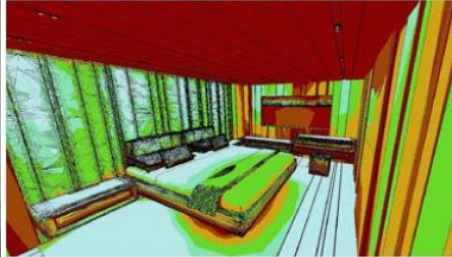
CRN - 137
62m



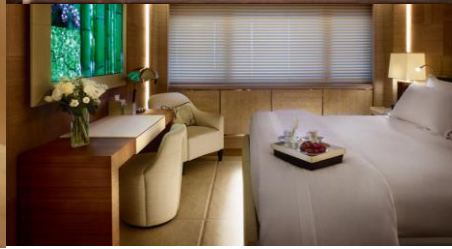
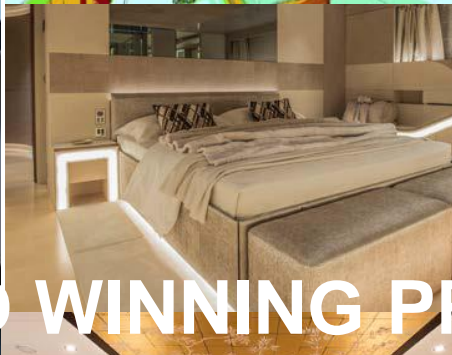
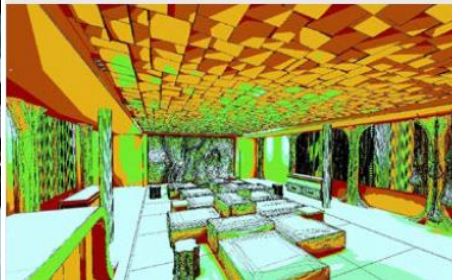
CUSTOM LINE - 108
33m

Professional Audio Video
Light Engineering and Comfort

Entertainment
IT Networking



Example of light engineering



SOME OF OUR AWARD WINNING PROJECTS

MORE OF OUR AWARD WINNING PROJECTS

Professional Audio Video
Light Engineering and Comfort

Entertainment
IT Networking



CERTIFICATIONS AND PARTNER CERTIFICATIONS



ShipRight Procedure for Cyber Security

PARTNERSHIPS



SONY

CLED displays



PERVASIVE DSP



Emo-recognition



REVOLUTION[®]
acoustics

Audio transducers



CO-DESIGN MARINE ACTIVE SPEAKER



Bluetooth tracking



GLASS APPS[®]

Switchable. Dimmable. Projectable.

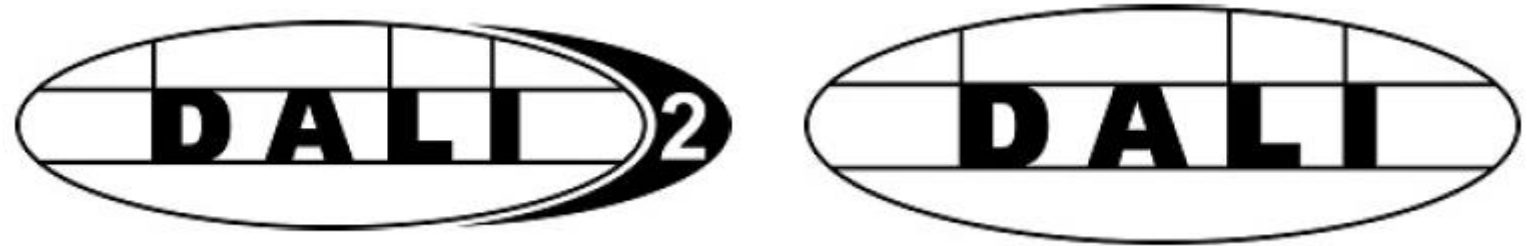
PDLC glasses

EDUCATIONAL PARTNERSHIPS



VOLTERRA ELIA
ISTITUTO ISTRUZIONE SUPERIORE





DALI DIGITAL ADDRESSABLE LIGHTING INTERFACE

History

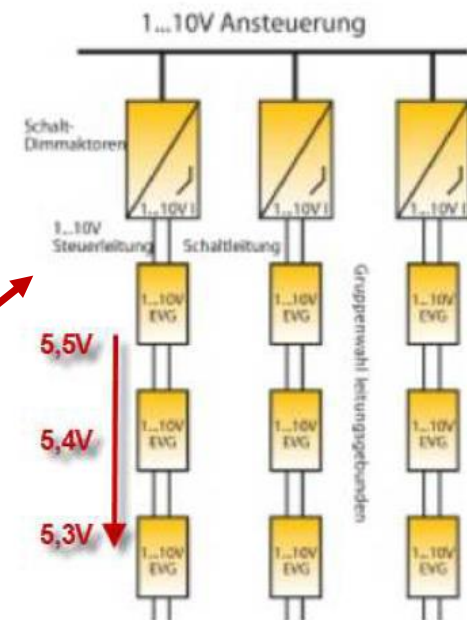
The demands on modern lighting technology are numerous. In former times there was but one objective, to provide light for visual tasks. Nowadays convenience, functionality and energy conservation are attractive features, which must be added as objectives. The traditional electric installation that is based on the simple wiring of light switches, dimmers and light consumers is inadequate of responding to these demands. Controls with analogue interfaces, like the 1-10V control, neither provide the flexibility nor the capability of controlling individual lights in a system. This makes the extension of an existing system a rather difficult task. This is why installation bus systems have been developed since the 1980's allowing a digital communication between all participating components of a lighting system or even in the engineering of Building Systems. High functionality and flexibility of the technical unit is ensured in these systems, where commands are exchanged between control devices and electric consumers.

In principle, DALI has established itself as the successor to the 1-10 V standard (electronic ballasts with 1-10 V interface) which is still dominating the market; DALI is also regarded as successor to the Digital Serial Interface (DSI). One of the main differences between these standards is that in the case of DALI, each control gear element can have individual intensity control values whereas in the case of the 1-10 V standard or DSI, all control gear elements always have the same intensity control value. Another difference is the communication: In the case of DALI, communication is bidirectional whereas in the case of the 1-10 V standard or DSI, communication is unidirectional (from control to control gear).

0/1 - 10V analog control

- dimmable and central controlling
- Disadvantage:
 - parasitic coupling
 - influence from cable length
 - numbers from luminaries are depending on the controls
 - influence of each member
 - danger at polarity reversal
 - sender/source no Standard

Only broadcast commands

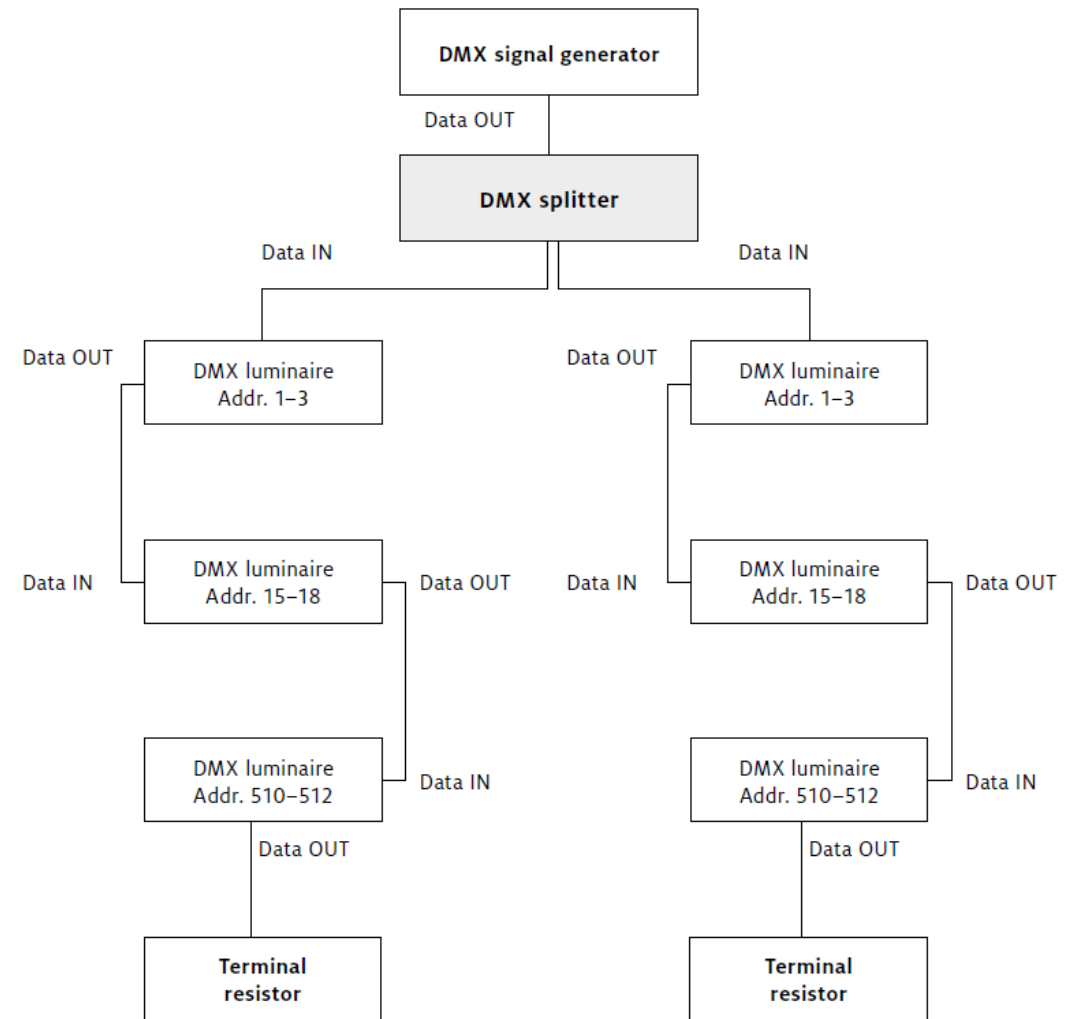


DMX: Features

- Usable data transmission rate:
250 000 bit/s
- Refresh rate: 30 times per second
- Max. 512 channels (addresses) per universe (control circuit)
- Max. of 32 luminaires directly one after the other; for more luminaires, a splitter is required
- Unidirectional: no information is reported
- Two-wire control line (shielded, terminal resistance)
- Application: illumination of façades (large number of lighting points, dynamic light)

- 120 Ohm and 24 AWG
- Data +, Data-, Shield per ground
- Terminator Resistor 0,25W, 120 Ohm
- Danger at polarity reversal

DMX: System design



max. 32 receivers in case of standard DMX connection

DALI ADVANTAGES

Overview

DALI is a protocol that controls an actuator (luminaire) via a master. It uses 2 byte telegrams. The target address is defined in the first byte and the command (forward frame) is defined in the second byte.

If the command is a query, the actuator must return a 1 byte answer (backward frame) within a specific period of time.

- As it is only the target that is specified in a *DALI* command, the transmitter cannot be determined (if there are several in the system).
- If multiple transmitters send a command, the command is corrupted and is no longer readable.

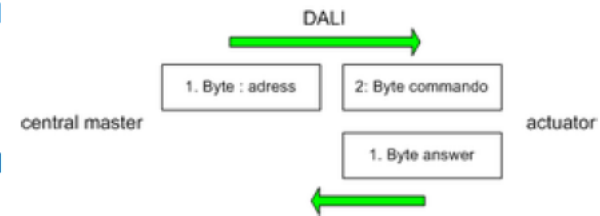
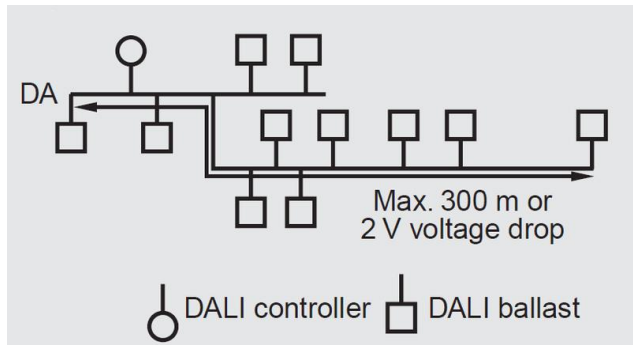
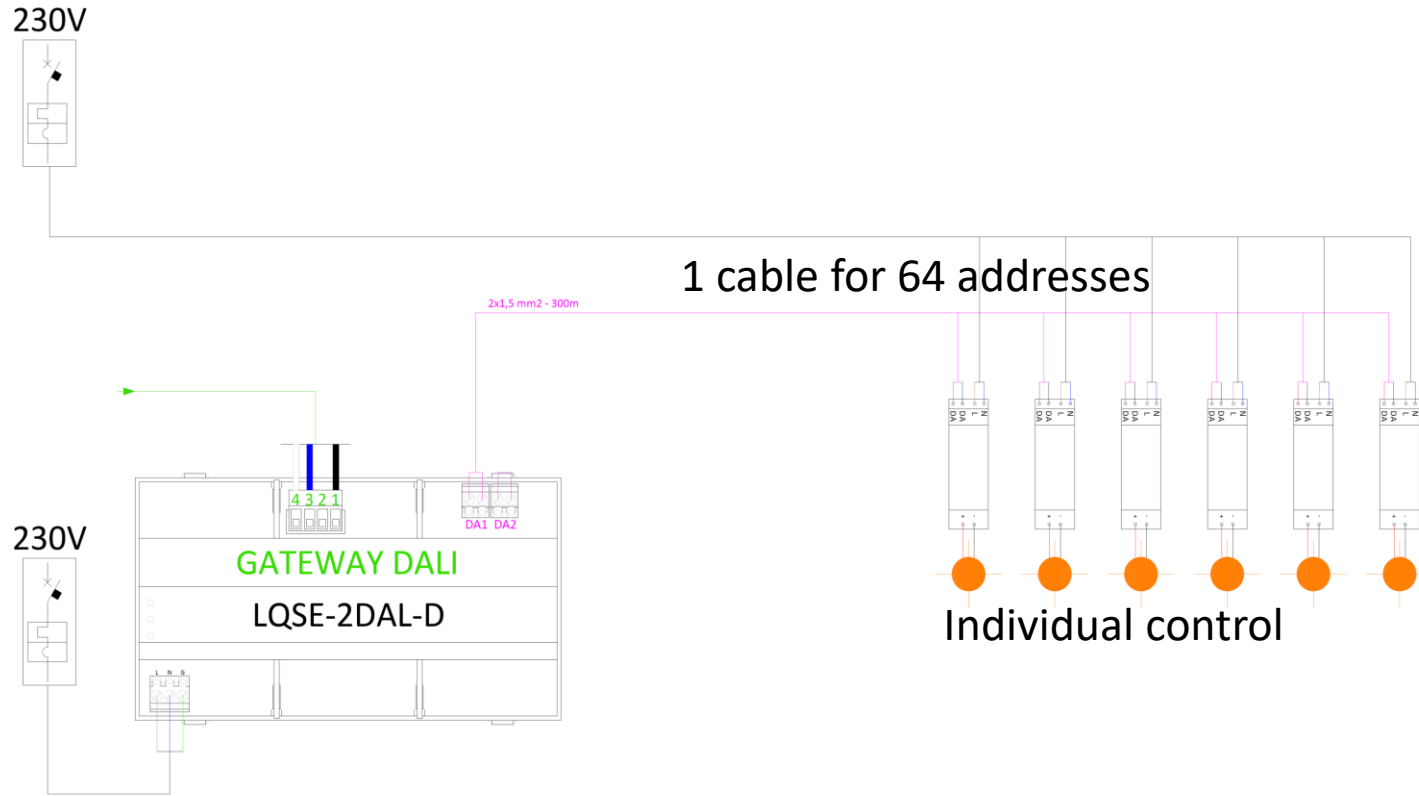


Figure 1: DALI telegram structure

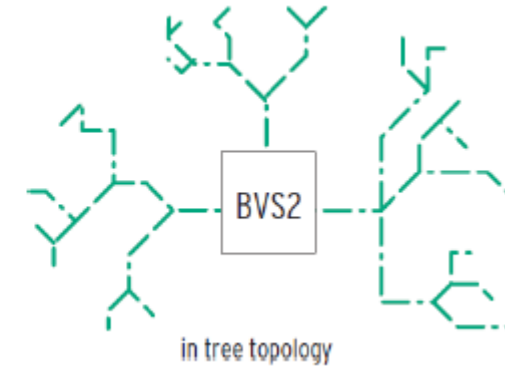
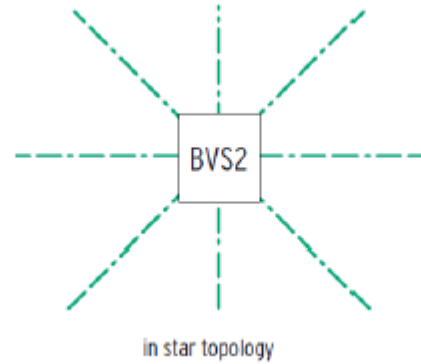
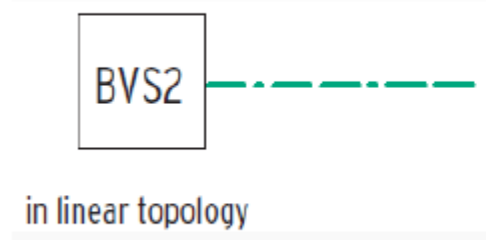
DALI ADVANTAGES



Free polarity

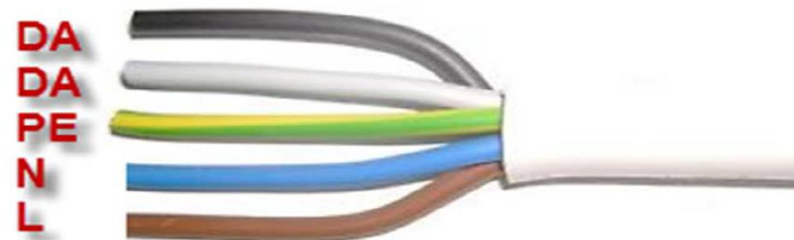
Conductor cross-section	Max. line length
2 x 0.50 mm ²	100 m
2 x 0.75 mm ²	150 m
2 x 1.00 mm ²	200 m
2 x 1.50 mm ²	300 m

DALI ADVANTAGES



Cabling material

- twisted (one twist every five metres) or braided pair cable approved for low-voltage installations. No safety extra-low voltage, no shielding, no terminator
- laying as phase-conductor
- mains and control line in one cable is allowed. (for example. 5x1,5mm²)



System limits

System limits are defined in IEC 60929, allowing for devices from different manufacturers to be integrated. A particular point to note is that the manufacturers represented in the *DALI* AG test their devices together in order to ensure a high level of functional reliability.

- Reference data transmission rate (1200 bits/sec)
Enables error-free operation of the system. The physical low level signal is defined on the receiver by an interface voltage of 0 V (-4.5 V to +4.5 V). The high level signal is defined on the receiver by an interface voltage of 16 V (9.5 V to +22.5 V). A voltage drop between transmitter and receiver of max. 2 V is permitted on the interface lines.
- In effect, 35 commands per second are possible based on the reference data transmission rate (1200 bit/s) and use of *eD* commands.
- Maximum system current
The maximum current that can be supplied by a central interface line is 250 mA. Every subscriber connected to the interface may consume max. 2 mA. This limit must be taken into account when the interface supply is selected.
- Limited system size
A maximum of 64 actuators (luminaires) with one unique address can be connected in one system.
- Max. 100 *DALI* loads on one *DALI* circuit permitted. [Precise list of *DALI* loads...](#)
- Two-wire control line
Two wires should have basic insulation. Single-layer insulation of one wire is sufficient. Control and supply lines can be cabled together, observing the minimum line cross-sections in the following table. The maximum cable length between the first and last connected system subscribers may not exceed 300 metres with a line diameter of 1.5 mm².

IEC 62386 standard

Purchase standards via the [IEC website](#)
 More details on IEC 62386: [DiiA website](#)

Red text = DALI-2 versions published

Part 101: General requirements – System components

Part 102: General requirements – Control gear

Part 104: General requirements – Wireless and alternative wired systems *In progress*

Part 103: General requirements – Control devices

Parts 2xx: Particular requirements for control gear

Part 105: General requirements – Firmware update *In progress*

Parts 3xx: Particular requirements for control / input devices

Published:
Part 201: Fluorescent lamps
 Part 202: Self-contained emergency lighting
 Part 203: Discharge lamps (excluding fluorescent lamps)
 Part 204: Low voltage halogen lamps
 Part 205: Supply voltage controller for incandescent lamps
 Part 206: Conversion from digital signal into DC voltage
Part 207: LED modules
 Part 208: Switching function
 Part 209: Colour control

Published:
Part 216: Load referencing
Part 217: Thermal gear protection
Part 218: Dimming curve selection
Part 220: Centrally-supplied DC emergency operation
Part 221: Load shedding
Part 222: Thermal lamp protection
Part 224: Integrated light source
In progress:
 Part 219: Power measurement
 Part 223: Light-output compensation over lifetime
 Part 225: Colour Tc
 Part 226: Colour xy

Published:
Part 301: Push buttons
Part 302: Absolute input devices
Part 303: Occupancy sensors
Part 304: Light sensors
Part 332: Input control devices - Feedback
Part 333: Manual configuration
In progress:
 Part 307: Relative input devices
Future part:
 Part 305: Colour sensor

For Parts 207, 209 and others, DiiA adapts DALI version-1 test specifications for use with DALI-2.

Updated: Dec 2018



Digital Illumination
Interface Alliance



www.videoworksgroup.com

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