



Case Study

**CERN Visit Points:
Control Centre**



Project

Permanent exhibition: Video-playable LED Wall
and LED ceiling elements

Installed Technology

LED Strips L25-250, LED Intelligence,
System Power Supply 4E, Pixel-Gate Light

In Operation

November 2013

Partner

Exhibition concept and design,
scenography
Atelier Brückner GmbH
Krefelder Straße 32
70376 Stuttgart
Germany

Media planning and installation
iart ag
Mülhauserstrasse 111
4056 Basel
Switzerland

Reference customer

CERN - The European Organization
for Nuclear Research
1211 Geneva 23
Switzerland

Photography

Michael Jungblut

The Project: Data streams in the world's largest particle accelerator. Visible to everyone.

The European Organization for Nuclear Research, better known as CERN, goes into the minutest detail to probe and discover the origins of the universe. The organization consists of 21 countries, which in 2012 created a furor with the discovery that the "God particle" behaves just as predicted.

Currently, scientists are researching the properties of dark matter – stuff that's straight out of a science fiction novel. It's the type of thing that's practically tailor-made to stir interest in basic research in physics and to make science fascinating to the public.

And, that interest is in fact enormous: the permanent exhibition "Universe of Particles" attracts 60 to 70-thousand visitors to Geneva annually. Reason enough for CERN to extend the show by adding three new Visit Points. One of them is the control centre.

With the help of a lighting installation, this part of the exhibition renders the immense data streams visible in order to bring to life the magnitude of data that actually flows into the real particle accelerator control centre during one of the many experiments at CERN.

The control centre was planned and designed by Atelier Brückner GmbH. The media planning and installation was carried out by iart ag.





The Project Requirements: Perfect control perfectly integrated.

A central element of the exhibition space is a 3 × 13 meter wall on the long side of the room. The front wall of the room serves as a projection surface for presentations. With the help of LED light, the long wall visualizes an abstract form of the data flow in the CERN control centre that closely resembles the display of an equalizer.

This required a flexible, video-playable LED system that was integrated easily on the wall and on part of the ceiling.

Requirements in Detail:

- Lighting elements controlled from a central unit
- Individually addressable units
- Video playability
- Minimal effort for integration on wall, ceiling and floor
- Long service life of the lighting elements
- Competitive installation and operating costs
- Design flexibility in terms of light color, dimmability and video playability

Schnick-Schnack-Systems LED solutions met all the requirements so there were no obstacles to completing the project.

Coherent down to the last detail: The solution from Schnick-Schnack-Systems.

To achieve the desired "Equalizer Effect" and to deliver excellent value for the available budget, Schnick-Schnack-Systems relied on the Series L LED Strips. They are monochromatic and with a length of 25 cm offer the highest possible flexibility. What's more, with an Intelligence each strip can be individually controlled as required.

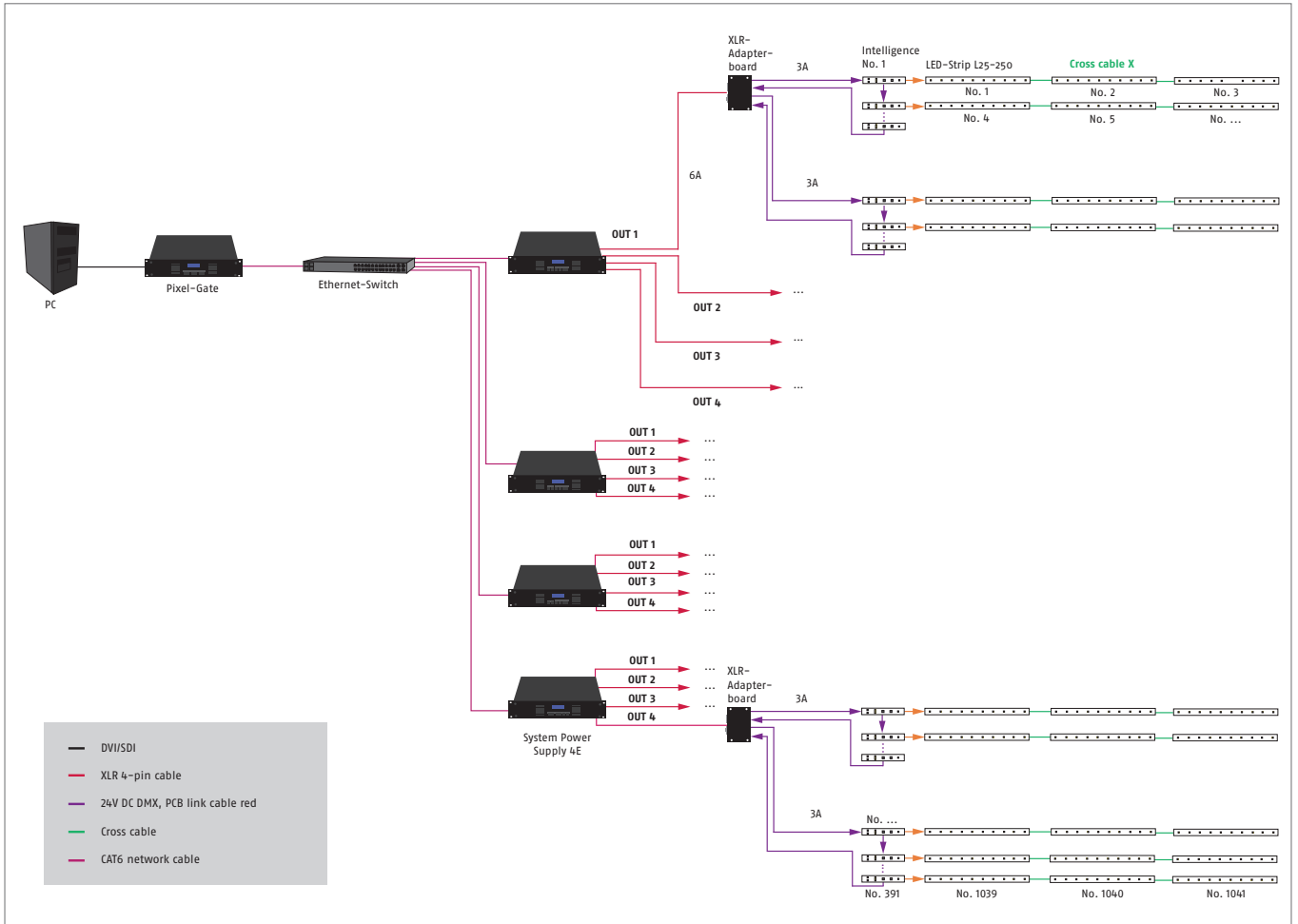
The distance between each LED on these strips is 25 mm – perfect for ensuring a homogenous illumination. Thanks to the Lehmann Modulation invented by Schnick-Schnack-Systems, an adjustable brightness is possible even in the lower intensity range as is flicker-free dimming.

To mount the LED components, iart built a specially designed frame. The control unit and the power supplies are integrated into display cases in the same room and therefore hidden from view.

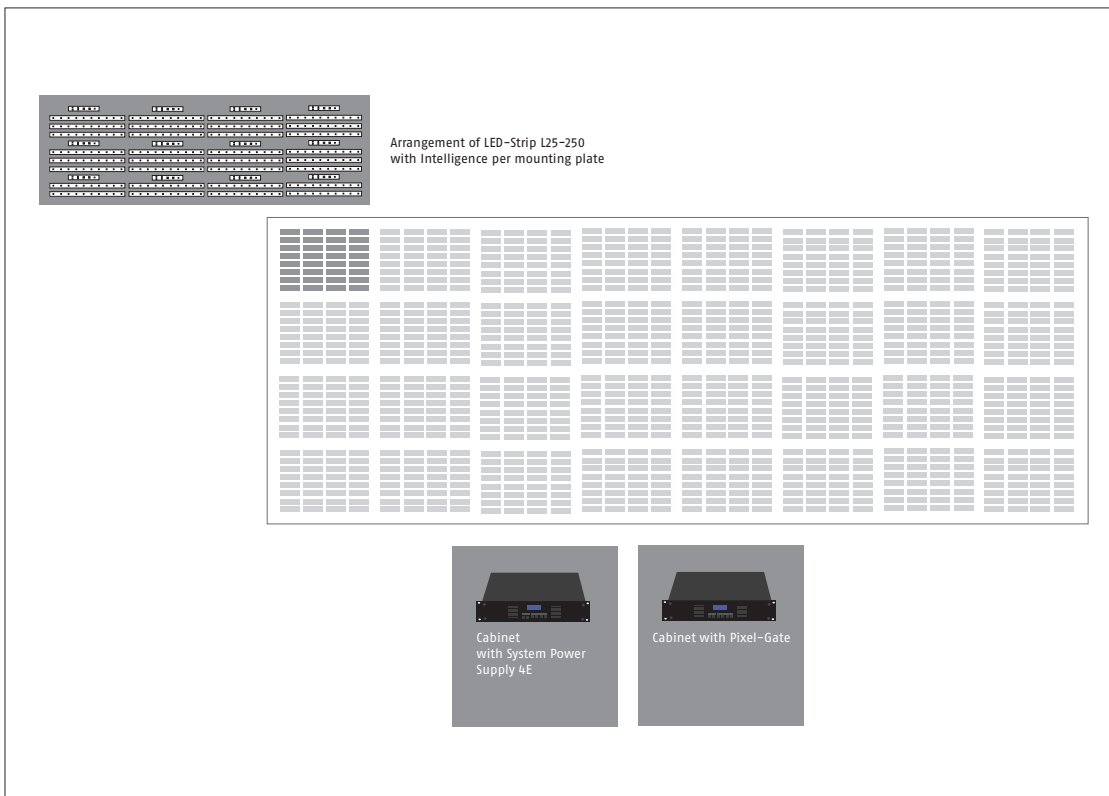
All parties involved planned the execution of the installation down to the smallest detail together. The planning was finalized in September 2013 and the installation was ready to go into operation by November.

Since then, minimalistic, two-dimensional videos have been running on the wall. The system is controlled via PC and a Pixel-Gate Light. The power supply is provided by four System Power Supply 4Es, whereby an adapter board is connected to each of the four Power Supply outputs as well as an Intelligence for every three LED Strips.

All together, there are 1,024 L25-250 LED Strips in the wall and additional 17 LED Strips set at irregular intervals in the ceiling as well as 384 Intelligences in the wall and seven overhead.



Above Simplified depiction of cabling.



Left Construction of the LED wall – 32 panels, each with 32 LED Strips and 12 Intelligences, are firmly fixed onto the approximately 13-meter long wall.

Why Schnick Schnack Systems?

As installation times become increasingly shorter the complexity of systems simultaneously increases as do the requirements of customers.

We are a supplier who delivers high-quality reliable systems – under tight deadline constraints that are not only quick to install but also simple to operate and service.

Schnick-Schnack-Systems GmbH

Mathias-Brüggen-Straße 79
50829 Cologne (Germany)

Phone +49 (0) 221/99 2019-0
Fax +49 (0) 221/16 85 09-73

info@schnickschnacksystems.com
www.schnickschnacksystems.com