

smartoptics

Case study Øresund bridge

# Øresund Bridge obtains embedded solution that bridges the communications gap

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— Christian Jørgensen, Responsible for IT Infrastructure, Øresund bridge

## CLOSING COMMUNICATIONS GAPS

Opened in 2000, the Øresund Bridge is a critical connection point between Denmark and Sweden. At 16 kilometers in length, it is the longest road/rail bridge in Europe. The bridge spans the distance between Copenhagen, Denmark’s capital, and Malmö, a major Swedish city.

Each day, around 17,000 cars use it to reach destinations in continental Europe and the Nordic region. The Øresund Bridge connects the digital world as well: A data cable runs the length of it and serves as the backbone of internet data transmission between central Europe and Sweden/Finland.

## LINK TO THE FUTURE

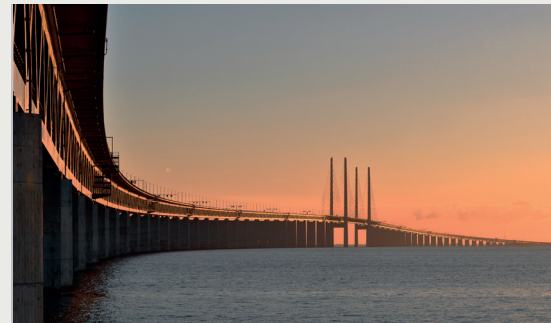
Around 200 people work in both Sweden and Denmark to ensure that all components of the Øresund Bridge—road, rail and tunnel—run smoothly each day. The main office is located in downtown

Copenhagen. The toll system administration employs about 100 people and is located near the opening to the bridge on the Swedish side.

In 2008, Øresund Bridge decided to update its information technology systems.

They needed a way to effectively connect their two data centers in Sweden and Denmark. Their old network was run through active telco-grade equipment. According to Christian Jørgensen, Responsible for IT Infrastructure from Øresund Bridge, “We started looking at new dark fiber connections between the sites. We had dark fiber that we can sell to other companies—but at the same time, it made sense to use it ourselves.

The downside of using an active approach: The cost was too high. So Jørgensen and his team decided to increase their network capacity through a Wave Division Multiplexing (WDM) solution.



They had heard about Smartoptics' passive solution and decided it was the best approach for their network requirements.

According to Jørgensen, "We had another solution together with Brocade 5100 switches for our SAN. But after a presentation from Smartoptics about their embedded solution, we ended up going with that approach instead. Not only did it simplify the overall approach a great deal, but we also ended up having enough budget to acquire the superior DCx4 series."

Øresund Bridge's solution is based on Smartoptics' SFP+ 8Gbps FC transceivers and special T-Series multiplexers. It enabled Jørgensen and his team to run a completely embedded, passive

approach on their SAN network. Simple plug and play and ideal for their green data center culture. On their LAN network, Øresund Bridge uses the active Smartoptics T-4904 series. It was the only solution that matched the SFP+ 10G CWDM approach used for the LAN.

Beyond a boost in capacity at lower cost, Smartoptics also simplified operations at the Øresund Bridge. Jørgensen added: "Smartoptics offers a straightforward set-up when it comes to hardware. That's what I like most about it. There are not too many active boxes, which make it simple to service. On the rare occasion we have an issue, you can identify it and address it immediately."



**Christian Jørgensen**  
Responsible for IT Infrastructure,  
Øresund bridge

## ABOUT SMARTOPTICS

Smartoptics offers optical transmission solutions making networks more powerful. Expanding bandwidth without the upfront investment or hassle of traditional WDM. Our products allow corporate data centers, governments, hosting solution providers and ISPs to build simple, straightforward and cost effective solutions to fulfill their ongoing and future network capacity needs. Headquartered in Oslo, Norway, Smartoptics is an international provider with thousands of installations all around the world. Our award-winning approach has helped companies from every industry sector stay ahead of expanding network demands.

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