



# Elevating Network Switch Performance Through LED Precision

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**Project:** Network Switch for a global leader in digital communications

The smallest details can have a significant impact on performance and user satisfaction. This case study shows how meticulous design and advanced LED technology deliver exceptional outcomes. Faced with a complex project, a digital communications design team came to us with a network switch product that presented unique design challenges.

See how our illumination expertise helped this connectivity solutions provider launch their product to market.

## Why Bivar?

This premier network solutions provider approached Bivar for their comprehensive light pipe offering and illumination expertise. However, Bivar's care of the customer goes well beyond just supplying components.

Bivar worked closely with project designers in the early stages of design and provided complementary design services for the development of this new product. In this case too, Bivar went the extra mile, giving its client engineering advice and assistance in all aspects of troubleshooting that arose during design, prototyping, and manufacturing.

Second, Bivar is integrated into the client's supply chain management system, a system that records the variable quantities demanded by the future production timeline for dozens of projects. Bivar tracks the complexities of orders, ensuring adequate stock, fulfillment of special requests, and timely shipment of supplies to client locations worldwide.

Another aspect of Bivar's long-standing collaboration with this client is special handling. Bivar excels in providing logistical services on each order, labeling shipments with tailored information that helps route the parts to the right location in the production process. This includes printing identifying client product numbers directly on the parts themselves to avoid confusion during assembly.

All major clients enjoy direct access to Bivar technical experts as an extension of their engineering teams.



## Turning Challenges into Bright Solutions


### Finer Points of Indication

This digital communications design team was working to bring a network switch product to market. The plan called for LED indication of its cooling fan status. Even this simple feature, however, had its share of design complexities.

The development team ran into several issues which it found difficult to negotiate without deep knowledge of LED and light pipe functionality. These finer details included:

- **Consistent LED Color and Intensity** — The network switch employed a low-power yellow/green LED. The manufacturer enlisted Bivar experts to match the output in hue and intensity with other indicators in its product line.
- **Panel Mount Indicator Selection** — Rather than merely taking a best guess on the type and dimensions of panel indicator required, the company asked



In the top left corner, there are two overlapping geometric shapes: a dark blue triangle and a light gray parallelogram.

Bivar design experts to double-check its assumptions and assure proper fit and function for this application.

- **Casing Aesthetics** — The rectangular fan indicator light was a more unusual form factor, whose outward presentation needed extra consideration. Further, the color of exterior mounting needed to precisely match the rest of switch casing. Bivar assisted by customizing the housing to the specific Pantone color.

## Experts On Call

Certainly, many manufacturers can take on the tasks of control panel design in house with success, although it may require some extra engineering hours and trial and error to settle on a workable light pipe and LED solution.

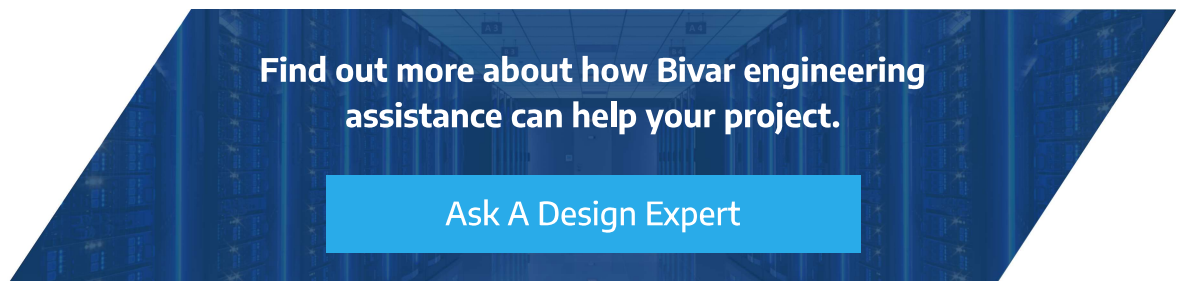
And it is not uncommon to ask vendors for recommendations and selection advice, although oftentimes response is not immediate, nor very comprehensive.

Working with Bivar, the difference is that technical advice is included as part of the package. In the case of this digital communications leader, it is as if they had gained an experienced expert on staff, working to meet the same pilot run schedule, design changes, and tight deadlines as the rest of its engineering team.

Bivar's experienced engineering staff is committed to solving customer problems. Besides supplying proven solutions for LED displays and indicators, Bivar goes the extra mile to provide customization to satisfy special client needs.

When you collaborate with Bivar on product development, you can expect:

- Optimal aesthetics for your new product
- Prompt and professional response on design iterations to meet deadlines
- Faster production line assembly with fewer mistakes

A dark blue banner with a background image of server racks. It contains white text and a light blue button.

**Find out more about how Bivar engineering assistance can help your project.**

[Ask A Design Expert](#)