

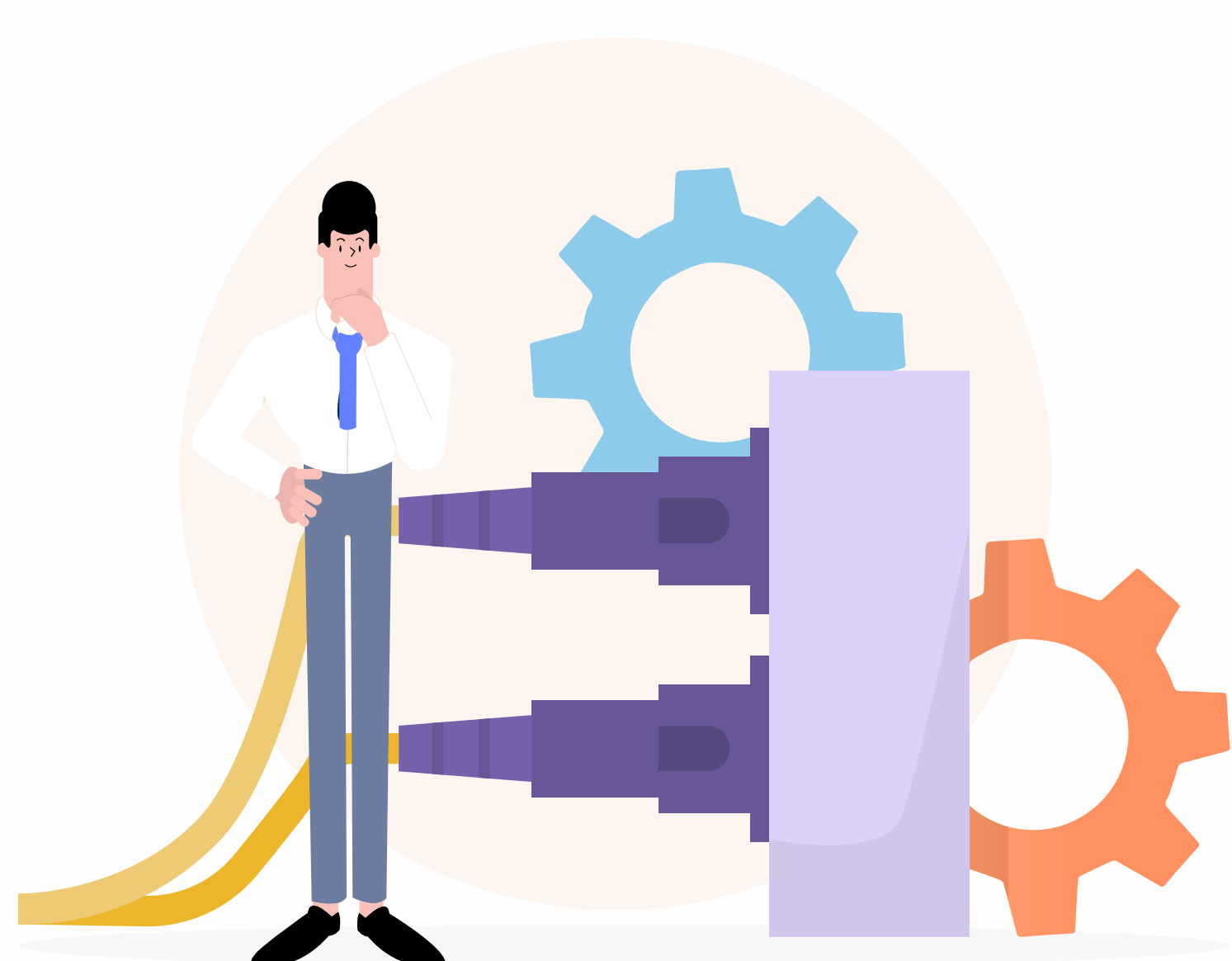
# 100G LONG-DISTANCE CONNECTIVITY SOLUTIONS

## A Basic Guide



With the development of 100G Ethernet becoming a trend, 100G products and technologies are becoming more mature. However, 100G long-distance transmission faces additional challenges, such as significant link loss. Effective solutions are required to address these challenges.

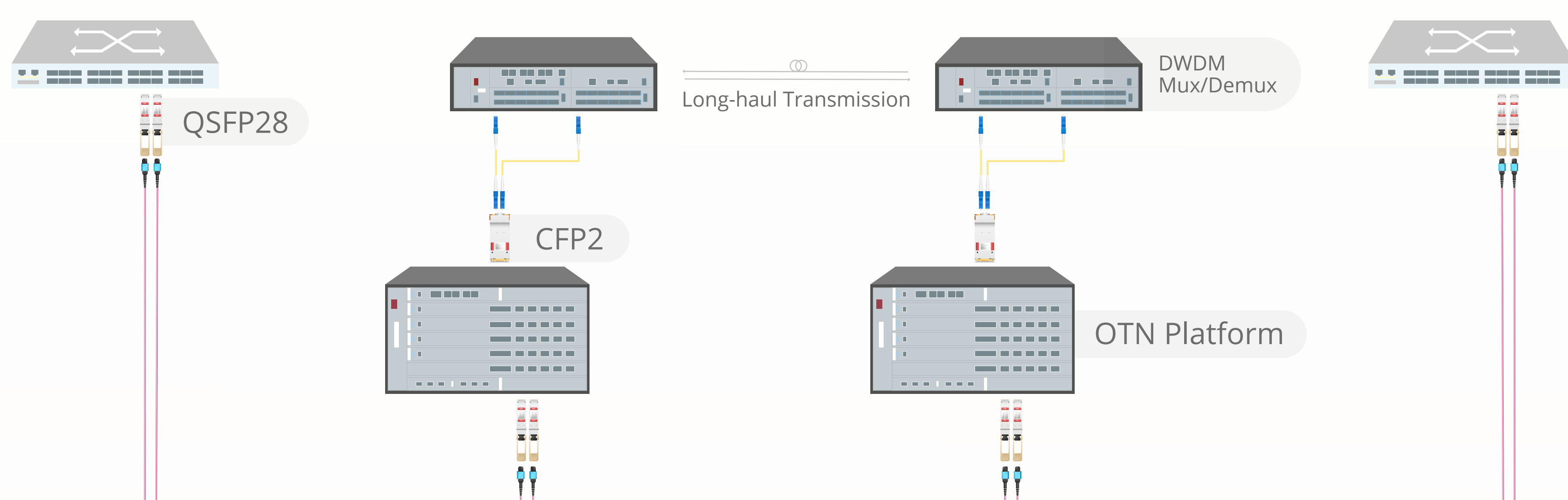
### The Challenges of Long-distance Connectivity



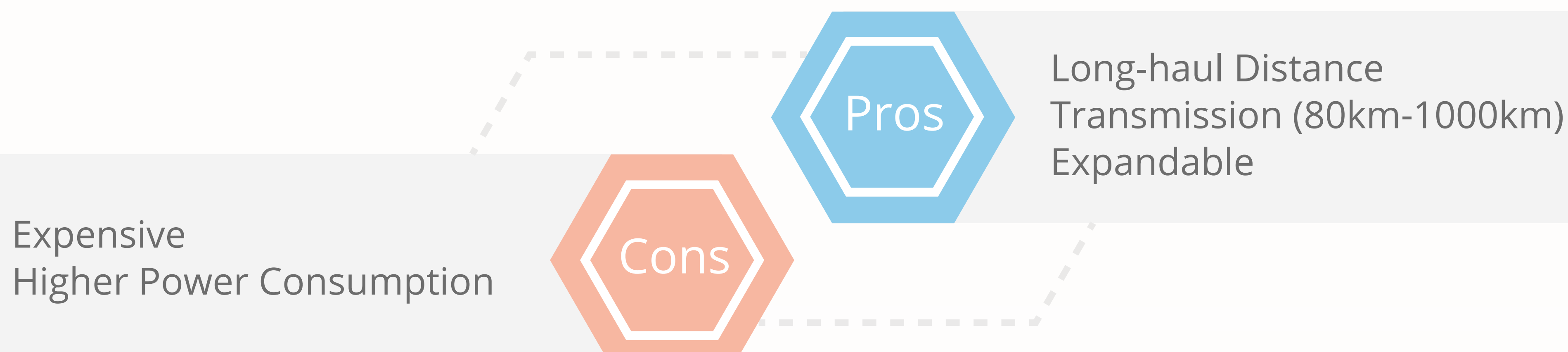
The transmission distance is affected by signal attenuation and dispersion. As the transmission distance increases, the optical signal can even be attenuated to significant signal loss, causing unreliable transmission. However, the demand for ultra-long transmission is continuously increasing, posing challenges to long-distance connectivity systems and equipment.

### Three Solutions for 100G Long-distance Connectivity

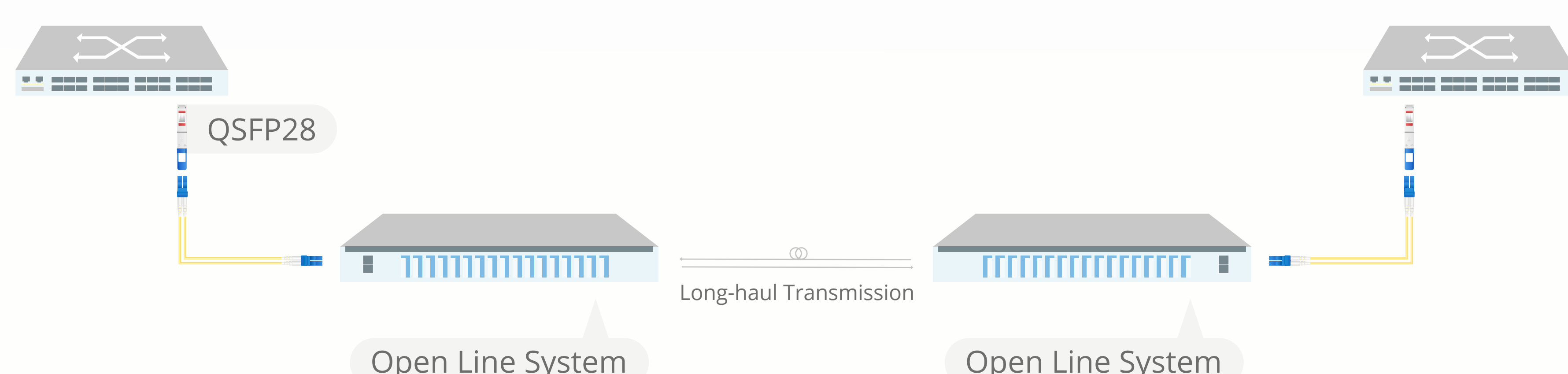
#### 100G Coherent



100G coherent DWDM solution enables transport of 100G capacity across long distances, even up to 1000km. With FS OTN platform and 100G coherent transceivers, the 100G coherent DWDM solution delivers flexibility and scalability for long distance connectivity.



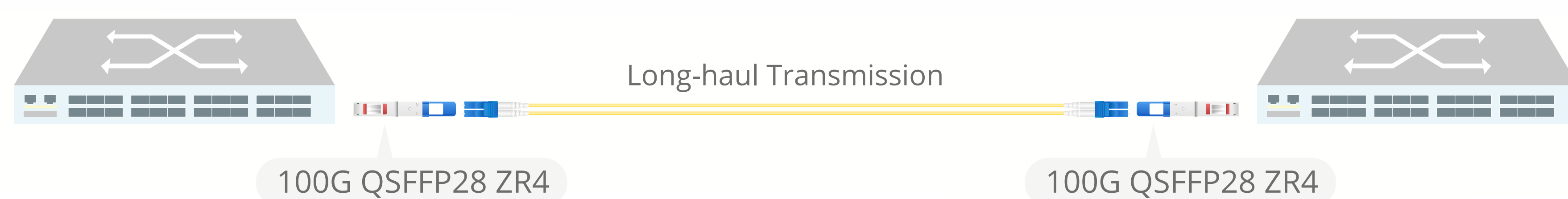
#### 100G PAM4 DWDM



The 100G PAM4 DWDM solution takes the output of the QSF28 transceiver and runs it through FS 100G PAM4 DWDM open line system that is highly integrated with a DWDM mux/demux, EDFA, and DCM, making it a cost-effective and simple solution.



#### 100G QSFP28 ZR4



The 100G QSFP28 ZR4 supports 100G Ethernet for extended reach up to 80km transmission that provides point-to-point network connectivity solutions between data centers without the need to deploy either complicated and costly open line systems or legacy CFP/CFP2 interfaces.

