Accelink leads in the industry to launch Super C + Super L transmission device solutions

Base on existing optical fibers, there are two ways to increase the transmission capacity of a single fiber, i.e., increasing the transmission rate of a single wavelength or broadening the spectral width to accommodate more channels. However, when rate of a single wavelength is increased, the required channel bandwidth will also become wider due to advanced modulations. Thus, the necessity of broadening the spectral width is more manifested and imminent.

Figure 1: The relationship between baud rate and channel bandwidth

Compared with the traditional C-band transmission of 4THz (80 wavelengths), the extended C-band can support up to 4.8THz (96 wavelengths), thereby increasing the capacity of each pair of fibers by 20%. The Super C band can support up to 6THz (120 wavelengths), and the capacity is increased by 50%, while the Super L band is currently required to support 100 wavelengths with the target to support 6THz (120 wavelengths), thereby broadening the total operating frequency spectrum to 12THz (Super C + Super L). Under the premise of the same single-wavelength rate, the single-fiber capacity is doubled. As shown in Figure 2:
Figure 2: Super C & Super L wavelengths

Wider spectral width puts new requirements on optical components used in transmission networks. For Super C application, Accelink already released EDFA, AWG, VMUX, etc. that support 6THz (120 wavelengths) back in 2020, together with OCM and OTDR to meet the monitoring needs.

Accelink will exhibit Super C + Super L transmission device solution during OFC 2021, including EDFA series, WDM series, ROADM series and monitoring series. Currently, passives such as AAWG, VMUX, interleaver, MCS, etc. have fully support Super C + Super L application (12THz, 240 wavelengths). An OTDR in SFP+ form factor has also been released to suit this application. EDFA that supports Super L (100 wavelengths) has been released and one that support Super L (120 wavelengths) will be released soon.

Please visit Accelink’s virtual booth via the link below for more information.