A large-capacity transmission system based on digital coherent technology is a promising way to keep up with the demand for continuous growth of communication traffic. We have been researching and developing a photonic transmitter and receiver that support ultra-high-speed multi-level signal transmission as key devices for the next-generation photonic networks.

### Features

- **Transmitter device technology**: A narrow linewidth tunable DFB laser array (TLA), compact low-voltage InP Mach-Zehender modulators, an ultra-high-speed InP IC, and their integration technologies enabled us to construct a low power and small size next-generation transmitter.

- **Receiver device technology**: A silica-based PLC-VOA integrated with polarization beam splitters as well as optical hybrids enabled the development of a small size and wide dynamic range integrated coherent receiver.

- **Next-generation ROADM module**: A reliable and mature silica-based PLC enabled the construction of highly functional, compact, integrated optical switch modules.

### Application Scenarios

- Large-capacity post-100G optical communication systems such as the next-generation 400G photonic transport systems.

### NTT Group Global Advantage

NTT will continue to lead the world in research and development of optical transmitter and receiver devices including the world speed record holding DAC.

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*1 VOA: Variable Optical Attenuator  *2 PLC: Planar Lightwave Circuit