

Increasing capacity and suppress the crosstalk by using hybrid optical OFDM/ WDM system

Abstract

Hybrid optical OFDM/WDM system is proposed to provide longer reach and larger capacity comparing with existing PON systems in order to meet the ever increasing bandwidth demand and data rate of next generation optical access networks. In this paper, two channels using different modulation at 10 Gb/s are used for downstream link. OFDM signals occupy different portions of the available signal spectrum for signal transmissions by using WDM. As a result, the system has good performance based on SNR with 50 km distance and QAM modulation delivers better performance compared with PSK.

Keywords; Modulation Technics, Optical OFDM, WDM