

SIGNAL AMPLIFICATION APPARATUS, OPTICAL SIGNAL RECEIVING APPARATUS, AND METHOD

ABSTRACT

5 This application provides a signal amplification apparatus, an optical signal receiving
apparatus, and a method, to meet high-performance time-division reception of 50GPON and
GPON uplink signals, and implement a requirement for coexistence of 50GPON and GPON
terminal devices on a same PON interface in a system. The apparatus includes a signal receiving
unit, a channel selection unit, a first amplification and data recovery channel, and a second
amplification and data recovery channel. The signal receiving unit is configured to receive a first
10 signal, and output the first signal to the channel selection unit, where the first signal includes a
first-rate signal and a second-rate signal. The channel selection unit is configured to connect the
signal receiving unit to at least one of the two amplification and data recovery channels, and
transmit the first signal to the at least one of the two amplification and data recovery channels. The
first amplification and data recovery channel and the second amplification and data recovery
15 channel each are configured to perform amplification and data recovery on the received first signal.

(Fig.2)