

METHOD AND SYSTEM FOR A DISTRIBUTED OPTOELECTRONIC RECEIVER

ABSTRACT

Methods and systems for a distributed optoelectronic receiver are disclosed and may include an optoelectronic receiver having a grating coupler, a splitter, a plurality of photodiodes, and a plurality of transimpedance amplifiers (TIAs). The receiver receives a modulated optical signal utilizing the grating coupler, splits the received signal into a plurality of optical signals, generates a plurality of electrical signals from the plurality of optical signals utilizing the plurality of photodiodes, communicates the plurality of electrical signals to the plurality of TIAs, amplifies the plurality of electrical signals utilizing the plurality of TIAs, and generates an output electrical signal from coupled outputs of the plurality of TIAs. Each TIA may be configured to amplify signals in a different frequency range. One of the plurality of electrical signals may be DC coupled to a low frequency TIA of the plurality of TIAs.

Fig. 1A