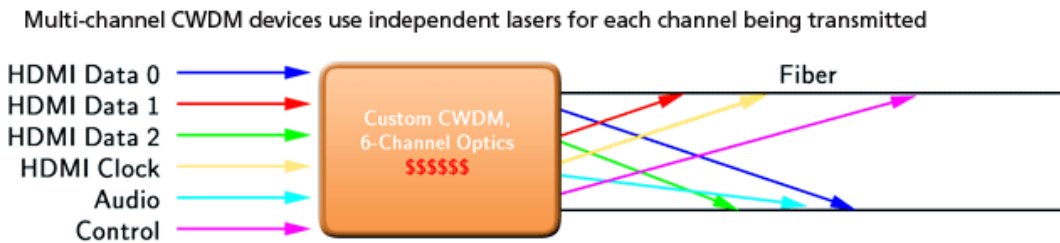




BlueRiver Channel Coder

Requirements for signal distribution in the AV market have evolved beyond transmitting just video. Signals such as audio, RS-232, Ethernet, USB and IR also need to be transmitted alongside the video signals. Unlike Cat-X cable which has 4 channels, and CWDM-based custom fiber-optic devices which can have 6 or more channels, low-cost networking optics use a single fiber-optic channel for transmission.



While multi-channel devices can easily transmit signals or sub-components of signals (clock, HDMI TX0-TX2) on separate channels, single-channel devices require all signal components to be transmitted on a single channel. Hence, in order to use low-cost networking optics, it is necessary to format or “code” these signals into a single channel which is then transmitted over the single fiber-optic channel. While such a channel coder is not unique and several implementations exist, such channel coders are not designed for synchronous video transmission since they rely on frame buffers and typically require costly FPGA implementations. BlueRiver Channel Coder is a highly efficient channel coder with the unique ability to transmit synchronous video using a very cost-effective FPGA.

