

光纤技术

多路串行数据光纤传输系统

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摘要 提出一种适合于点-点或小局域间的中、长距离光纤(缆)传输系统。系统采用光纤(缆)作为传输媒介, 因而具有抗电磁和核辐射等干扰能力, 可应用于某些特殊的人工不宜到达的地理位置环境中; 系统同时采用了单片机作串行数据的发射和接收, 具有结构简单、可靠性高、数据处理能力强和串行波特率设置灵活等特点, 能适应不同串行传输速率的需求, 满足军用和民用的中、长距离的遥控及监控传输需求, 应用前景广阔。

关键词 [串行数据](#) [单片机](#) [光纤传输](#)

分类号

Multi-channel Serial Optical-fiber Data Transmission System

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Abstract This paper introduces a medium and long-range optical-fiber(cable) communication system which can be used in data transmission of point-to-point or between two local-area-networks. Using optical-fiber as a transmission media, the system is immune from electromagnetic and nuclear radiation interference,and can be applied to some special environments or places unaccessible by human. While the microcontroller is used in the transmitter and receiver in this system,it makes a feature of simple structure, high reliability, the powerful data processing function and flexible design for baud rate of serial port, and fits in with the need of different transmission rate of serial port. It meets the requirement of the remote-control-and-monitor for medium,long range signal transmission in civil and military fields. Therefore,it has a great potential in the future.

Key words [serial data](#) [microcontroller](#) [optical-fiber transmission](#)

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