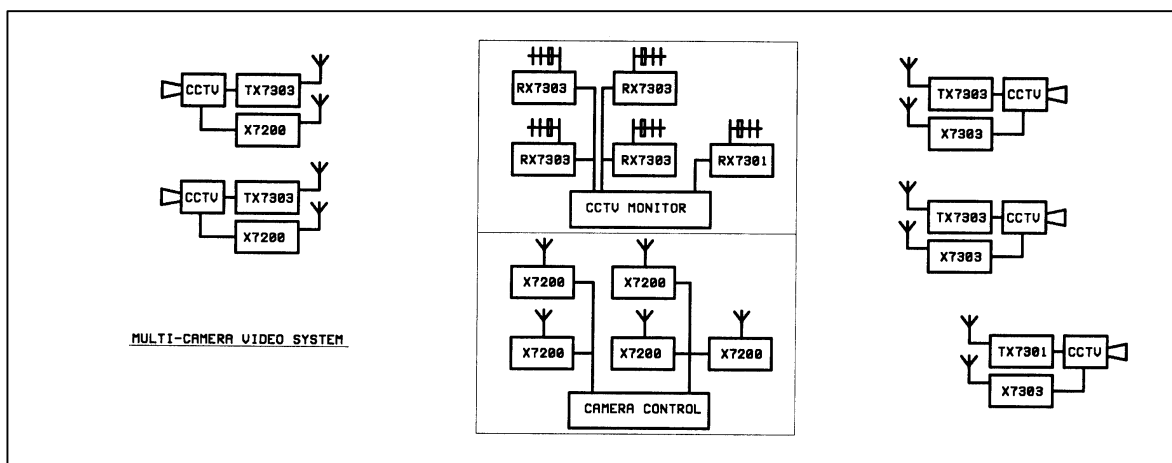


Overview

In a conventional wired CCTV systems a number of cameras are connected to a multiplexer unit and then to a single monitor. The operator can then select the chosen picture. In many applications it can be difficult and expensive to lay coaxial cables. Especially if there is a road, railway or river in the way. Cabling CCTV cameras in temporary or moving structures can also can be either difficult or impossible. In such application radio becomes very cost effective.

There are five licence exempt RF channels allocated to the broadcasting of real time video signals in the UK. One is at 1.394GHz at 500mW and four at 2.4GHz - 2.8GHz at 10mW. Hence a total 5 cameras can be used to transmit real time colour pictures over the same site to five radio receivers.

Conventional camera controllers send command data back to the camera over a RS485 serial link. In a radio system a radio modem such as the X7200 operating on the 458.5MHz - 458.95MHz band can be used to replace the RS485 cabling.



System Specification

The system consists of four surveillance cameras at traffic junction, all are with 25 meters of each . A further camera is sited 1.5 Km away from the junction so that the oncoming traffic flow can be observed. All 5 cameras broadcast their pictures back to a Police station which is 500 meters from the traffic junction.

The four cameras at the junction are fitted with a TX7303 Video Transmitter with a unity gain antenna and one X7200 Radio Modem connected to the camera controller. All of

them are set to different RF frequencies. The traffic observation camera is fitted with a TX7301 Video Transmitter set at 1.394GHz along with a X7100 radio modem.

Four RX7303 Video Receivers are installed in the roof space of the police station along with one RX7301 Video Receiver. High gain antenna are connected to each receiver and pointed directly at their respective transmitters. Thereby improving the signal strength and the hence the quality of the pictures. 15 meters of coaxial cable is then used to connect the receivers to the colour monitor.

Five X7200 Radio Modems are also installed in the roof space for camera control. The antenna are mounted 5 metres away from the video receiver antenna to prevent interference.

With a conventional wired system extensive road works would have had to be undertaken causing disruption and delays. Because Radio was used the whole system was installed within 5 days with the minimum of inconvenience to motorist.

Warwick Industrial Electronics Ltd

Tel: +44 (0) 1455 233616 Fax: +44 (0) 1455 233179

E-mail: sales@radiotelemetry.co.uk