EP210 Ethernet Peripheral

FOR ETHERNET DATA CAPTURE APPLICATIONS

Overview

The EP210 is a compact general purpose data collection peripheral device that communicates with an application software program over a TCP/IP network. It can decode input from a barcode, mag-stripe, Wiegand, or RFID card reader and convert it into a packet of ASCII text. A serial RS-232 port provides bi-directional communication with any serial device (scanner, scale, counter, etc.) and the host network. In addition, digital I/O interface options include up to four (4) relay outputs and four (4) digital inputs with counters. The network interface supports both 10BaseT and 100BaseT Ethernet connections.

Theory of Operation

When the EP210 is connected to an Ethernet network it can be configured as a client or a server for the purpose of sending data to and receiving data and commands from a host PC resident program. The EP210 reader or serial port input is received and, if necessary, decoded and then forwarded in a packet across the TCP/IP network to the host computer's application program. Likewise, the application program can send data to the EP210's serial port as well as commands to the EP210 itself. The optional digital inputs and outputs allow the application program to control relay outputs and to query contact/counter inputs.

EP210 Command Modes

The EP210 has two modes of operation, the "Virtual Terminal Command" (VTC) mode and the "ANSI Emulation Mode". The VTC mode provides a unique but simple command syntax that alleviates the need to know the details of the lower level ANSI protocol. The ANSI emulation mode is a subset of the standard ANSI terminal protocol. For more information on these emulation modes see the technical specifications for the EP210.

Network Interface

The EP210 connects to a 10BaseT or 100BaseT hub (or switch) via a standard RJ-45 Ethernet (CAT 5) cable. From a network perspective it occupies a single "socket" at a specific IP address and port number. The device must be configured with a unique IP address, net mask, and port number BEFORE it is installed on your network. The host software communicates with the EP210 by establishing a connection with the terminal and then sending and receiving ASCII text command strings. In addition to the primary TCP/IP network port the EP210 supports an

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additional Telnet port (port 23). This port can be used by a Telnet client software piece for remote configuration and control using the "Telnet Command Mode" built into the EP210. An "Aux Command Mode" is also provided to allow initial local configuration using the serial RS-232 port on the EP210. The "Telnet Command Mode" and the "Aux Command Mode" support all of the VTC commands.

Data Collection Device Interface

The typical EP210 includes a barcode or mag-stripe reader for primary data input. Optional input capabilities include RFID or Wiegand card readers. In addition, barcode wands or other handheld or stationary scanners can also interfaced. The optional digital inputs with counters and the software controlled relay outputs provide directed control of an external device.

Input/Output Options

Barcode Input Port

The barcode decoder input option allows one (1) or optionally two (2) bar-code input devices to be interfaced to the EP210 decoder. The EP210 will automatically discriminate and decode Code 39, Code 128, Interleave 2/5, Codabar, and UPC/EAN symbologies. Available input scanning devices include wands, slot readers, and wand emulating CCD or laser scanners.

Magnetic stipe card reader port

The mag-stripe decoder input allows either a single or dual track magnetic card reader to be supported. Either single Track #1 or Track #2 reader can be decoded and the input converted to an ASCII string and appended with an automatic "Enter" (CR) code.

Prox-Card (RFID) Input

The optional RFID proximity card reader equips the EP210 to read proximity cards. Decoded data is converted and processed the same as Mag-stripe data.

RS232 Serial Port

The serial RS-232 port is used to initially configure the EP210 via the "Aux Command Mode", by providing local communications with a terminal or laptop computer. The serial port can also be used to interface serial devices like scales, scanners, counters and other equipment with the application program via the network.

Optional Digital Inputs (quad)

The EP210 can be equipped with four (4) solid state relay (SSR) inputs which are read under software control. In addition, each input will increment an eight (8) digit counter which can be read or cleared under software control.

Optional Didigtal Outputs (dual/quad)

The EP210 can be equipped with two or four solid state relay (SSR) outputs that can be individually activated under software control. Relay controls include "On", "Off" and "Pulsed" for a specified amount of time. Each relay has a single "form A" contact rated at 10va (100vdc, 100ma.) maximum.

Power Supply

The EP210 is powered by a 12Vdc power adapter that plugs directly into a 120Vac receptacle. Typical power consumption is less than 6 watts. A 240Vac power supply is also available at extra cost.

Software Interface

Software communications with the EP210 is simple and straight forward. The primary TCP/IP port is used for communications with the user application program. Normally, the host software (client) is responsible for establishing a network connection with the EP210 (server) on a specified port. Alternately, the EP210 can be configured to automatically establish a connection (as client) with a host computer application (server) using the SERVER parameter.

Options

- Magnetic stripe card reader (Trk 1 and/or Trk 2)
- Wiegand card reader (26 bit)
- Proximity (RFID) reader (26-bit, 37-bit, others)
- Quad digital inputs with counters
- Relay control outputs (2 or 4)

Physical Specifications

RS232 Serial Port Connector
    DE9M
Bar-code decoder interface Connector
    5-Pin DIN
Dimensions (width x height x depth):
    No slot reader: 84mm x 30mm x 129mm
    Bar-code slot reader: 84mm x 60mm x 129mm
    Mag-stripe reader: 84mm x 58mm x 129mm
Weight:
    No slot reader:
    Bar-code slot reader:
    Mag-stripe reader:
Power Consumption
    Standard Unit - 6 Watts (max)
Temperature Ranges
    Operating - 0C to 60C (32F to 120F)
    Storage Temperature - -30C to 70C (-4F to 158F)