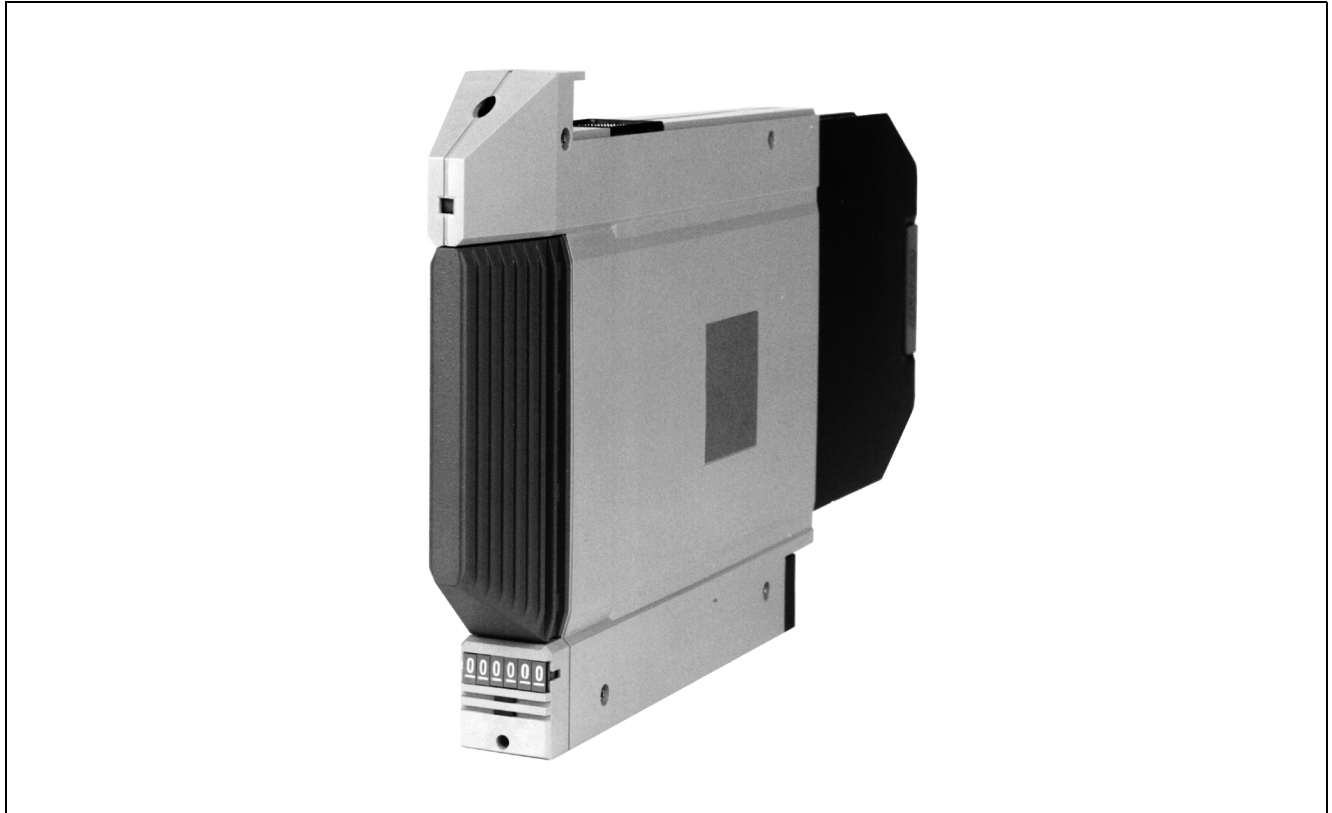


## **I/A Series® Hardware Communications Processor 10**



The Communications Processor 10 is a station on the I/A Series System network providing interconnection of peripherals such as a terminal I/O device, or a printer device. It has four RS-232-C compatible serial ports with asynchronous channel performance up to 9.6 kbps, or one RS-232-C compatible port with synchronous channel performance up to 64 kbps.

The communications processor is responsible for translating received standard messages from stations on the network into device specific messages. For each device, the processor maintains a control character table which defines the control character set specific to a device. The processor performs a character by character mapping from the standard control character set to the control character set recognized by the device. User programs can also

send messages already formatted for a particular device. In this case no translation is performed.

The communications processor offers the user these features:

- Standard Error and Alarm Message Print
- Report and Bulk Print Handling
- Message Backup
- Terminal User Interface

### **STANDARD ERROR AND ALARM MESSAGE PRINT FUNCTION**

Any system station capable of generating messages contains a list of I/O devices to which it may output. The user may reference these devices by their logical name. Multiple messages transmitted to the communications processor are queued locally and

transmitted by priority from the processor to a particular device. This assures prompt servicing to high priority alarm messages.

### **REPORT AND BULK PRINT HANDLING**

If a device is configured to be lockable, reports are printed to completion with no intermixing of alarm messages. Other messages, including alarms, are re-directed to a backup device for timely output. When the report is complete, the device is unlocked and normal message processing on a priority basis is continued. If a device is not specified as lockable, higher priority alarm messages will be intermixed with the report output and no re-directing of messages take place.

### **MESSAGE BACKUP**

The communications processor contains a backup mechanism which routes unprinted messages to a backup device in event of a device failure or lockup. The backup device may be local or on a remote communications processor. Through a configuration process, a first and second backup device may be specified for each attached device. The backup routing process enacted by the processor occurs automatically on detection of device failure.

### **TERMINAL USER INTERFACE**

The default terminal connected to each port is the Digital Equipment Corporation's VT 100. For types of terminals other than the default terminal, the user may configure modifiable Packet Assembly/Disassembly (PAD) parameters such as PAD key stroke assignments, data rate, idle time delay, characters per line, and idle connection time-out according to the requirements of the terminal attached to that port.

### **DIAGNOSTICS**

The communication processor utilizes three types of diagnostics to detect and/or isolate faults:

- Power-up Self Checks
- Run-time and Watchdog Timer Checks
- Off-line Diagnostics

Power-up self checks are self-initiated when power is applied to the communication processor. These checks perform sequential tests on the various processor functional elements. Red and green indicators at the front of the processor module reflect the successful (or non-successful) completion of the startup sequence.

The run-time and watchdog timer checks provide continuous monitoring of communication processor functions during normal system operations. The operator is informed of a malfunction by means of printed or displayed system messages.

Off-line diagnostics are temporarily loaded into the system for the purpose of performing comprehensive tests and checks on various stations and devices. Using the off-line diagnostics, a suspected fault in the processor can be isolated and/or confirmed.

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