Peripheral Interface Adapter Module
(Cat. No. 1775-RM)

Product Data
The Peripheral Interface Adapter Module (Cat. No. 1775-RM) enables remote communication to the Peripheral Communication Module (Cat. No. 1775-GA). The peripheral interface adapter module interfaces RS-232-C compatible devices to the peripheral communication module up to 10,000 cable feet from the PLC-3 processor. You can insert the peripheral interface adapter module into any I/O slot of a 1771 I/O chassis. This module receives its power from the I/O chassis, but does not communicate through the I/O chassis backplane.
The peripheral interface adapter module connects to the remote terminal arm on the peripheral communication module via Twinaxial Cable (Cat. No. 1770-CD). Figure 1 shows a block diagram of this connection. Sixteen peripheral interface adapter modules can connect to one remote channel on the peripheral communication module. Each peripheral interface adapter module has two local RS-232-C communication channels which communicate to RS-232-C compatible devices. You can connect the following devices to these communication channels:

- Industrial terminals (Cat. No. 1770-T4)
- Data cartridge recorders (Cat. No. 1770-SB)
- Modems
- Computers
- RS-232-C data terminals

Once you connect an RS-232-C compatible device to a communication channel, you can use the following methods to communicate with the peripheral communication module.

- GA Basic programming language which provides interactive operator interface capability
- Binary Command Language which provides programming interface between a 1770-T4 terminal or computer and the PLC-3 processor
- LIST function which provides tape and mass storage functions in addition to PLC-3 system configuration
1 You can connect up to 16 peripheral interface adapter modules per peripheral communication module remote channel.
2 You can connect the peripheral interface adapter module up to 10,000 cable feet from the peripheral communication module.
3 You can connect RS-232-C compatible devices up to 5,000 cable feet away. (provided the RS-232-C device has a line driver/receiver).
Status Indicators

The peripheral interface adapter module features the following LED indicators to ease troubleshooting:

- Module fault LED
- RS-232-C channel 0 LED
- RS-232-C channel 1 LED
- Remote channel LED

The following three sections discuss each of these indicators.

Module Fault Indicator

At the top of the module, a red LED labeled MOD FLT keeps you informed on the general condition of the module:

- If the red LED is on, a module fault condition exists.
- If the rest LED is off, no detected fault exists, or power is off.

RS-232-C Channel Indicators

Below the module fault LED are two green LEDs labeled:

- CH0 ACT
- CH1 ACT

These indicators keep you informed on the status of each local RS-232-C communication channel:

- If the green LED is on, proper connections exist between the RS-232-C device and the peripheral interface adapter module on the corresponding local channel.
- If the green LED is off:
  - Power is off at the RS-232-C device.
  - Proper connections do not exist between the RS-232-C device and the peripheral interface adapter module on the corresponding local channel.
  - Break conditions are transmitting from the RS-232-C device.
Remote Channel Indicator  
Directly below the two local channel indicators, a green LED labeled REM ACT keeps you informed on the communication line between the peripheral interface adapter module and the peripheral communication module:

- If this LED is on, the peripheral interface adapter module is communicating with the peripheral communication module.
- If this LED is off, the peripheral interface adapter module is unable to communicate with the peripheral communication module.

RS-232-C Communication Channel Indicators  
Below the status indicators are two 25-pin D-shell connectors labeled:

- CHANNEL 0
- CHANNEL 1

Each of these connectors corresponds to one of the RS-232-C compatible channels on the peripheral interface adapter module. These channels operate similarly to the primary local RS-232-C channels on the peripheral communication module.

Remote Channel Terminal Block  
Below the RS-232-C channel connectors is a terminal block labeled REMOTE. This remote terminal block contains three terminals which enable easy wiring for Twinaxial Cable (Cat. No. 1770-CD). Such wiring enables the following connections:

- Connecting the peripheral interface adapter module to the peripheral communication module
- Connecting peripheral interface adapter modules together in a chain on one peripheral communication module remote channel (Figure 1)

NOTE: Each terminal block accommodates two wires for daisy chain configurations.

Station Address and Communication Rate Selection Switches  
On the bottom center of the peripheral interface adapter module’s printed circuit board, a cover plate protects a series of dip switches. You set these switches to determine:

- Station address of each peripheral interface adapter module that connects to a peripheral communication module remote channel
- Communication (baud) rate at which the peripheral interface adapter module communicates to the peripheral communication module
The cover plate also protects a terminator plug which you set to terminate the string of peripheral interface adapter modules connected to a remote channel of the peripheral communication module.

Additional Information

This publication gives you general information on the peripheral interface adapter module. For detailed information on:

- Module functions
- Module hardware components
- Module installation and operation procedures

Refer to Peripheral Communication Module User’s Manual (publication 1775-6.5.4)

Specifications

Location

- Single slot in any 1771-I/O chassis
- Up to 10,000 cable feet from Peripheral Communication Module (Cat. No. 1775-GA)

Functions

- Remote interface with Peripheral Communication Module (Cat. No. 1775-GA)
- Interface to RS-232-C compatible devices for GA Basic programming language
- Interface to an Industrial Terminal (Cat. No. 1770-T4) for ladder diagram programming
- Interface to a Data Cartridge Recorder (Cat. No. 1770-SB) for tape save/load capability

Channels

- 2 local (Full RS-232-C)

Cable Lengths

- Up to 5,000 cable feet from RM to RS-232-C Device

Backplane Current

- 1.5A

Keying

- None required
Environmental Conditions

- Operational Temperature: 0 to 60°C (32 to 140°F)
- Storage Temperature: -40 to 85°C (-40 to 185°F)
- Relative Humidity: 5 to 95% (without condensation)

Communication Rate

- 57.6 kbaud – up to 10,000 cable feet
- 115.2 kbaud – up to 5,000 cable feet
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