

INFI-NET to INFI-NET Local Interface

The INIIL02 INFI-NET to INFI-NET Local Interface is made up of two NIS modules and the INIIT03 INFI-NET to INFI-NET Transfer Module.

This interface provides a communication path between a central INFI-NET loop and a local satellite INFI-NET loop (Figure 1-2). The maximum distance between termination units

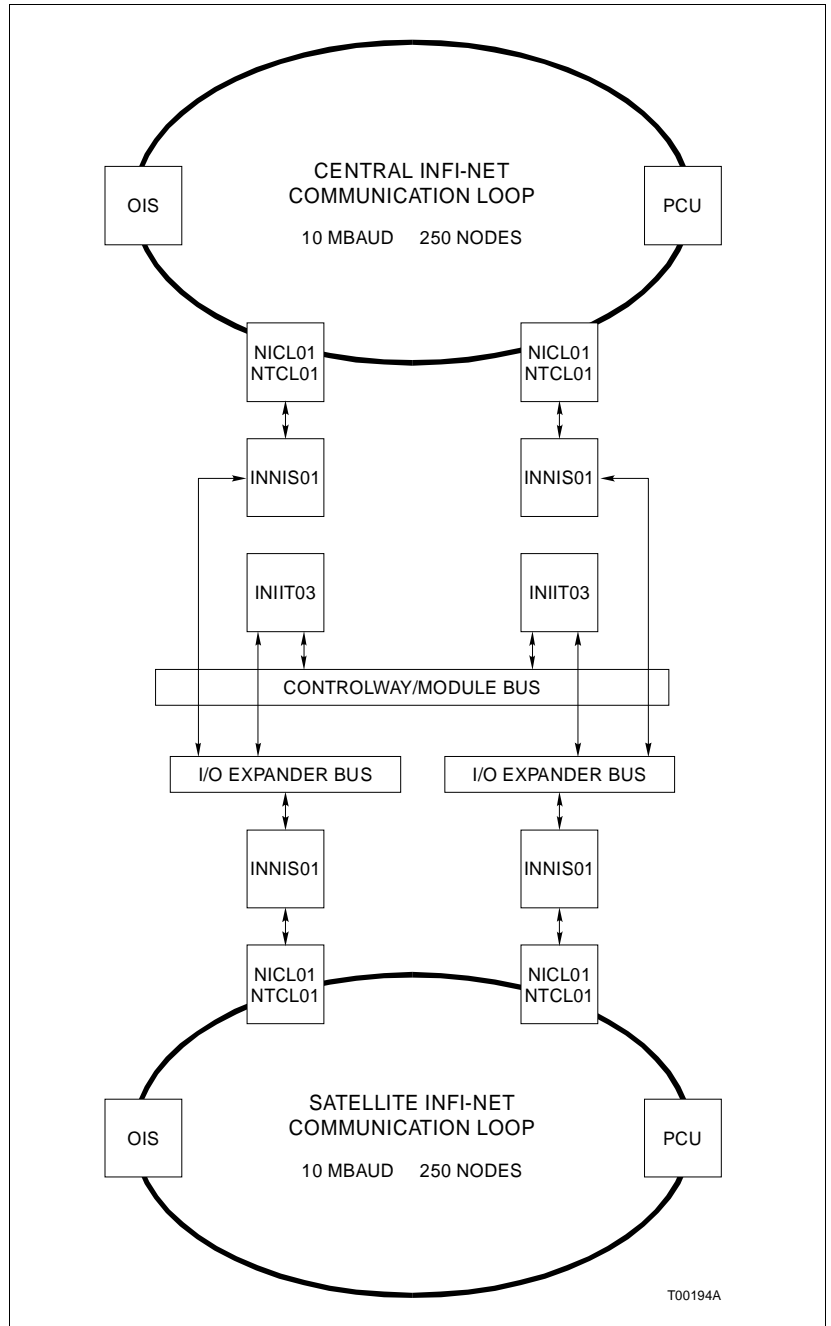


Figure 1-2. INFI-NET to INFI-NET Local Interface

on the two communication loops is 45.8 meters (150 feet). Bidirectional communication from the central communication loop is through cable connection to the NTCL01 Communication Termination Unit or NICL01 Communication Termination Module.

This interface transfers system data, control and configuration messages, and exception reports between two INFI-NET communication networks. The INFI-NET to INFI-NET local interface can support hardware redundancy.

MODULE DESCRIPTION

Network Interface Slave Module

The NIS module works in conjunction with the INFI-NET to INFI-NET transfer modules. This allows any node to communicate with any other node within the INFI-NET system.

The NIS module is a single printed circuit board that occupies one slot in the module mounting unit (MMU). The circuit board contains microprocessor based communication circuitry that enables it to interface with the INFI-NET to INFI-NET transfer modules via the I/O expander bus. Both the INFI-NET to INFI-NET interfaces require a specific interface module and an NIS module (the INIIL02 module requires two NIS modules).

Two captive latches on the front-mounted faceplate secure the module to the MMU card cage. There are 16 LEDs on the faceplate that display error codes or event/error counts.

Each NIS module connects to its INFI-NET communication loop by a cable connected to an NTCL01 Communication Termination Unit or NICL01 Communication Termination Module. Communication between nodes is through coax or twinax cables that connect the termination units or modules on each node. Power and I/O expander bus connections follow the same connector assignments common to most INFI 90 modules (P1 for power, P2 for I/O expander bus).

INIIT02 INFI-NET to INFI-NET Transfer Module

The INIIT02 INFI-NET to INFI-NET Transfer Module supports bidirectional communication through two RS-232-C ports. Port one passes system data only. Port two passes system data or can be used as a diagnostic port. The central INIIT02 module can use a variety of means to link to the satellite INIIT02 module such as modems, microwave and transceivers. The INIIT02 module communicates directly with an NIS module through the I/O expander bus.

The INIIT02 module is a single printed circuit board that occupies one slot in the module mounting unit, adjacent to its NIS

module. The circuit board contains the serial communication circuitry necessary for it to communicate with another INIIT02 module.

Two captive latches on the INIIT02 faceplate secure the module in the MMU card cage. The faceplate contains eight CPU LEDs, a red/green status LED, and a stop/reset switch.

Interface termination is through a cable connection between P3 of the INIIT02 module and an NTMP01 Multi-Function Processor Termination Unit or NIMP01 Multi-Function Processor Termination Module. INIIT02 module power and I/O expander bus connections follow the same connector assignments common to most INFI 90 modules (P1 for power, P2 for I/O expander bus).

INIIT03 INFI-NET to INFI-NET Transfer Module

The INIIT03 INFI-NET to INFI-NET Transfer Module serves as the link between two local INFI-NET communication loops. It holds the node database and is responsible for transferring all messages between loops. Messages include exception reports, configuration data, control data and system status. This module communicates directly with the NIS module on each loop of the interface.

The INIIT03 module consists of one printed circuit board that occupies one slot in the module mounting unit. The circuit board contains the circuitry necessary for it to pass communication from the central communication loop to the satellite communication loop.

Two captive latches on the INIIT03 module faceplate secure the module in the module mounting unit. The faceplate contains 16 CPU LEDs, a red/green status LED, and a stop/reset switch.

FEATURES

- INFI-NET provides a plantwide communication network. INFI-NET time synchronizes the control process plantwide.
- Each node can operate independently of other INFI-NET nodes. INFI-NET communication modules provide localized start-up/shutdown on power failure without operator intervention.
- Response time is fast. The ten-megabaud loop communication rate gives timely information exchange.
- The INFI-NET interface modules handle four message types: Broadcast, time synchronization, multicast and NIS poll. All messages contain cyclic redundancy check codes (CRC) and checksums to insure data integrity.