Continental Access

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CICP18ACCBD Accelerator Board Communication Options

WI1617.03 6/07

OVERVIEW

The Superterm Accelerator™ adds wide-band Ethernet connectivity, greater memory capacity and higher speed processing to new and existing Sensorpanel II and Superterm installations. Existing installations may be upgraded with minimal rework at the facility. All field wiring for the Card Readers, Electrical Locks, Alarm and Accessory Relay circuits remain intact.

Existing Ethernet cables in your EIA/RS-422 Repeater Network may be used to link panels together. One Ethernet cable may serve as many as 63 Access Control Panels that are equipped with the Superterm Accelerator board.

Other communication configurations exist:

- Direct Ethernet connection to each panel
- High-speed EIA/RS-422 connections (460.8 KBaud)
- High-speed EIA/RS-232 connections (921.6 KBaud)

Note: Sensorpanel II is a registered Trademark of Sensormatic Electronics Corporation. CA3000 - Software Release 2.51 or later is required.

COMMUNICATION OPTIONS

The following two hardware boards and two Accelerator Firmware mode options can be used:

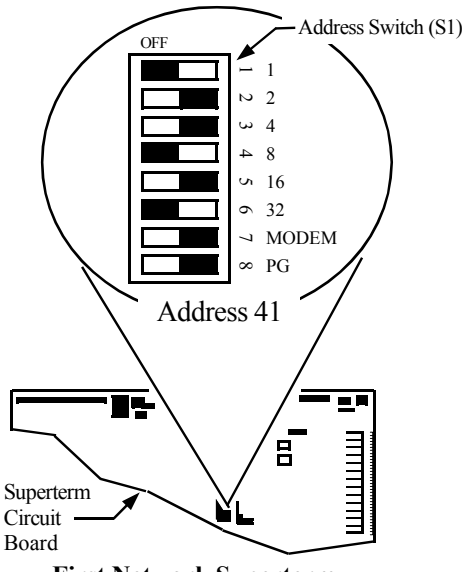
Ethernet Module (CICP18ACCNETBD) - A plug-in board for Ethernet communication. The CICP18ACCNETBD Ethernet board is mounted in the CICP18ACCBD Accelerator board (see installation instructions WI1593 for more information regarding the installation of the CICP18ACCBD Accelerator board).

RS232 Module (CICP18ACCEIABD) - A plug-in board for high-speed EAI232 (RS232) connections. The CICP18ACCEIABD Module adds fast EIA/RS-232 transmission speeds to the CICP18ACCBD Accelerator board (see installation instructions WI1593 for more information regarding the installation of the CICP18ACCBD Accelerator board).

Standard Mode – The Accelerator Firmware automatically detects whether communication with the Host/Server is through the POLLING Port (RS232 or RS422, as with the original Superterm) or through one of the two plug-in boards (either the Ethernet Module or the RS232 Module described above) mounted in the Accelerator board.

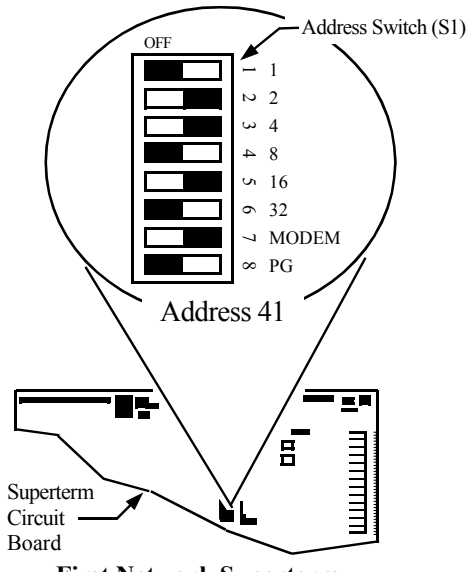
Pass Through Mode - In this mode, the Accelerator Firmware is required to use the Ethernet Module or the RS232 Module for the connection to the Host Computer, but the Host Data is buffered and passed through to the POLLING Port. In this way, a single Ethernet Module or EIA232 Module plug-in board serves an entire Accelerator Superterm RS422 Repeater Network, and in most cases, may use the wiring already in place. *Pass Through Mode* is selected by the previously unused switch located at the bottom of the ADDRESS DIP switch (as shown below).
Note that only the first Accelerator Superterm needs to be set into *Pass Through Mode*, and any valid address may be set to this panel.

Standard Mode Selected



First Network Superterm

Pass Through Mode Selected



First Network Superterm

Maximum Recommended Cable Length

EIA/RS-232

KBaud Rate	Practical EIA/RS-232 Distance Limits
921.6	10 Feet
460.8	20 Feet
230.4	40 Feet
115.2	80 Feet

EIA/RS-422

KBaud Rate	Practical EIA/RS-422 Distance Limits (Between Panels)
460.8	1000 Feet
230.4	2000 Feet
115.2	4000 Feet

Ethernet

Speed	Limits defined by IEEE802.3 for CAT5/6 Copper Cable (to Switch or Router)
10/100Base-T	100 Meters (305 Feet)

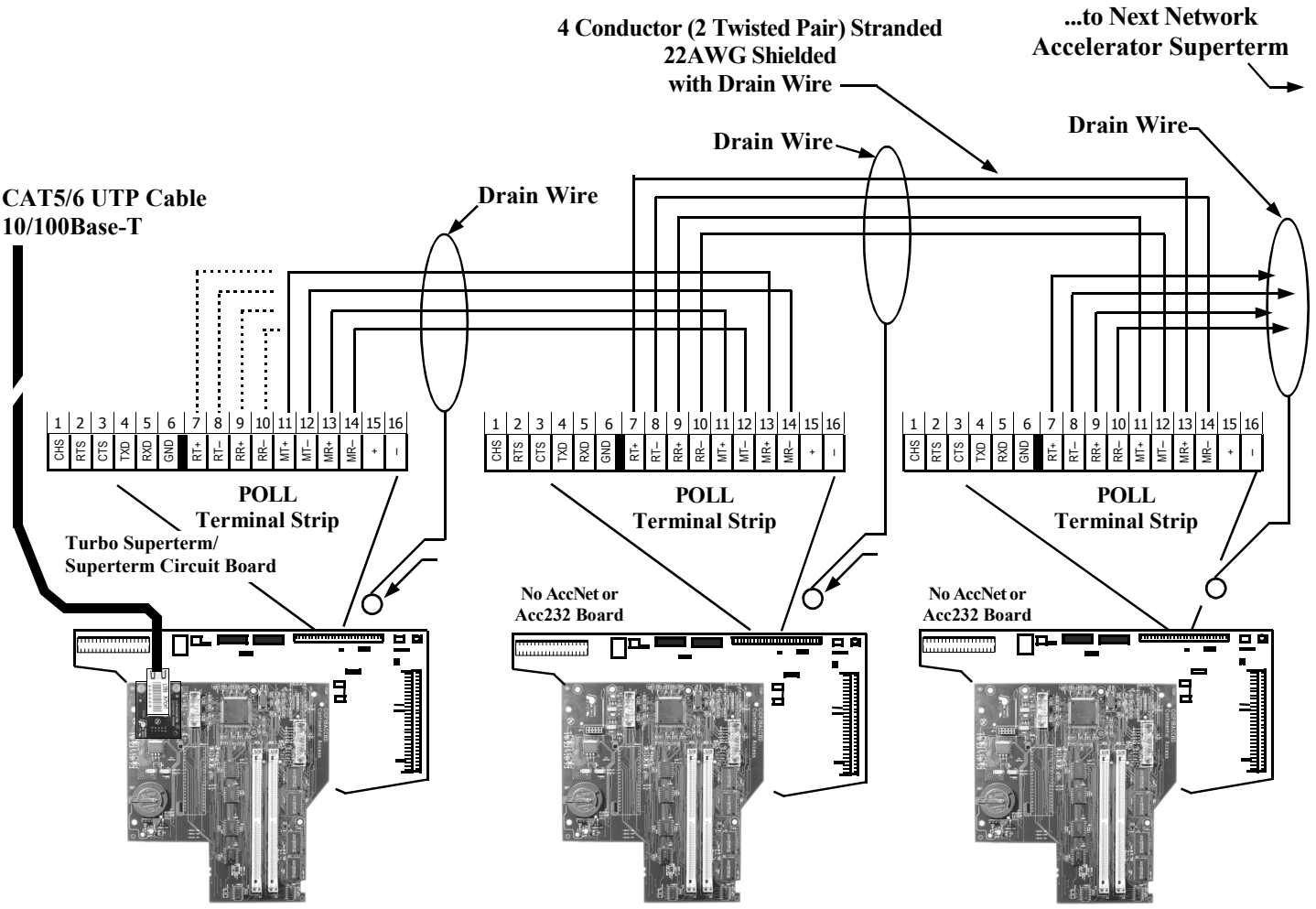
CASE 1:

The first panel on an EIA422 chain uses an Ethernet Module (CICP18ACCNETBD) or RS232 Module (CICP18ACCEIABD) set to use *Pass-Through Mode*. All other Accelerated boards on the communications line retain existing wiring and are set to use *Standard Mode*.

One slight modification must be made to the previous wiring with the first board only. The wires existing on the Poll RPT port must be moved to the Poll MD port (see diagram below). All other wiring remains the same. Max Baud of 460.8 K may be achieved with the Practical EIA 422 Distance Limits as noted in the tables on the previous page.

Note that this "Case 1" configuration provides wide-band communication between the Host Computer/Server and a network of Superterm panels enhanced by Accelerator boards. Only the first Superterm Accelerator board must use an Ethernet or EIA232 plug-in board, and in most cases the pre-existing EIA422 Repeater Wiring may continue to be used.

Please also note that the faster EIA422 communication speeds require that the panels be connected in the Repeater Configuration.



First Accelerator Superterm
- REPEAT Mode
- MODE 1 Jumper = RPT (pins 1 and 2)
- EOL2 Jumper = IN (pins 1 and 2)
- PG Switch selects Pass-Through Mode

Second Accelerator Superterm
- REPEAT Mode
- MODE 1 Jumper = RPT (pins 1 and 2)
- EOL2 Jumper = IN (pins 1 and 2)
- PG Switch selects Standard Mode

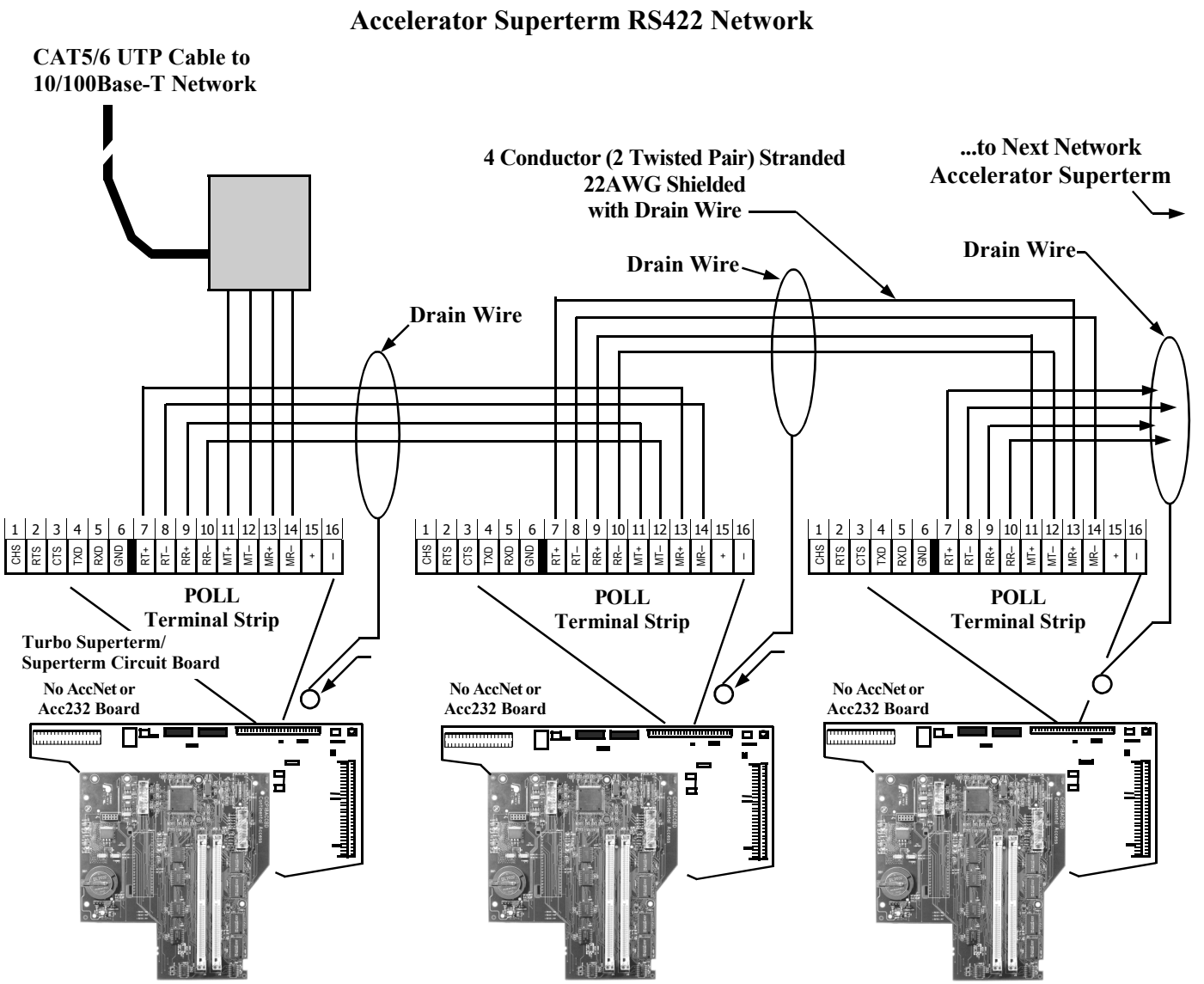
Third Accelerator Superterm
- REPEAT Mode
- MODE 1 Jumper = RPT (pins 1 and 2)
- EOL2 Jumper = IN (pins 1 and 2)
- PG Switch selects Standard Mode

CASE 2:

The first panel does NOT use an Ethernet Module (CICP18ACCNETBD) nor does it use an RS232 Module (CICP18ACCEIABD). Polling from the Host comes into the POLL MD connector using conventional wiring methods from a new Lantronix UDS-2100. All existing wiring remains unchanged and all panels are set to use Standard Mode.

With the latest version of this Lantronix device, a max Baud of 460.8 K may be achieved with the Practical EIA 422 Distance Limits as noted in the tables previously in this manual.

Note: The UDS-2100 must be set to RS-422, 8-bit. See the UDS2100 User Guide.



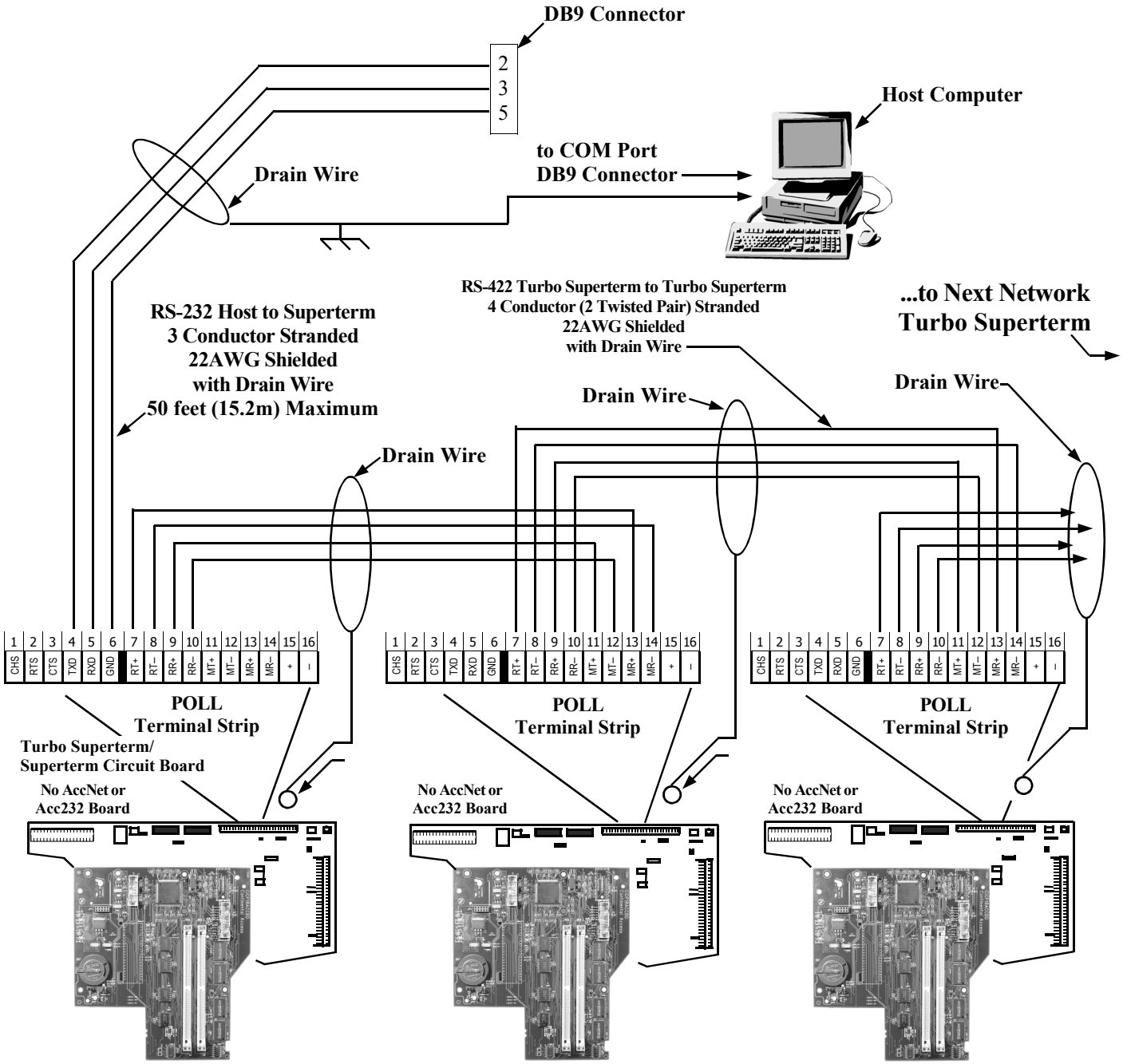
First Accelerator Superterm
- REPEAT Mode
- MODE 1 Jumper = RPT (pins 1 and 2)
- EOL2 Jumper = IN (pins 1 and 2)
- PG Switch selects Standard Mode

Second Accelerator Superterm
- REPEAT Mode
- MODE 1 Jumper = RPT (pins 1 and 2)
- EOL2 Jumper = IN (pins 1 and 2)
- PG Switch selects Standard Mode

Third Accelerator Superterm
- REPEAT Mode
- MODE 1 Jumper = RPT (pins 1 and 2)
- EOL2 Jumper = IN (pins 1 and 2)
- PG Switch selects Standard Mode

CASE 3:

The first panel does NOT use an Ethernet Module (CICP18ACCNETBD) nor does it use an RS232 Module (CICP18ACCEIABD). Polling from the Host comes into POLL connector using conventional wiring, and all existing wiring remains unchanged. All panels set to use the Standard Mode. A maximum baud rate of 115.2K may be achieved in this configuration. The speed is limited due to the RS232 interface chips on the Host and the first Superterm.



First Network Superterm
- REPEAT Mode
- MODE 1 Jumper = RPT (pins 1 and 2)
- EOL2 Jumper = IN (pins 1 and 2)
- PG Switch selects Standard Mode

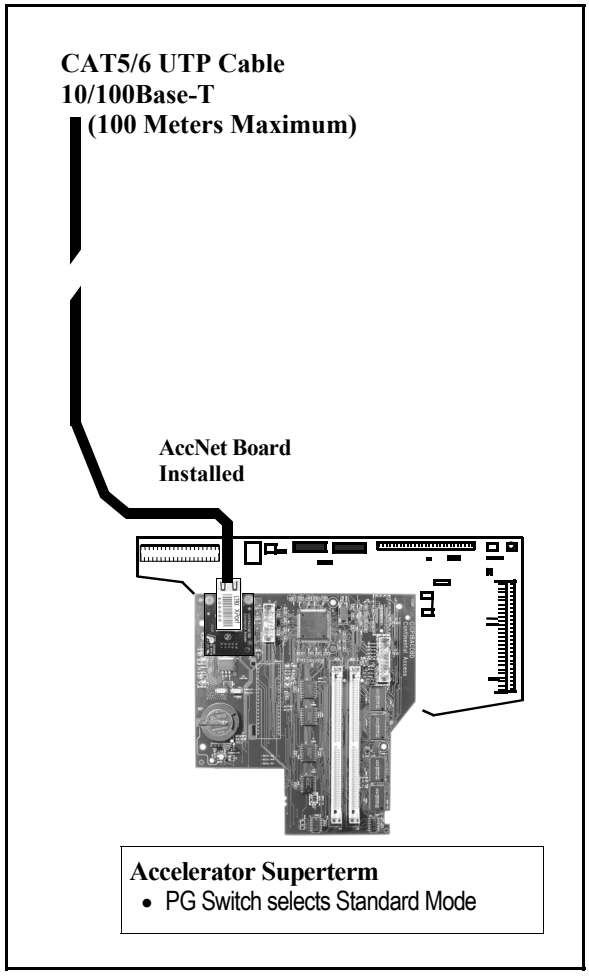
Second Network Superterm
- REPEAT Mode
- MODE 1 Jumper = RPT (pins 1 and 2)
- EOL2 Jumper = IN (pins 1 and 2)
- PG Switch selects Standard Mode

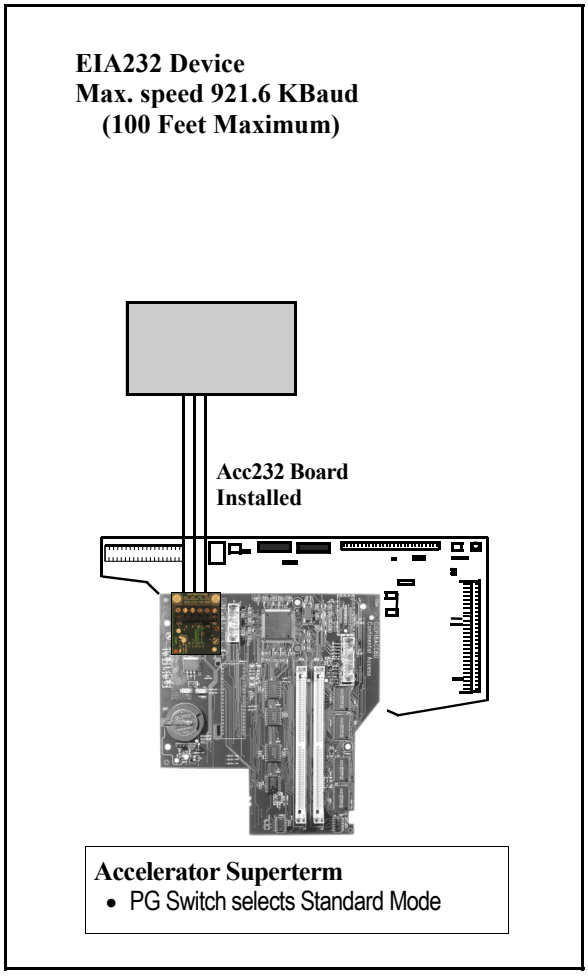
Third Network Superterm
- REPEAT Mode
- MODE 1 Jumper = RPT (pins 1 and 2)
- EOL2 Jumper = IN (pins 1 and 2)
- PG Switch selects Standard Mode

CASE 4:

All panels in the system are equipped with an Ethernet Module (CICP18ACCNETBD) or RS232 Module (CICP18ACCEIABD). Each panel has a distinct connection to the Host / Server. Either Mode setting will work. In this configuration the panels may communicate at 921.6K baud. Panels equipped with the RS232 Module (CICP18ACCEIABD) interface can have a cable length limitation of 10 feet, depending on the baud rate used.

Note: When used with the Ethernet Module, this configuration offers the fastest download speeds and the least load on the CA3000 Host/Server.





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