



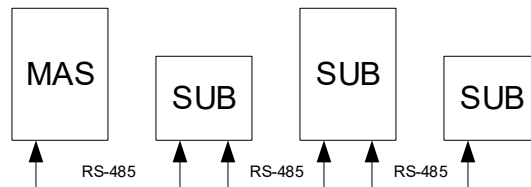
CONTROLLER COMMUNICATION

OVERVIEW

Controller to controller communications utilizes RS-485 between Controllers and Controller Packages. RS-485 provides fast and noise immune communications over standard 2 twisted pair wiring.

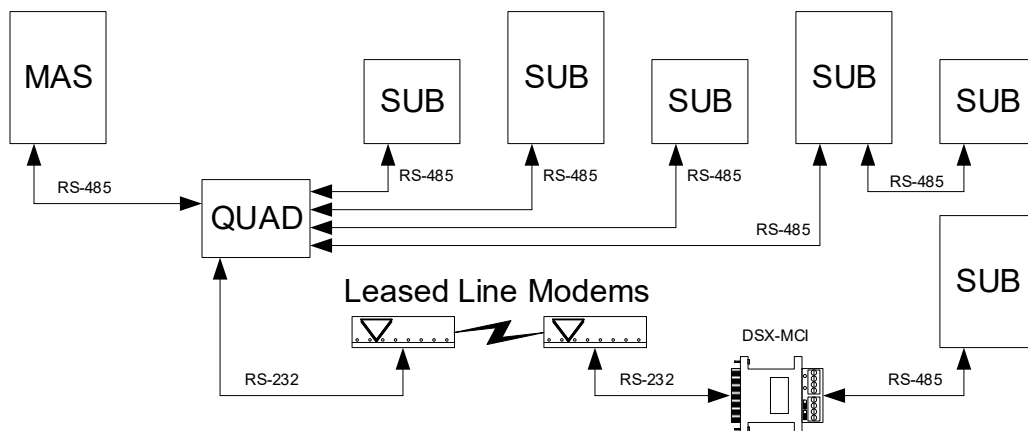
MASTER TO SUB CONTROLLER COMMUNICATIONS – SERIES LOOP

The two twisted pair RS-485 circuit runs from enclosure to enclosure in a series loop or daisy chain configuration. Each DSX-1040CDM or 1020 Series Controller regenerates the RS-485 signal to allow up to 4,000 feet of wire between controllers / controller packages. The CDM and 1020 Series Controllers have two bypass relays that will pass the RS-485 signal through to the next enclosure in case of a failure or power down.



MASTER TO SUB CONTROLLER COMMUNICATIONS – STAR WIRING

A Star or Branch wiring configuration can be achieved with the use of a DSX-1035 Quadraplexor. The Quadraplexor provides four RS-485 outbound ports and one RS-232 port. Any number of Sub Controllers can be connected to each of the four RS-485 outputs of the Quadraplexor and without regard to the Sub Controllers address. The RS-232 output of the Quadraplexor can be used to connect to a set of Fiber optic transceivers or to a set of Lease Line modems such as in the drawings. If necessary, the RS-232 Output can be used to connect to a subsequent DSX-1035 Quadraplexor for an additional four RS-485 Outputs.



SUB COMMUNICATIONS VIA TCP/IP USING PC MASTER

TCP/IP Communications are traditionally from the Comm Server PC to the Master Controller.

When TCP/IP communications are required to the Sub Controllers PC Master Software must be used.

The PC Master (PCM) Software is designed to allow a PC to perform the polling and communications duties normally handled by the Master panel. A computer running PCM Software will take the place of the Master panel. This arrangement provides three advantages:

- The Comm Server communicates to the PCM computer over the network. It downloads the Location data to the PCM and supervises the communication to the PCM just as if it were a Master Controller.
- The PCM then communicates and Polls the Sub panels just like a Master Controller. The only difference is the Sub controllers are connected to the Network using LAN Serial Devices like the DSX-LAN-D.
- The PCM can communicate with up to 63 Sub controllers each with its own LAN connection or multiple Sub Controllers can be connected to the same LAN serial device. The PCM supervises the communication to these LAN connected Sub controllers and performs all global communication duties such as Linking and Anti-Passback.

