The LocalNet 50/201 Bridge interconnects packet communication units (PCUs) on different frequency channels within a LocalNet™ network so that all PCUs in the network can communicate as if they were logically on a single channel.

As shown in the LocalNet Channels diagram, 50/201 Bridge units can interconnect multiple LocalNet channels up to a maximum of 8 channels per bridge. Bridge #1 interconnects channels 6, 8, 10, 12. Bridge #2 interconnects channels 8, 10, 12, 14.
Features
- Provides full connectivity between all "bridged" channels.
- Implements link layer and network (PTP) layer protocols, providing transparent inter-channel connections within LocalNet.
- Routing is automatically determined by the bridge at each session initiation; no special configuration is required at the time of installation.
- Up to eight LocalNet 20™ channels (in pairs) can be interconnected using a single bridge unit.
- Bridge channel connection is field configurable, through the use of LocalNet frequency agile RF modems.
- Bridges can be configured in parallel between channels providing redundant routes and load sharing.
- Each bridge can handle up to 2000 active sessions.
- Automatically restarts when power is restored in the event of a power outage.

Description
The LocalNet 50/201 bridge implements the network PTP protocol layer transparently allowing all PCUs to communicate as if they were on the same channel. The bridge performs the following tasks:
- Enables a PCU to "discover" a communication path to another PCU connected to a different frequency channel by returning its own Link Access Protocol (LAP) to the caller for use in routing packets during the current session.
- Provides packet transportation between PCUs on different channels.
- Interconnects up to eight channels located on one cable system.
- Routes up to 800 packets/second between channels.

Analog Specifications
Transmitter
Transmit channel frequency range:
70.3 MHz to 76.00 MHz
(for Group A)
Transmitter power output:
+46 dBmV at modem output
+34 dBmV at unit output
Output linearity:
±2dB
Modulation technique:
FSK
Frequency deviation:
60 KHz ± 4 KHz

Frequency stability:
±.01%
Frequency agility:
Fully Agile Over Group Range
300 KHz
Channel spacing:
Number of channels supported:
20 (for Group A)
Carrier on/off ratio:
60 dB minimum
Carrier harmonic content:
-50 dB minimum
Output Impedance:
75 ohms

Receiver
Receive channel frequency range:
226.55 to 232.25
(for Group A)
Input power level:
-2 dBmV nominal at modem input
+10 dBmV nominal at unit input
Receiver sensitivity:
-22 dBmV min. for 20 dB quieting
Receiver stability:
±.01%
Input impedance:
75 ohms

Status Interface Specifications
Type:
EIA RS-232C (DCE)
Data rate:
up to 9600 baud
Flow control:
EIA
Number of stop characters:
1
The status interface allows an operator to query the bridge for status and configuration information (the bridge is not configured via this interface; configuration is done via DIP switches on the digital cards). Bridge status commands allow the operator to do the following:
1. Examine the routing directory.
2. Print statistics on Bridge performance.
3. Display the configuration of the Bridge, and also a history log of errors that have occurred.

Technical Specifications
Capacity
Sessions:
up to 2000
Error rate
less than 1 in 10⁸ bits
Network type
midsplit, subsplit, (single or dual), broadband CATV system
Compatibility
Medium
6 MHz channel
Cable type:
75 ohm coaxial cable or standard CATV cable.
Cable topology:
Branching tree
Access method:
Carrier Sense Multiple Access with Collision Detection (CSMA/CD)
Line protocol
HDLC derivative, designed for local network use.

Environmental Specifications
Operating temperature:
+10 to +40°C
Storage temperature:
-40 to +70°C
Relative humidity:
To 95% (non-condensing)
Physical and Mechanical Specifications

Rear panel connectors
- Console: RS-232C (DCE)
- RF: Industry standard type "F" connectors (2), (Female Fittings)
- Power: Recessed male RFI-filtered fused AC connector

Front panel indicators
- On/Off Keyswitch and reset keyswitch: On/off and momentary reset
- Power on: Red/green LED indicates power on condition
- Channel Status: Red/green LEDs indicate packet receipt or transmission for each bridged channel. Red-packet received, Green-packet transmitted.

Size: Rack-mountable cabinet, 19" W, 10¼" H x 23¼" D

Weight: 80 lbs.

Power requirements:
- Voltage/Frequency: 115 VAC ± 10%, 60 Hz ± 5%
- 220 VAC ± 10%, 50 Hz ± 5%
- Power Consumption: 440 watts max

MTBF: 6000 hours

Processor:
1. Motorola 68000 control processor
2. Z80 for each channel interface unit

Memory (RAM):
1. 128 K bytes on 68000
2. 16 K bytes on each Z80

Ordering Information

<table>
<thead>
<tr>
<th>Model</th>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>50/201</td>
<td>W00</td>
<td>115 VAC, 60 Hz AC Power</td>
</tr>
<tr>
<td>50/210</td>
<td>W01</td>
<td>220 VAC, 50 Hz AC Power</td>
</tr>
</tbody>
</table>

*NOTE: May order 1 to 4 modem interface kits per bridge.
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