ANDERSON JACOBSON

CopperLAN

LAN Ethernet 10/100 Base-TX Bridge

Highlights

- G.SHDSL mode: 64Kbps to 2.32Mbps
- CAP-mSDSL mode: 64Kbps to 4.64Mbps
- Automatic rate / reach adaptation up to 4.64Mbps or 4.35 miles
- Full duplex transmission on a single twisted copper pair
- Transparent Ethernet bridge: 802.1D 10/100 Base-T
- Transparent to VLAN and special protocols frames
- Filtering bridge with automatic discovery of MAC addresses
- Data compression up to 256Kbps
- Compatible with: MD-20BT and MD-2HUB units
- User's Choice for the transmission mode: mSDSL CAP at 4.6Mbps, or G.SHDSL at 2.3Mbps
- Manageable over the LAN or through the console port
- Administration: Telnet, HTML and SNMP
- Compact metallic enclosure
- Optional 4-port switch 10/100 Auto MDI/MDX

Advantages

- Reach: 1.37 miles at 4.64Mbps
- Reach: 4.97 miles at 128Kbps
- Fast and easy installation: plug and play
- Rate optimization vs line length and quality
- Speed: automatic or user selectable
- Pingable unit
- Transmission statistics
- Industrial kit for DIN rail mounting available

The ***CXR-Anderson Jacobson CopperLAN***™ is a new Ethernet bridge over a single twisted pair that comes from the proven technology of CXR's MD-2000.

CopperLAN relies on the latest SDSL and G.SHDSL techniques for multi-rate data transmission over the subscriber or private pair line.

CopperLAN can connect on existing telephone lines and provides an adaptation to the maximum rate that the line can accept from 128K to 4.64Mbps, without voice alteration or configuration of either PBX or LAN.

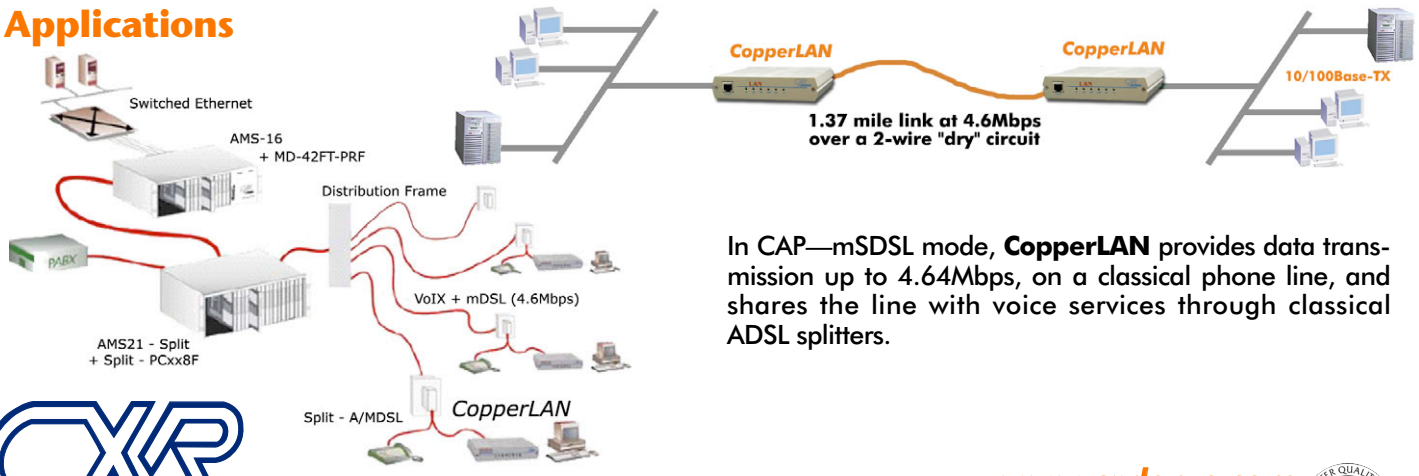
CopperLAN is a powerful 10/100 Base-T Ethernet bridge that can carry 802.1q frames and facilitate VLAN installation.

CopperLAN's operation is automatic since it defines the best rates depending on the line length and quality. The transmission rate is set automatically or defined by the user from 64Kbps to 4.64Mbps. Both local and remote units can always be controlled from their console port, from the LAN, or from the line.

CopperLAN is compatible with the existing MD-2000 range of modems. It can connect to MD-2703 as to extend the local loop from the PDH/G.703 network, and provide LAN-to-LAN links.

CopperLAN's line coding is either CAP—mSDSL for rates up to 4.64Mbps that is compatible with classical ADSL splitters for sharing data and voice on standard phone line, or TC.PAM G.SHDSL for rates up to 2.32Mbps that provides an higher reach and is compatible with classical SHDSL repeater for even longer length lines.

Applications



In CAP—mSDSL mode, **CopperLAN** provides data transmission up to 4.64Mbps, on a classical phone line, and shares the line with voice services through classical ADSL splitters.

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Anderson Jacobson CopperLAN

Typical Reach on 26 AWG/0.4 mm line wire

CAP-mSDSL speed	144	272K	384K	528K	784K	1.04M	1.552M	2.06M	2.32M	4.64M
Reach (miles)	4.35	3.98	3.60	3.23	3.11	2.86	2.49	2.30	2.11	1.37
G.SHDSL speed	144	272K	400K	528K	784K	1.04M	1.552M	2.128M	2.32M	-
Reach (miles)	4.97	4.47	3.98	3.79	3.36	3.05	2.61	2.36	2.17	-

Specifications

TRANSMISSION TECHNIQUE mSDSL OR G.SHDSL
User can select mSDSL or G.SHDSL line code from companion software.

mSDSL MODE

- Line: one metallic twisted pair
- Line coding: CAP/QAM
- Line rate: 144Kbps to 4.64Mbps
- Transmit signal power: 13 dB
- Reach on 26 AWG at 144Kbps: 4.35 miles
- Port: RJ-11
- Standards: UIT-T G.991.1 and ETSI ETS.101135
- Compatible with the MD-2000 range of mSDSL modems

G.SHDSL MODE

- Line: one metallic twisted pair
- Line coding: TC PAM
- Line rate: 144Kbps to 2.312Kbps
- Reach on 26 AWG at 144Kbps: 4.72 miles
- Port: RJ-11
- Standards: ITU-G991.2 (A, B, B-ANFP), G.994-1 and ETSI ETS.101524
- Compatible with most non ATM G.SHDSL concentrators

LAN INTERFACE

- Ethernet 10/100BaseT: Auto sense
- Socket: RJ-45
- IEEE 802-3 compliant
- Transparent to IEEE 802.1q VLAN frames
- Filtering of up to 10,000 MAC addresses
- Frame buffer: 400
- Max frame size: 1548 bytes
- Optional: 4-port switch

FRONT PANEL
LED: Power, CD, LAN 10/100, RX, TX and link

POWER SUPPLY
110/230 VAC through external adapter (< 5 W)

PHYSICAL (D x W x H)
Metallic enclosure: 5.79 in x 5.67 in x 1.5 in

OPERATING TEMPERATURE
32° to 113° F (0 to 45 ° C)

MANAGEMENT

- Console port: V.24/V.28 - 8 bits no parity, 19.2Kbps; VT100 emulation, AT commands and user friendly menus

MANAGEMENT

- From the LAN*: Telnet session
- Remotely from the DSL line: Telnet

* *Remote control does not interrupt the user traffic. The remote unit can be controlled from a host anywhere or from the local unit.*

- SNMP trap for alarm notification w/ graphical MIB
- Flash memories for code upgrades from the console port or an FTP session
- Plug and play

TRANSMISSION OVER VOICE LINES

CAP-mSDSL code of the **CopperLAN** can connect on a phone line without altering the voice link from the PBX to the subscriber. Small standalone or rackmount cards of splitters adapts and filters the voice (low pass filter) and mSDSL (high pass filter) signals on both ends of the line.

No change is required on the PBX or CopperLAN.

Ordering Configurations

(Model/Description)

CopperLAN

G.SHDSL/mSDSL Ethernet Bridge, 10/100 TX LAN Interface

OPTIONS

- **AMS21-SPLIT & SPLIT-PCxxx**
  19-inch chassis for 8 port cards to split up to 168 lines of a PBX
- **SPLIT—A/MDSL-3RJ11**
  Spitter to the network or PBX
- **SPLIT—A/MDSL-MULTIPLE**
  Remote splitter
- **CopperLAN-Rail-Kit**
  Kit used for mounting the unit on an industrial DIN track
- **CopperLAN-SW**
  4-port switch. Auto MDI/MDX and Auto 10/100 detection