

# COPPERWAY

## ETH/V24 ACCESS SERVER OVER DSL

### Characteristics Advantages

- 1 Ethernet 10 / 100 BaseTX interface, auto sense
- 1 V24 / RS232/RS485 interface
- Dual DSL interface, 2 wires, TC-PAM G.SHDSL
- TC-PAM G.SHDSL: provides rates from 144 Kbps to 2.3 Mbps on each pair
- Ethernet filtering or transparent bridge
- 1,000 Ethernet addresses memory
- 400 Ethernet frames buffer
- RS232/RS485 port addressed as a COM port server through an IP address and / or a TCP/UDP port
- Master/Slave mode for easy migration of multidrop modems
- Easy to operate thanks to user friendly menus.
- Local and remote TCP-IP management
- SNMP management: for configuration and TRAP. Graphical MIB for SNMP-C
- Network test loop
- Compact size enclosure with a choice of mains (110 / 230 Vac) and DC power supply: 36-72 or 12-36 Vdc
- DIN rail mounting
- 19" mounting kit for two units
- By-pass relay between DSL interfaces
- Spanning tree 802.1d
- Dual DC power inputs

### ETHERNET & RS232 SERVER OVER DSL BUS

The **CopperWay** is aimed at transmitting data over 1 or 2 copper pairs in G.SHDSL mode to distribute V24/RS232/RS485 and Ethernet accesses in an industrial infrastructure.

The **CopperWay** embeds a powerful Ethernet switch that ensures an optimum internal transfer delay and reduce the end to end transmit delay over the bus.

The Ethernet interface is served in transparent bridge mode. It offers an automatic detection of the link speed, 10 or 100 Mbps, as well as the MDI/MDIX polarity.

The **CopperWay** is also an asynchronous port server with IP/TCP/UDP protocols and Raw-IP, Message and HN2 modes which make it possible to transport asynchronous data over an IP network.

The **CopperWay** provides 2 DSL line interfaces, East and West. The transmission mode complies with the G.SHDSL standard and supports rates from 144 Kbps to 2,320 Kbps per pair that are suitable for video traffic. The SHDSL mode offers unique reach on copper pairs.

The **CopperWay** fits in a compact metallic, DIN rail mounting enclosure with a choice of mains (110/230 Vac) and DC (12-36 or 36-72 Vdc) power supplies that satisfies industrial and telecommunication requirements.

The **CopperWay** is very easy to operate thanks to its user friendly and intuitive menus. It can be managed from the IP network through Telnet and SNMP protocols.

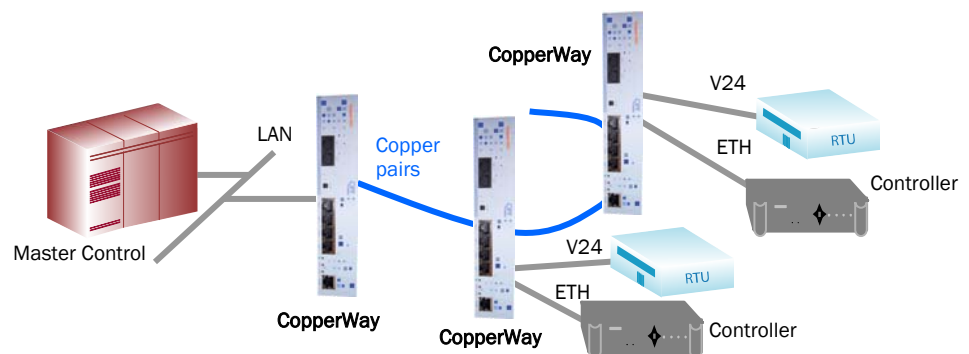
The **CopperWay** is mounted on a DIN rail, or it can be installed in a 19" bay.

The **CopperWay** is part of a large CXR range of products such as Terminal and COM port servers, xDSL access systems, including the CopperWay-SW with multiple Ethernet and serial ports.



### APPLICATIONS

Controlling equipments and collecting data in Ethernet/IP mode on a Bus or Ring SHDSL link



The **CopperWay** interconnects RS232/RS485 and Ethernet based systems on each access point of a copper pair infrastructure. The total number of access points is only limited by the IP addressing capability of the network. The internal transit delay is optimized thanks to powerful switching and filtering techniques. The Ethernet equipments are addressed just as if they were connected to the local network. Asynchronous devices are addressed through an IP address and of a TCP /UDP port number in either Raw-IP, HN2 or Message mode.

## SPECIFICATIONS

### G.SHDSL Line Interface

- 2 Interfaces: west and east
- G.SHDSL: TC-PAM 16 line coding, 144 to 2,320Kbps throughput on each copper pair
- RJ11 sockets
- Impedance: 125 Ohms
- By-pass relays

### V24/RS232/RS485 Interface

- 1 V24 / RS232 / RS485 port
- RJ45 socket
- RS232 or RS485 mode is user defined
- Asynchronous mode
- Data rate: 1,200 to 115,200 Bps
- V24/V28 and RS485 levels
- Mode of operation: IP/TCP/UDP, Raw IP (transparent), HNZ, Message

### Digital inputs / outputs

- 2 digital inputs
- 2 dry relay outputs
- DB9F socket
- Commands and status transmitted over TCP or UDP (data field), or SNMP TRAP and GET, deport a relay command / contact over IP / DSL

### Ethernet Interface

- 1 Ethernet port
- Speed: 10 / 100 Mbps, auto sense
- Automatic MDI/MDIX detection
- 10/100 BaseTX, IEEE 802.3
- RJ45 socket
- Ethernet bridge, 1,000 MAC addresses memory
- 400 Ethernet frames buffer
- User controlled Ethernet filtering
- Statistics: transmitted and received frames, filtering diagnostics

### Configuration Port

- V24/V28—8bit, 19,2Kbps
- VT 100 compatible, AT commands or user friendly menus
- RJ45 socket

### Front panel LED

- Power
- CD 1: first DSL port synchronisation
- CD 2: second DSL port synchronisation
- Link/Act: Ethernet connection status and data activity

- 100: speed of the Ethernet interface
- TX: data transmitted at the asynchronous RS232 interface
- RX: data received at the asynchronous RS232 interface

### Management

- Local console port: AT commands, intuitive VT100 menus
- Diagnostics: Network local loop, PING
- TCP-IP management: Telnet, SNMP, FTP for firm-ware upgrade
- Remote management: TCP-IP, Telnet, SNMP
- Statistics: Counters for loss of synchronization and DSL carrier, data transmission statistics for each interface, Ethernet switching statistics
- Alarm relay control in case of carrier loss. Uses one digital output

### Power supply

- 230 Vac: MVE model
- 110 Vac: MVU model
- 36-72 Vdc: MC1 model
- 12-36 Vdc: MC2 model
- Consumption: 7,5W (5V, 1.5A)

### Miscellaneous

- Size: 170 x 125 x 35 mm
- Weight: 0.7 kg
- Operating temperature:
  - MC model: -25 to +60 °C
  - MV mains supply: -10 to +45 °C
  - PS-DIN mains supply: -20 to +70 °C
- CE: EN60950, EN55022, EN55024
- MTBF: 123 000 hours

### DSL reach

1 pair Kbps	km 0.4 mm	km 0.6 mm	km 0.8 mm
192	7,2	9,5	16,4
512	5,6	7,4	12,8
1024	4,7	6,2	10,7
1536	4,1	5,4	9,3
2048	3,6	4,7	8,2
2304	3,4	4,5	7,7

## ORDERING INFORMATION

### CopperWay -TTX - MXY

XY : Power Supply Model

- VE** 230 Vac power supply
- VU** 110 Vac power supply
- C1** 36-72 Vdc power supply
- C-2** 12-36 Vdc power supply
- PS-DIN-12V-40/75/120W**: mains supply, DIN, operating temperature -20 to +70 °C

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