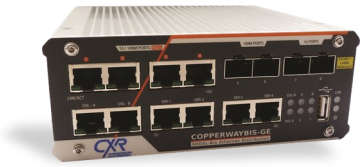
Smart solutions for smart networks

Version 1.9

COPPERWAYBIS-GE / FIBERWAY-GE

CopperWayBis-GE Hybrid ETH/Serial switch over fiber and DSL
FiberWay-GE Hybrid ETH/Serial switch over fiber



CONNECTIVITY
2x DSL at 30 Mbps
4x Optical SFP's

VERSATILITY
Ethernet, RS232 and Digital interfaces

RELIABILITY
Ruggedized design

Resiliency
Ring Protection
By-pass relay

SECURITY
802.1X
Encryption

Overview

CopperWayBis-*GE* delivers four Ethernet ports and two asynchronous V24/RS232/RS485 serial ports over mixed copper pairs and fiber optic cables communication network.

CopperWayBis-*GE* provides six transmission interfaces. Two East and West SHDSL ports with 2 and 4 wires modes deliver up to 30 Mbps throughput and adaptive rates from 192 kbps to 15 Mbps per pair or up to 7 km distance over on AWG26 or 0.4 mm cables. 2x Gigabit and 2x 100FX SFP sockets deliver higher bandwidth and flexible distances thanks to a broad choice of SFP modules. Mixed optical and copper line connectivity enables any network infrastructure, coverage, speed and topology - star, multi-drop and resilient ring.

CopperWayBis-*GE* is also an asynchronous serial port server with tcp/udp protocols and raw-ip, message and bloc encapsulation. Serial ports can be set for RS232 or RS485/RS422.

CopperWayBis-*GE* embeds a high performance Gigabit Ethernet processor that provides low latency switching and many Ethernet protocols for perfectly control applications. Application traffics may be set into VLAN's when they enter the equipment and throughout the network. Most stringent QoS and traffic prioritization can by applied on the various VLAN's and Ethernet / IP packets.

CopperWayBis-*GE* is designed in a robust metallic enclosure with DIN rail clip or optional 19'' rack mounting kit. It has a dual inputs power supply converter with protection against polarity and overvoltage risks.

CopperWayBis-*GE* gives the user a simple and user friendly management interface that is secured with https and ssh protocols. The intuitive Web interface provides easy system setting and very detailed statistics and diagnostic information. Snmp v3 is supported for integration in a global Network Management System. The USB port enables automatic configuration backup and update, as well as an automatic firmware upgrade from a memory card.

FiberWay-GE has the same features, without DSL.

Applications

- Intelligent Transportation Systems : a single device to connect Traffic Light Controller, information display, traffic counter, gate control, IP camera, alarm contacts, payment and ticketing terminals, Wi-Fi access point, etc.
- Electricity, oil & gas, Water Utility : connect to RTU, smart and legacy meters, valves and gate control, temperature and air conditioning control, VoIP phones, RS232 console ports, video camera, etc.

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Specifications

Interfaces	
G.SHDSL.Bis Line	• 2x interfaces, East and West • G.SHDSL.Bis : TC-PAM 16/32/64/128 coding, 192 kbps to 15 Mbps per pair • Ethernet EFM / 802.3ah • Max rate 2x1 pairs : 2x 15 Mbps • Max rate 2x2 pairs : 2x 30 Mbps • 2x RJ45 sockets • Impedance : 120 Ohms • By-pass protection relay (DSL1/DSL2)
Ethernet Optical SFP	• 4x fiber optic interfaces with SFP sockets • 2x Gigabit Ethernet and 2x 100FX ports
Ethernet RJ45	• 4x Ethernet ports • Rate : 10/100 Mbps automatic • Automatic detection MDI/MDIX • Authentication 802.1x • Interface : 10/100 BaseTX, IEEE 802.3 • MAC address memory : 8 K • Ethernet frame buffer : 1 MB • Statistics : transmitted and received frame counters, interface status
RS232/RS485/RS422	• 2x or 4x asynchronous ports • RS232 or RS485, software selectable • RJ45 socket, EIA-561 compatible • Rates : 300 to 115,200 bps • Transfer : via IP/ TCP/ UDP, Raw-ip (transparent), Bloc, Message, multipoint modem emulation

Switching and Traffic Control	
Switching	• Switch Ethernet, 802.3D bridge
VLAN	• per port on Ethernet, fiber and DSL • VLAN 802.1Q
QoS	• priority queuing on VLAN and DSCP, 4x priority queues per interface Ethernet / fiber / DSL
Rate	• Limiting per port Eth / Fiber / DSL
Ring resiliency	• STP, RSTP
SHDSL performance	• Distances on a AWG26 / 0.4 mm cable, no noise conditions - refer to below metrics

General Characteristics	
Format	• Compact metallic stainless enclosure • DIN rail mounting and 19'' option
Dimensions	• 160 x 160 x 44 mm
Weight	• 1 kg
Operating temperature	• -20 to +70°C , -4 to 158 °F • Fan-less
Power supply	• MC model : 12 - 24 - 48 Vdc • 10 Watts
Compliance	• EN-55022, EN55024, EN-50121-4, IEC-61850-3, EN-60950 • ROHS, DEEE, REACH
Misc	• MTBF 200,000 Hours

Administration	
Digital Inputs and Outputs	• 4x Digital Inputs • 1x dry relay output • Removable terminal screw bloc with clips • Commands and status sent over TCP or UDP, SNMP TRAP and GET messages, remote relay control
Management	• TCP-IP : Telnet, http, ssh, https • LLDP • Html Web interface with intuitive menus • CLI commands : ssh and local console port • Snmp : v2/v3 • USB memory interface: event log, configuration and firmware up/download • Diagnostics : ping, traceroute • DSL Diagnostic : speed, signal quality • Interface transmission statistics • Interface operating diagnostics
Light indicators	• Power • DSL : synchronization and Connection Quality of the DSL pair (2 or 4) • FO-Link-Act : synchronization and activity of the optical interfaces • Link/Act : status and activity of the Ethernet interfaces • 100 Mbps : speed of the Ethernet interfaces • TD/RD : data activity of the serial interfaces

One pair rate Mbps	0.192	1.280	2.048	4.6	5.7	11.4	15.3
Distance km	7	4.5	4	2.5	2	0.9	0.4

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Ordering Information

Part Number	Eth	SFP	DSL	RS232/485	I/O	Power
CWayBis-GE-2W-MC	4x 100BT	2GE + 2FX	2x2W	2	4 in + 1 out	12-24-48
FiberWay-GE-MC	4x 100BT	2GE + 2FX	-	2	4 in + 1 out	12-24-48
PS-DIN-12V-40/75/120W	Power supply, 110 / 230 Vac to 12 Vdc, 40, 75 or 120 W, -20 à +70 °C range					
ACDC-H-48V-240W-DM	Power supply, 110 / 230 Vac to 48 Vdc, 180 W, -20 to +70 °C range					
PROTEC-1DSL-RJ45	Lightning protection for a DSL interface made of one copper pair					
PROTEC-2DSL-RJ45	Lightning protection for a DSL interface made of two copper pairs					

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