

CNS LonWorks® Serial Gateway

Features

- ◆ Available with following LonWorks® transceivers types:
 - 78Kb/s twisted pair Free topology transceiver (FTT-10A),
 - LPT-10/11 network compatible
 - 1.25 Mbps TP/XF-1250
 - RS-485 TP-RS485, 39 Kbps

- ◆ Din Rail and Desk Mounting
- ◆ 3150, 10Mhz Neuron
- ◆ High Speed RS-232 Interface up to 57600 kbps
- ◆ 10V to 33V DC powered
- ◆ LED and service LED's for both sides of the gateway
- ◆ LonMark, LNS compliant
- ◆ Reset and Service buttons provided with power

- ◆ CE, RoHS



Description

The Serial Gateway provides a serial interface between RS-232 and LONWORKS networks offering data transfer rates of up to 57600 kbps. The Neuron chip 3150 maps the interface to the LON side. The serial interface includes 8 signal lines (RXD, TXD, RTS, CTS, DCD, DSR, RI). The usage of these lines depends upon the application of the module and / or on the implemented software. The unit contains 32 KByte (max. 64 KByte) non-volatile FLASH-or EPROM-memory. Additionally, 24 KByte of RAM can be used for memory consuming applications.

By default, the unit works with standard software **SPA** (Serial PC Adapter) in FLASH/EPROM for network access from PC. All received network messages or network variable updates are sent to the PC. Messages from the PC are transferred to the network. The serial transmission is

controlled by the SPA-protocol. The PC software library supports receive and send operations similar to those in Neuron-C. These functions and the underlying data structures make the implementation of network management tools and visualisation software easy. It can be used for connecting PCs, printers, modems, or any other equipment with serial interface to a LonWorks network.

The unit is an excellent platform for custom specific programming (including gateway functions or customized protocols) due to the flexible memory configuration (FLASH or EPROM and RAM) as well as the unlimited access to the serial data lines.

For the implementation of proprietary protocols in the firmware, a Neuron-C-library <UART_MM.H> and the source code of a sample application is available under signed license (free of charge).

Caution: Installation by qualified personnel only. Observe established engineering procedures and CNS's published data. Be careful when connecting power!

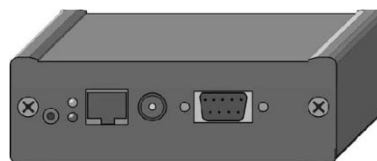
For additional information regarding use of these products please, refer to CNS Serial Gateway User Manual. Please note that CNS supplies a complete range of Lon Network Infrastructure Products (NIP's) and Internet Lon Network Infrastructure Products (INIP's) including Physical Layer Repeaters, Lon Terminators, LonRouters (inc Fibre), Lon/IP 852 & Lon/ WiFi 852 Routers please visit our web site www.control-network-solutions.co.uk for more information.

For additional information regarding use of these products please, refer to CNS LonWorks Router Guide and CNS LonWorks Din Router Installation Guide. Please note that CNS supplies a complete range of Lon Network Infrastructure Products (NIP's) and Internet Lon Network Infrastructure Products (INIP's) including Physical Layer Repeaters, Lon Terminators, Lon/IP 852 & Lon/ WiFi 852 Routers please visit our web site www.control-network-solutions.co.uk for more information.

Specifications

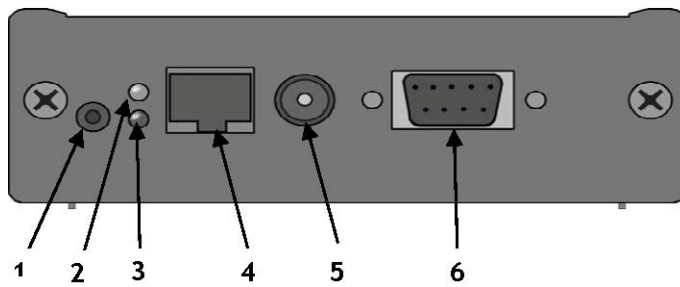
Mechanical

Overall Width	103mm
Overall Height	36mm
Overall Depth	103mm



Din mounted Bracket can be fitted to underside of unit. Unit is suitable for fitting on DIN 46277 and DIN EN 50022 mounting rail

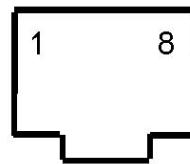
Connections and Status LED's



- 1.....service Pin
- 2.....service-LED (yellow)
- 3.....status-LED (red)
- 4.....RJ45-modular jack (LON)
- 5.....power supply
- 6.....D-SUB-9-jack (RS-232)

Connectors Lon network connector -RJ45 Modular Jack (outside view)

Pin	Signals
1	Data A
2	Data B
3	+10..+33 VDC
4	GND
5	-
6	-
7	-
8	-



The specification for cabling of the LON connector is described in the Lonmark™ Interoperability Guidelines Layer 1 in more detail.

This device can be supplied with power via the RJ-45 connector (Pins 3 and 4). The Power Jack and RJ-45 power supply paths are decoupled by diodes, but are not galvanically isolated.

Warning: Use only one power supply path to power the device!

Please observe the guidelines concerning the cable length and recommended cable types, published by Echelon Corporation and the LONMARK Interoperability Association.

Serial Port RS-232 (D-SUB-9-Jack)

Pin	Direction	Signal
1	Input	DCD
2	Output	TXD
3	Input	RXD
4	Input	DSR
5		GND
6	Output	DTR
7	Input	CTS
8	Output	RTS
9	Input	RI

Maximum speed 57600 Baud

Note: Voltage potential differences between RS232 ground and power supply ground may damage the device! Avoid potential differences by using a galvanically decoupled power supply.

Power Supply Adapter Jack

Pin diameter is 1.9mm,

Centre – GND

Outer -+10.. +33 VDC

Note: Exceeding the indicated voltage range can damage the device!

Memory Configuration

Flash / EPROM 0x0000 to 0x7FFF RAM 0x8000 to 0xE3FF UART 0xE400 to 0xE7FF

Electrical

Technical	
Processor	3150 @ 10Mhz
Memory	32K EPROM/FLASH + 32K RAM
Lon Transceiver	FTT10A, TPT1250, RS-485
Supply	10V to 33VDC
Power	≤ 0.6W

Operating Temp	0.... 50°C
Storage Temp	-20...70°C
Relative Humidity	0 – 75% (annual average non – condensing)
Weight	250g
CE	EN 50081-1 / 55011 Class B Group 1, EN 50082-1

Reference documents for installation and network topology issues;

Echelon LonWorks FTT-10A Transceiver User's Guide, 078-0198-01D

Echelon LPT-11 Link Power Transceiver User's Guide, 078-0198-01A

Echelon Twisted Pair Transceiver User's Guide, 078-0025-01C

Ordering Information

Part No. = CNSSGS/1

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