

HDLC Router

Datasheet

A-HDLC

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Revision 1.2

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1. PREFACE

1.1. ABOUT THIS DOCUMENT

This document contains the technical data for the HDLC Router. The HDLC Router provides intelligent data routing between EtherNet/IP and an HDLC (RS485) network. This allows the user to integrate HDLC devices into a Rockwell Logix platform (e.g. ControlLogix or CompactLogix) with minimal effort.

1.2. FEATURES

The module can be configured to act as either an HDLC master or slave, in either 2-wire or 4-wire RS485 mode. Data can be easily mapped to custom positions in the Logix input and output assemblies affording maximum user flexibility.

The HDLC Router is configured using the Aparian Slate application. This program can be downloaded from www.aparian.com free of charge.

The module also provides a range of statistics and a packet analyser to help fault find any problems. The HDLC RS485 port uses a terminal block for convenient installation.

A built-in webserver provides detailed diagnostics of system configuration and operation, including the display of HDLC operation and communication statistics, without the need for any additional software.

1.3. ARCHITECTURE

The first example application uses the HDLC Router to exchange data between a GEM80 MultitGEM controller via a STARNET card, and a ControlLogix controller.

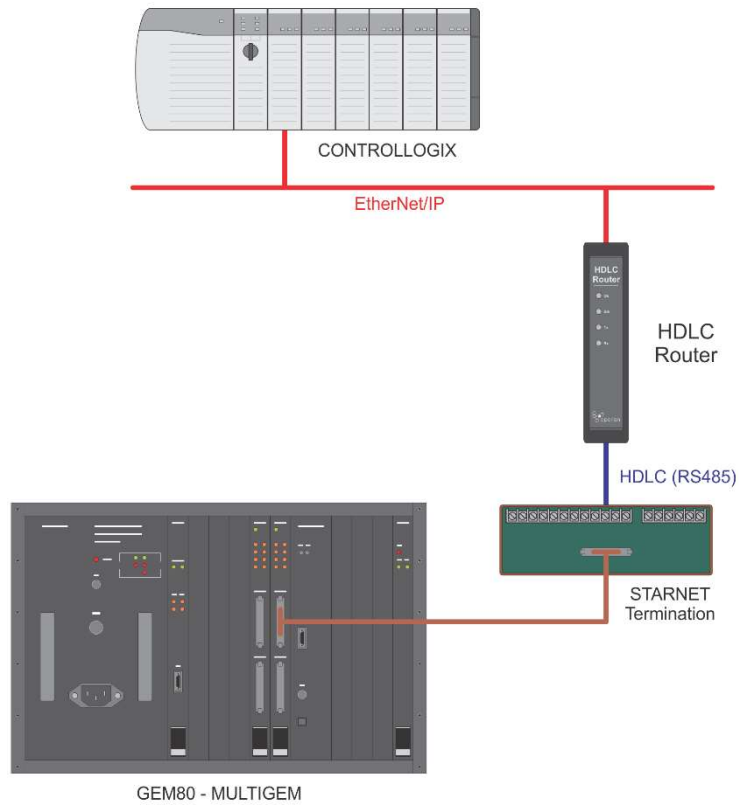


Figure 1 – Application Example 1

The HDLC Router can be configured to be either a Master or Slave, depending on the configuration of the GEM Starnet module. This application typically makes use of a 4-wire connection.

The second example has the HDLC Router configured as a slave device with a number of other slaves connected on the same HDLC segment. The HDLC Router is able to masquerade as multiple slave nodes, according to the pre-configured data mapping.

This configuration can make use of either 4-wire or 2-wire RS485 topologies.

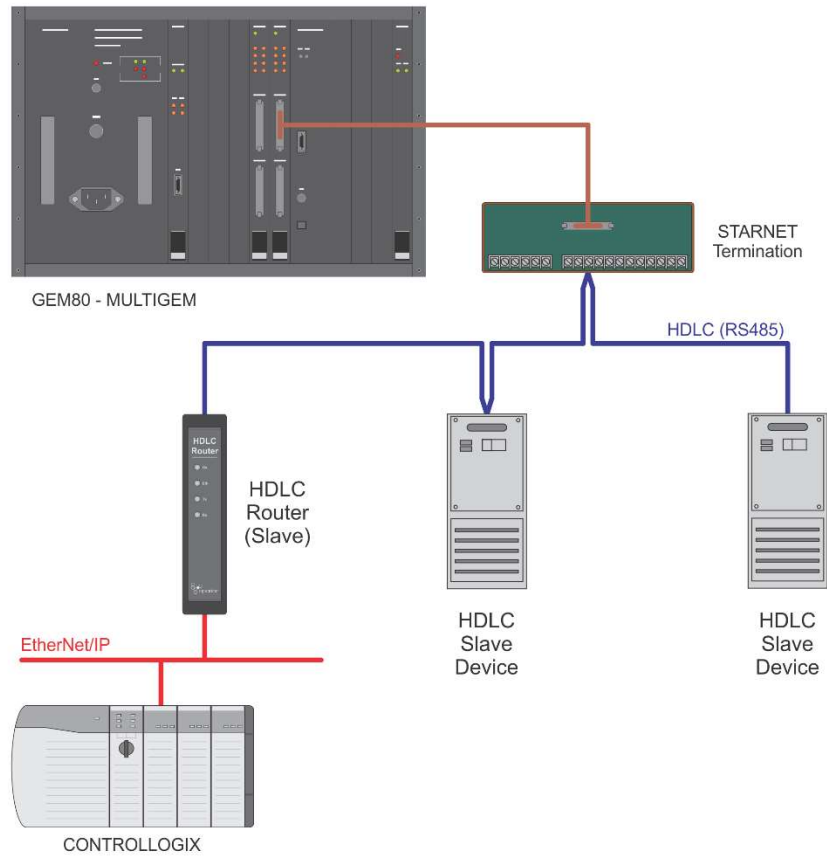


Figure 2 – Application Example 2

2. ETHERNET/IP NETWORK

Specification	Rating
Connector	RJ45
Conductors	CAT5 STP/UTP
ARP connections	Max 20
TCP connections	Max 20
CIP connections	Max 10
Communication rate	10/100Mbps
Duplex mode	Full / Half
Auto-MDIX support	Yes

Table 1 - Ethernet specification

3. HDLC (RS485) NETWORK

Specification	Rating
RS485 Connector	5-way terminal
RS485 Conductor	24 – 18 AWG
BAUD	48000, 180000 b/s
Encoding	NRZI, FM0, FM1
Interface Modes	Table Exchange Mode Broadcast with response Broadcast with no response

Table 2 – HDLC (RS485) specification

4. ELECTRICAL SPECIFICATIONS

Specification	Rating
Power requirements	Input: 10 – 28V DC, (70 mA @ 24 VDC / 130 mA @ 10 VDC)
Power consumption	1.7 W
Connector	3-way terminal

Conductors	24 – 18 AWG
Enclosure rating	IP20, NEMA/UL Open Type
Temperature	-20 – 70 °C
Earth connection	Yes, terminal based

Table 3 - Electrical specification

5. CERTIFICATIONS


Certification	Mark
RoHS2 Compliant	RoHS2
CE Mark	CE
ODVA Conformance	EtherNet/IP™ <small>* F/W 1.004</small>
RCM	

Table 4 – Certifications

6. DIMENSIONS

Below are the enclosure dimensions as well as the required DIN rail dimensions.

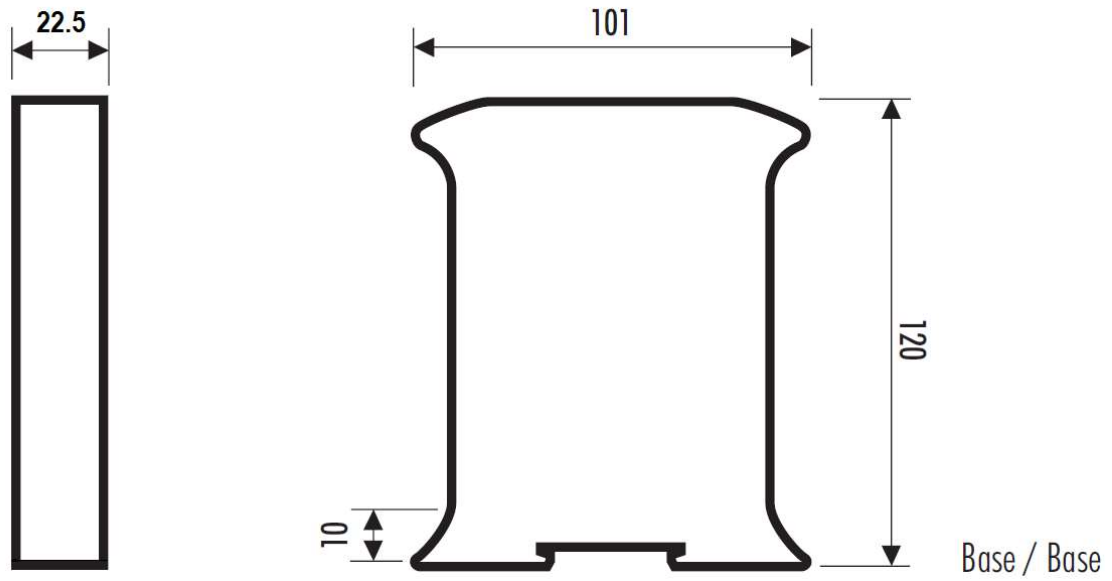


Figure 3 - HDLC Router enclosure dimensions

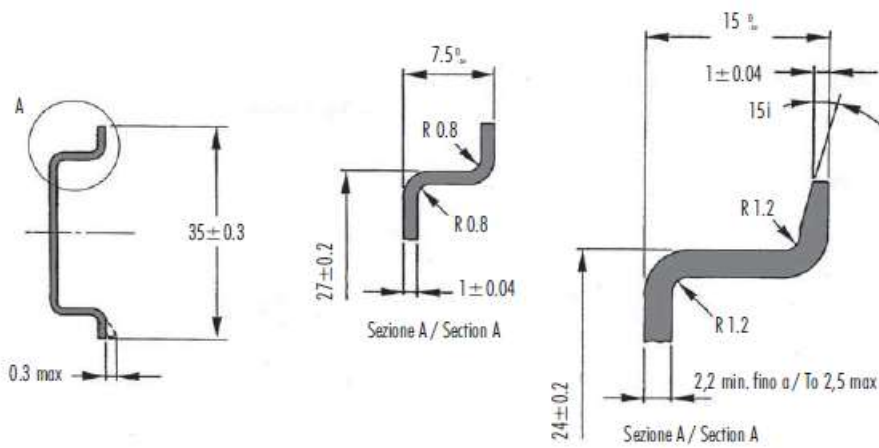


Figure 4 - Required DIN dimensions