



* version SIU3449A. See table below for all options.

Serial Links Interface Unit (SIU)

EN 50155
EN 45545

MODULE FUNCTIONS

The Trainnet® Serial Links Interface Unit (SIU) is used to implement up to eight serial links. The physical layer level and parts of data link layer are implemented within SIU and higher protocol layers are implemented on the system CPU.

For gateway applications, the routing between the Serial Link buses and other buses are implemented by the train computer CPU module.

KEY FEATURES

The module has one DIN41612-F48 connector on the front-panel where Serial Links can be connected. Serial links are split

in two identical groups which are isolated from the FPGA and from each other. In each group there are four Serial Links that can be configured in different ways according to the table below.

Communication between the module and the train computer/system is done through shared memory over the IEC 821 VME back plane bus.

The Trainnet® SIU module provides 2 kByte long RX and TX double buffers for each serial link. The system CPU can access these buffers through the VME shared memory. A dedicated FPGA controls precise

timing for all eight channels in parallel and provides convenient double buffering for the system CPU. This guarantee high performance in demanding safety critical applications.

OPTIONS

The Trainnet® SIU comes in 2 different versions offering different Serial Interface combinations. Please consult the table below for specifications. Other configurations are available upon request.

TECHNICAL SPECIFICATIONS

Dimensions (W x H x D)

4 TE x 3 U x 160 mm

Weight

140 g

Input Power

5 V DC ± 5 % (250 mA typ., 400 mA max.)

Temperature Range (operational)

-40 °C... +70 °C

MTBF (40 °C ambient temperature)

2 600 000 h

Connector

DIN41612-F48 (at front)

Serial Link Interfaces

2 isolated groups

See table for all options

FPGA Shared Memory

TX buffers: 8 x 2 x 2 kB

RX buffers: 8 x 2 x 2 kB

VME Bus (IEC 821) Interface

A24 Slave with D08(E0)/D16

STANDARD SIU MODULES:

MODULE REFERENCE	RS-485 HALF OR FULL DUPLEX*	RS-232**
SIU3448A	8	0
SIU3449A	6	2

* The RS-485 Full Duplex can be used for RS-422 applications

** Optional handshake signals