GOSSEN METRAWATT

SMART**CONTROL** | ECS

Energy Management System
Interface Module for LON

3-349-553-03
2/5.19

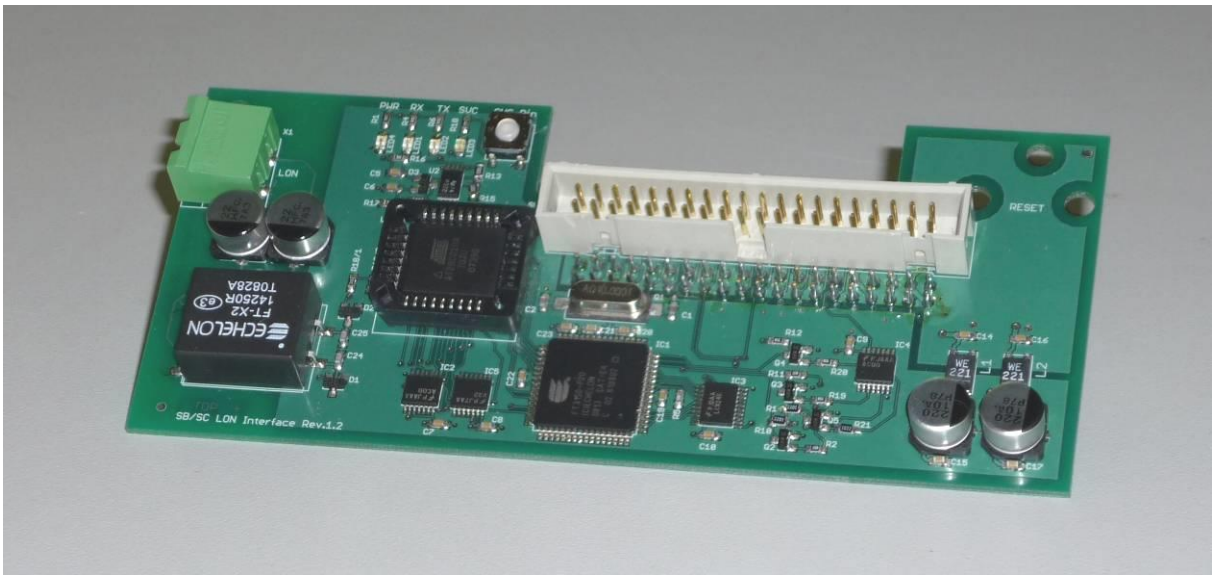
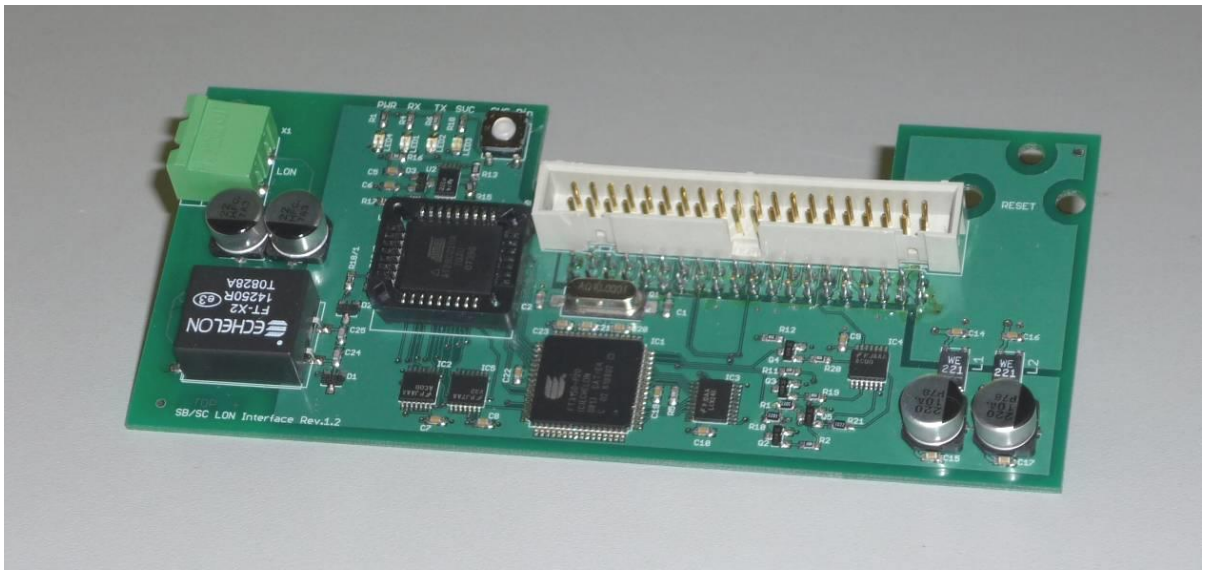


Table of Contents

1 The Local Operating Network – LON

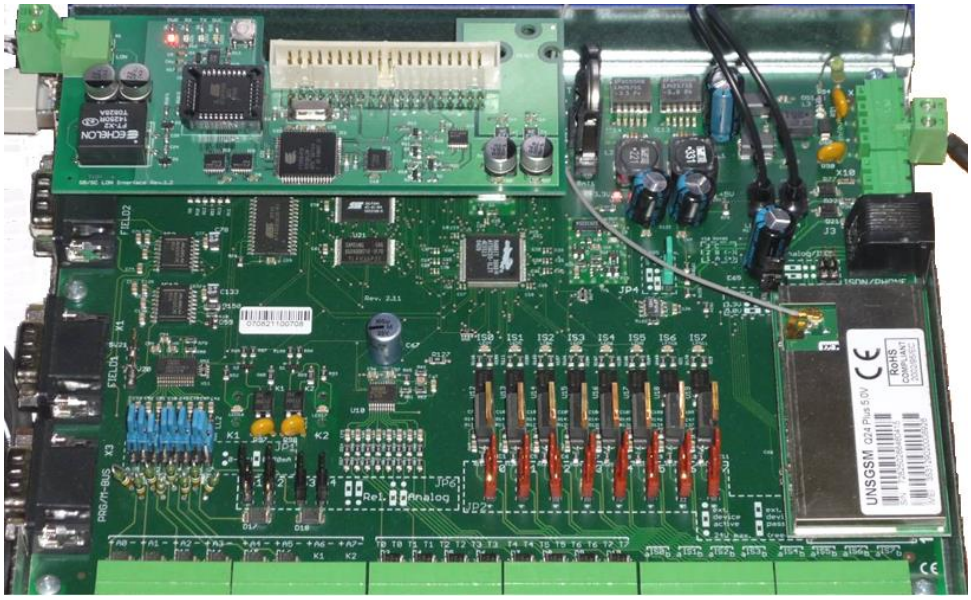
The local operating network (LON) is a bus system for decentralized automation.
The SmartControl Interface Module for LON is used to read out values from a LON network, and to make the 24 measured values from the SmartControl (8 analog inputs, 8 digital inputs and 8 temperature inputs) available via LON. Polling data from the LON network is based upon a simple request/response procedure. A description of the network variables for making data from the SmartControl available is attached.



Interface Module for LON

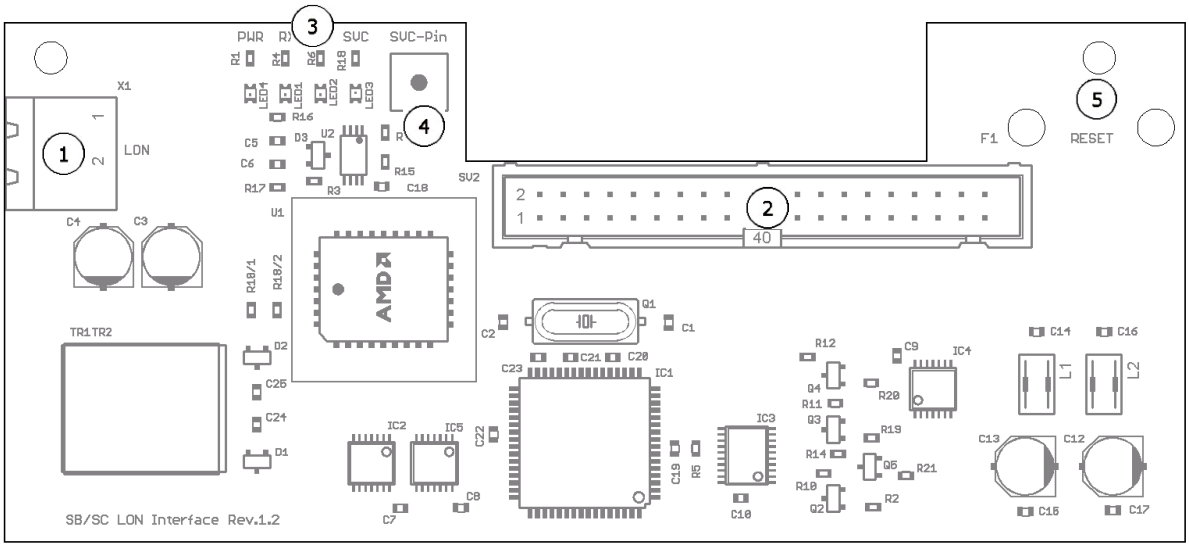
1.1 Connecting the Interface Module for LON

The module is plugged directly into the SmartControl expansion port and is mounted with the included accessories.



Interface Module for LON with SmartControl

The module is connected to the LON network by means of 2-wire connection (top left).



1. 2-pin LON socket for establishing connection to the LON network using the included 2-pin plug with screw connector.

2. SV2 expansion port plug-connector on the SmartControl PCB for connecting add-ons (e.g input/output module for 24 channels)

3. PWR LED (green): indicates that power is available for the Interface Module for LON.
   RX and TX LEDs RX (green): indicates communication between the LON network and the Interface Module for LON.
   SVC LED (yellow): service LED. Doesn't light up during normal operation.

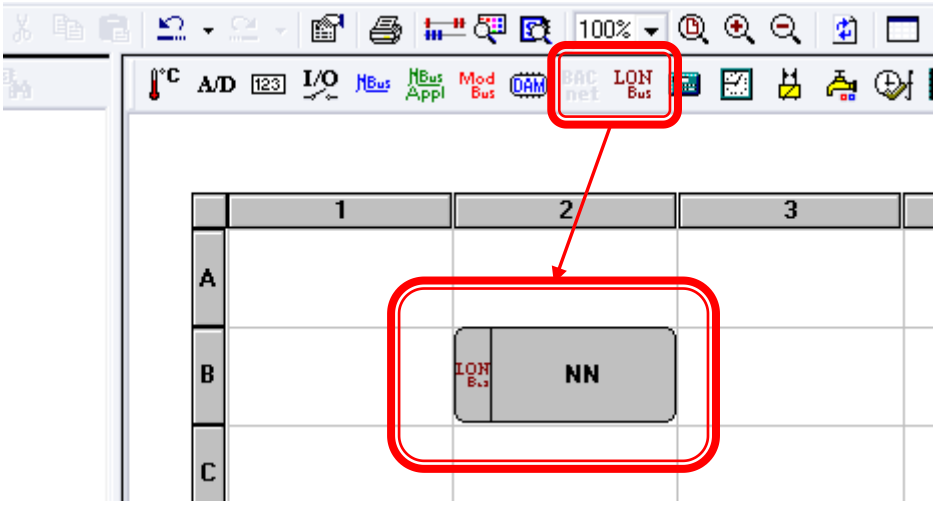
4. SVC pin: key for transmitting the neuron ID to the LON network. The SVC LED remains lit as long as the SVC pin is pressed.

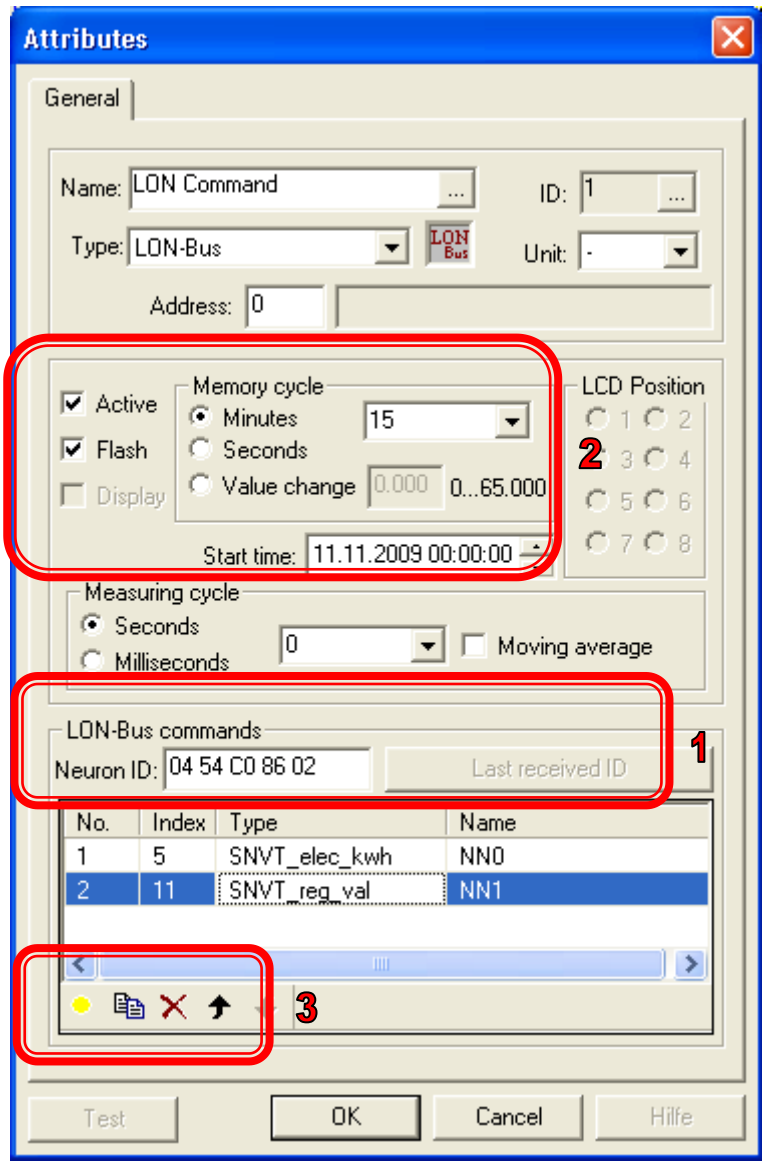
5. The F1 and RESET through-holes make it possible to activate the keys with these designations on the SmartControl PCB.

2 Interface Module for LON and SmartControl Manager

In order to make data from the SmartControl available within the LON network, it's only necessary to create a command in the SmartControl Manager for the corresponding channel. When this command is queried, the corresponding value is forwarded directly to the Interface Module for LON.

A Lon command must also be created in order to read data from the Lon network.





The command has to be parametrized for the read-out of values. Open the command and enter the following values to this end:

1 Neuron ID of the device to be read out. The "Last Received ID" button can be used for this purpose. Press the "Service" pin of the device to be set up to this end. The device's Neuron ID is then transmitted, which can then be read in and saved by the SmartControl.
2 Enter the memory cycle (if large numbers of read-outs are involved, this should not be set too high!). Activate the "Active" and "Flash" checkboxes.
3 Create a query command and enter the network variables index and the type (SNVT).
4 Optional: Test the command.

2.1 LON ID

Values are read out from the SmartControl via the neuron ID and the associated network variable. These variables are listed and explained below.

Please note that data at the Interface Module for LON are based on the commands at the SmartControl. If no command is created for the corresponding channel, it's not transmitted to the Interface Module for LON and contains not data.

LON Network Variables, Temperature Inputs

NV ID	SNVT_ Type	Network Variable	U/M	Description
0	SVNT_temp_f	nvoSBTemp1	°C	SmartControl temperature value for temperature input T0
1	SVNT_temp_f	nvoSBTemp2	°C	SmartControl temperature value for temperature input T1
2	SVNT_temp_f	nvoSBTemp3	°C	SmartControl temperature value for temperature input T2
3	SVNT_temp_f	nvoSBTemp4	°C	SmartControl temperature value for temperature input T3
4	SVNT_temp_f	nvoSBTemp5	°C	SmartControl temperature value for temperature input T4
5	SVNT_temp_f	nvoSBTemp6	°C	SmartControl temperature value for temperature input T5
6	SVNT_temp_f	nvoSBTemp7	°C	SmartControl temperature value for temperature input T6
7	SVNT_temp_f	nvoSBTemp8	°C	SmartControl temperature value for temperature input T7

LON Network Variables, Pulse Inputs

NV ID	Network Variable	Network Variable	Unit	Description
8	SVNT_count_f	nvoSBImpuls1	-	SmartControl pulse value for pulse input I0
9	SVNT_count_f	nvoSBImpuls2	-	SmartControl pulse value for pulse input I1
10	SVNT_count_f	nvoSBImpuls3	-	SmartControl pulse value for pulse input I2
11	SVNT_count_f	nvoSBImpuls4	-	SmartControl pulse value for pulse input I3
12	SVNT_count_f	nvoSBImpuls5	-	SmartControl pulse value for pulse input I4
13	SVNT_count_f	nvoSBImpuls6	-	SmartControl pulse value for pulse input I5
14	SVNT_count_f	nvoSBImpuls7	-	SmartControl pulse value for pulse input I6
15	SVNT_count_f	nvoSBImpuls8	-	SmartControl pulse value for pulse input I7

LON Network Variables, Analog Inputs

NV ID	Network Variable	Network Variable	Unit	Description
16	SNVT_vol_f	nvoSBAnalog1	Volt	SmartControl analog value for analog input A0
17	SNVT_vol_f	nvoSBAnalog2	Volt	SmartControl analog value for analog input A1
18	SNVT_vol_f	nvoSBAnalog3	Volt	SmartControl analog value for analog input A2
19	SNVT_vol_f	nvoSBAnalog4	Volt	SmartControl analog value for analog input A3
20	SNVT_vol_f	nvoSBAnalog5	Volt	SmartControl analog value for analog input A4
21	SNVT_vol_f	nvoSBAnalog6	Volt	SmartControl analog value for analog input A5
22	SNVT_vol_f	nvoSBAnalog7	Volt	SmartControl analog value for analog input A6
23	SNVT_vol_f	nvoSBAnalog8	Volt	SmartControl analog value for analog input A7

Values for these network variables can be queried by means of a standard request command.

3 Technical Data

LON PCB	
Dimensions (W x H)	Approx. 128 x 56 mm
Power consumption *	Max. 1 W

4 Repair and Replacement Parts Service, Calibration Center and Rental Instrument Service

If required please contact:

GMC-I Service GmbH
Service Center
Beuthener Str. 41
90471 Nürnberg, Germany
Phone: +49 911 817718-0
Fax: +49 911 817718-253
e-mail: service@gossenmetrawatt.com
www.gmci-service.com

This address is only valid in Germany.
Please contact our representatives or subsidiaries for service in other countries.

5 Product Support Industry

If required please contact:

GMC-I Messtechnik GmbH
Product Support Hotline Industry
Phone: +49 911 8602-500
Fax: +49 911 8602-340
e-mail: support.industrie@gossenmetrawatt.com

* Actual power consumption depends upon power pack efficiency, as well as any other connected sensors and devices.

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