

EIT Advanced Interface (ETA option)

Enhanced version of EIT Test Adapter ETA with access to active electrodes on the back of the device (break-out circuit) and access to resistor phantom via 32 points.

Intended Use

The EIT Advanced Interface is not a medical device. Therefore, the hardware and software components of the EIT Advanced Interface are intended for testing only and should never be used in diagnostics, treatment or any other capacity where it would come in contact with patient. Set-up and use of the EIT Advanced Interface is the sole responsibility of the user.

Specifications

The EIT Advanced Interface is an enhanced version of the ETA and contains complete SensorBelt hardware which is connected to a resistor phantom simulating the human thorax. The impedance distribution in the phantom can be changed manually, automatically or by external signals. EIT Advanced Interface is powered by the SensorBeltConnector. In addition to the ETA, the EIT Advanced Interface provides access to the active electrodes and the resistor phantom by virtue of a break-out cable located in the back of the device.

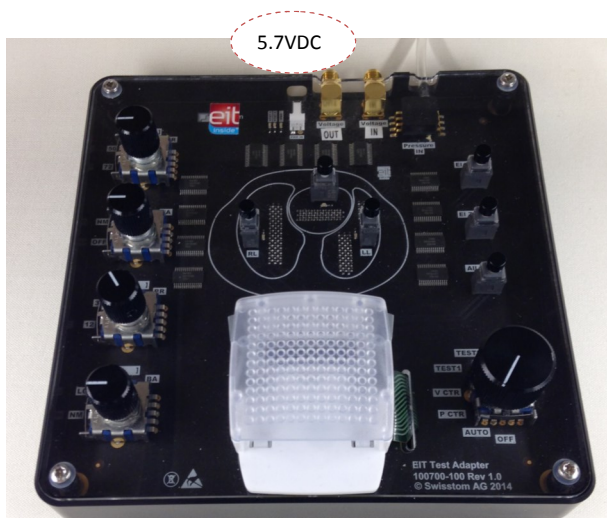


Figure 1: EIT Advanced Interface

The EIT Advance Interface device with control buttons and mode selectors identical to the EIT Test Adapter ETA. In contrast to ETA, the EIT Advanced Interface provides access to optional DC Power (5.7VDC, see use cases) and electrodes (see use cases next page)

Swisstom AG

Swisstom AG develops innovative medical devices for the monitoring of lung and heart function in ICU patients and patients undergoing general anesthesia.

The vision of Swisstom AG is to become a globally active and leading provider of life saving, non-invasive medical technology for patient monitoring – to the benefit of patients, physicians, caregivers and society.

Unlike traditional tomographic methods, Swisstom’s imaging does not use x-rays.

For more information

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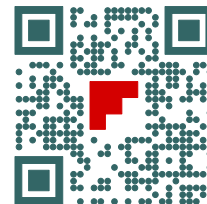
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TECHNICAL DATA SHEET

Use case „standard“, Figure 2

The factory configuration has the break-out cable installed as depicted in Figure 2. In this configuration, the EIT Advanced Interface can be used just like the standard EIT Test Adapter ETA (see separate Data Sheet).

Use case „external electrode driver“, Figure 3

Remove the break-out cable of Figure 2 and install the electrode extension cable as depicted in Figure 3. The EIT Advance Interface can now be used to connect the Swisstom SensorBeltConnector to 32 electrodes with 32 leads. The following table provides the connection scheme.

Lead	#	Lead	#	Lead	#	Lead	#
2	1	10	9	18	17	26	25
3	2	11	10	19	18	27	26
4	3	12	11	20	19	28	27
5	4	13	12	21	20	29	28
6	5	14	13	22	21	30	29
7	6	15	14	23	22	31	30
8	7	16	15	24	23	32	31
9	8	17	16	25	24	33	32

Table 1: Electrode extension pin-out and electrode assignment using 34 leads flat band cable (Samtec FFSD-17-D-40.01-01-N-SR). Note that lead #1 (marked in red color on the flat band cable) and lead #34 are not used. The connector on the EIT Advanced Interface side is a Samtec connector ESHF-117-01-L-D-SM .

Use case „Resistor phantom for third-party device“

Remove the break-out cable of Figure 2 and install the resistor phantom access cable (is identical to the electrode extension cable). Connect a third-party device to the EIT Advance Interface with up to 32 electrodes. Connection Table 1 applies.

There are two options to power the EIT Advanced Interface:

Power supply option a): use a Swisstom SensorBeltConnector

Power supply option b): use an external power supply with 5.7 VDC. DO NOT CONNECT a Swisstom SensorBeltConnector while supplying 5.7 VDC. Damage may result!

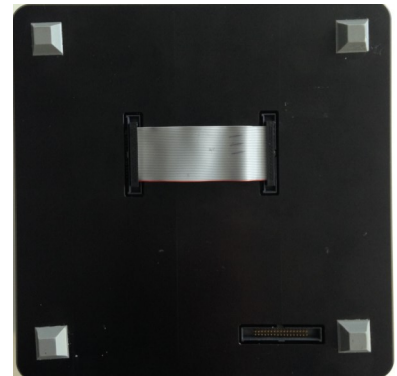


Figure 2: Rear view of EIT Advanced Interface: standard
The 32 active electrodes are connected to the resistor phantom by a break-out cable.



Figure 3: Configuration external electrode driver.

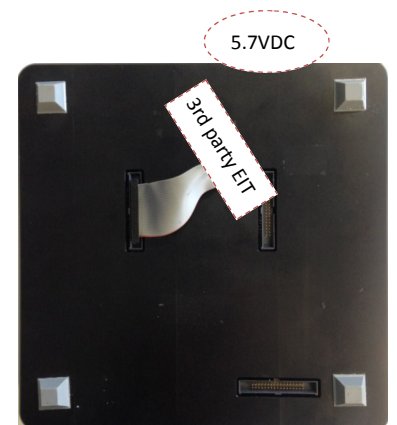


Figure 4: Configuration „resistor phantom for third party device“
Note: connector on the bottom is for internal use only.