



# switch...it Installation Guide V1.11

## Contents

<b>Installation instructions</b> .....	<b>3</b>
Caution Safety Instructions! .....	3
Mechanical Installation instructions .....	3
LAN integration.....	3
<b>IP Address set-up</b> .....	<b>4</b>
Set-up Client IP Address.....	4
Set-up Client Netmask .....	4
Set-up Client Gateway .....	4
Set-up NTP Server Address.....	4
Set-up Unit Number .....	4
Getting started.....	4
<b>Frame connections</b> .....	<b>5</b>
<b>Pinout switch...it 1-RU Frame</b> .....	<b>6</b>
RS-232 Port * .....	6
LAN Interface .....	6
<b>Pinout System cards</b> .....	<b>7</b>
Switch...it - SER-2 dual RS-422 Port.....	7
Switch...it - GPIO parallel In/Out card .....	7
<b>switch...it TCP/IP Protokolle</b> .....	<b>8</b>
<b>switch...it Systemkabel</b> .....	<b>8</b>
Serial RS-422 cable for IBT panel / matrixes Snell, Miranda, Nevion(Multicon) .....	8
Serial RS-422 cable for switcher Kahuna, MVS-3000/65xx,XtendD, DD30,KAYAK .....	9
Serial RS-422 cable for switcher Sony MVS-6000/8000 Mischer.....	9
Serial RS-422 cable for Stagetec Nexus .....	10
Serial RS-422 cable for „first“ IBT-UMD of daisy chain bus.....	10
Serial RS-422 cable for IBT-UMD daisy chain bus .....	11
Serial RS-422 cable for Multiviewer Miranda KX Serie .....	11
Serial RS-422 cable for Multiviewer Evertz MVW VIP A8 Duo.....	12
Serial RS-422 cable for Multiviewer Evertz Quad VIP 4 .....	12
GPIO input / output connections .....	13
<b>Troubleshooting</b> .....	<b>14</b>
GUI can not open (Website not found) .....	14
Daten per FTP ins System übertragen fails with timeout.....	14
Webpanel can not connect.....	14
TSL Protocol.....	14
Nvision Protocol .....	14
Nevion MRP Protocol.....	15
<b>Common specifications</b> .....	<b>16</b>
<b>Frame version depending specifications</b> .....	<b>16</b>
<b>Changeindex</b> .....	<b>16</b>

## ***Installation instructions***

### **Caution Safety Instructions!**

This manual is intended for qualified operating personnel. Electronic technical knowledge is required for the handling of this device or system in order to avoid the risk of electric shock or equipment damage. Perform only those referred to in this manual Installation and Operating Instructions unless you are qualified on these instructions also make interventions.

### **Always disconnect power supply before opening the frame!**

This device operates in the specified voltage range without the need for manual adjustment is required.

For the wiring different power cord can be used that meet the product safety requirements of the country in which they are used. For this device, a power cord with a protective conductor is required. The power cord must be rated for a nominal voltage of 240V / AC.

To ensure safety and permanent fire protection, all fuses may be replaced only by identical fuses with identical electrical data for the corresponding fuse location.

### **Mechanical Installation instructions**

To avoid damages on the 19" mounts of the frame, we recommend the use of 19" rack mount rails.

#### **Important!**

In order to ensure a sufficient convection ventilation, we recommend above and below our frame 1-RU distance.

If the installation situation does not allow the recommended distance above and below the device, the device can be equipped, as an available option with a fan and a cross ventilation.

### **LAN integration**

We recommend to use a virtual-LAN (V-LAN) for the IBT Interfaces inner core "switch..it" components, like Frames and Panels.

Communication to the external components for example production switchers, multiviewers or matrixes should be done via a router gateway.

## *IP Address set-up*

### **Set-up Client IP Address**

Turn the LCD wheel knob on the front panel to the right until you reach the menu entry Client IP Address.

1. Push the knob to enter the edit mode
2. Turn the knob to the right / left to put the cursor to one of the four address sub-segments.
3. Push the wheel knob again to edit the selected sub-segment and turn the wheel to the right, to increment the address segment, or to the left to decrement the address segment.
4. To confirm the change of a sub-segment press once the wheel knob, this will also exit the sub-segment edit mode.
5. Move to the next sub-segment and continue with point 2, or if you are finished to set-up all sub-segments continue with point 6..
6. If you have entered the right values for all sub-segments, turn the wheel to the right until accept changes appear and press the wheel knob once again, to confirm and exit the edit mode.  
If you like to discard the changes turn the wheel knob to the left until discard changes will appear and confirm by pressing wheel knob

### **Set-up Client Netmask**

Turn the LCD wheel knob on the front panel to the right until you reach the menu entry Client Netmask. Follow the instruction of "Set-up Client IP Address point 1-6"

### **Set-up Client Gateway**

Turn the LCD wheel knob on the front panel to the right until you reach the menu entry Client Gateway. Follow the instruction of "Set-up Client IP Address point 1-6"

### **Set-up NTP Server Address**

Turn the LCD wheel knob on the front panel to the right until you reach the menu entry NTP Server Address. Follow the instruction of "Set-up Client IP Address point 1-6"

### **Set-up Unit Number**

If the system is a single frame system unit number is by default "0.0.0.1"

Turn the LCD wheel knob on the front panel to the right until you reach the menu entry Unit Number Follow the instruction of "Set-up Client IP Address point 1-6"

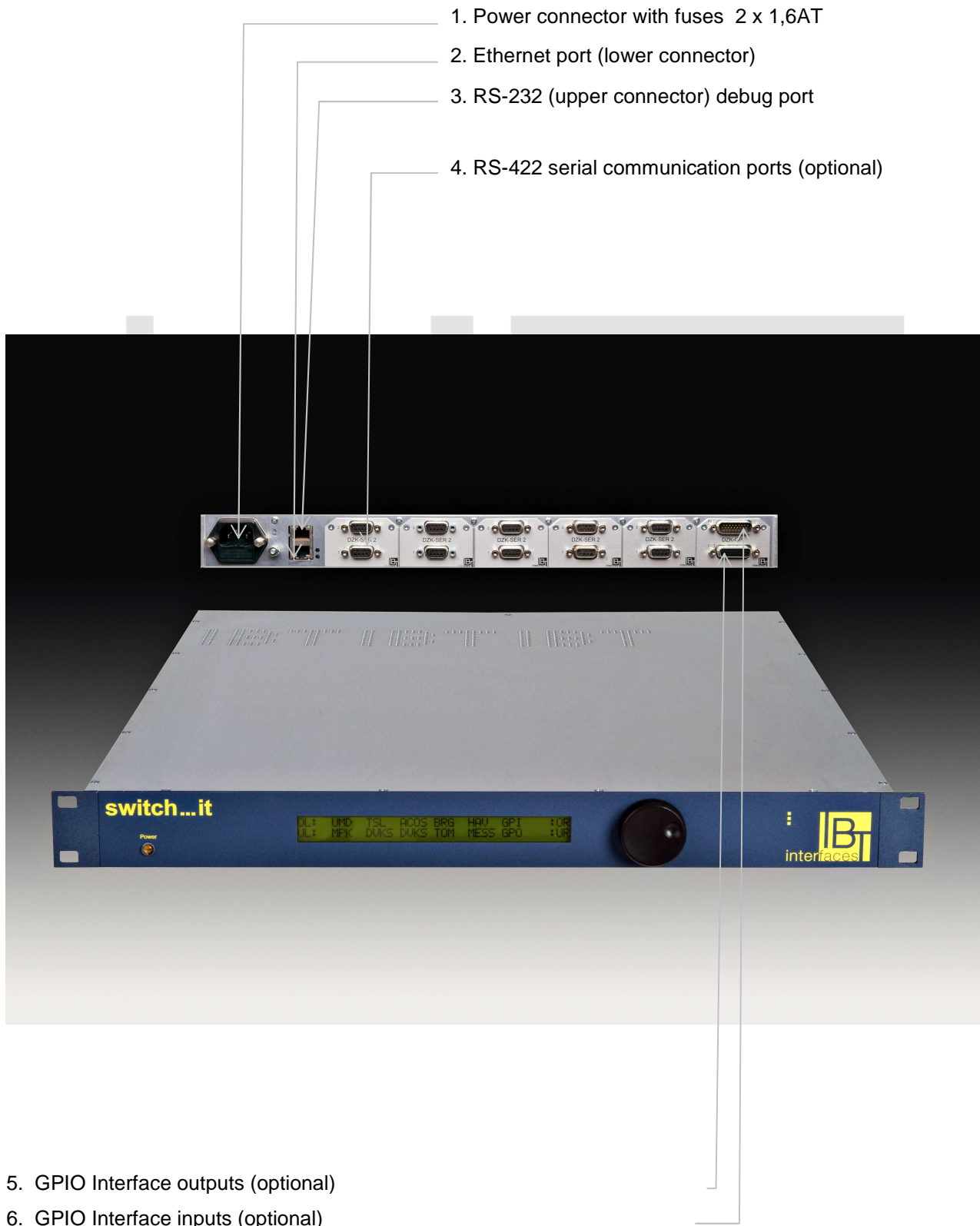
## **Getting started**

Go to <http://www.ibt-interfaces.de/download-support/>

Section switch...it Downloads

1. Load the latest "switch...it quick start guide"
2. Load the latest "switch...it Panel installation guide"

## Frame connections



## Pinout switch...it 1-RU Frame

### RS-232 Port \*

RJ-45 B8 female

Pin Nr.	Signal
1	n.c.
2	n.c.
3	n.c.
4	Rx
5	Tx
6	n.c.
7	n.c.
8	GND

\* For future use

### LAN Interface

RJ-45 B8 female

Pin Nr.	Signal
1	Tx +
2	Tx -
3	Rx +
4	n.c.
5	n.c.
6	Rx -
7	n.c.
8	n.c.

Frame 1.0 serial number < XX-00242, selling date before 06.05.2015

**Forced to 10Mbit half duplex. Intelligent switches need to be set either to 10 Mbit half duplex, to avoid duplex mismatch errors.**

Frame 2.0 serial number >= XX-00242, selling date after 06.05.2015

**Auto sensing (normally 100 Mbit full duplex).**

**Pinout System cards**

**Switch...it - SER-2 dual RS-422 Port**

**Port 1 (lower)**  
D-Sub. B9 male

Pin Nr.	Signal
1	n.c.
2	/TxD
3	RxD
4	GND
5	n.c.
6	GND
7	TxD
8	/RxD
9	n.c.

**Port 2 (upper)**  
D-Sub. B9 male

Pin Nr.	Signal
1	n.c.
2	/TxD
3	RxD
4	GND
5	n.c.
6	GND
7	TxD
8	/RxD
9	n.c.

**Switch...it - GPIO parallel In/Out card**

**GPI Outputs (lower):**  
HD-D-Sub. B26 female

Pin Nr.	Signal
1	/out 1
2	/out 2
3	/out 3
4	/out 4
5	/out 5
6	/out 6
7	/out 7
8	/out 8
9	/out 9
10	/out 10
11	/out 11
12	/out 12
13	/out 13
14	/out 14
15	/out 15
16	/out 16
17	n.c.
18	n.c.
19	n.c.
20	n.c.
21	n.c.
22 *	+ Volt <sup>2</sup>
23 *	+ Volt <sup>2</sup>
24 *	Comm. contact 1-16
25	GND
26	GND

**GPI Inputs (upper):**  
HD-D-Sub. S26 male

Pin Nr.	Signal
1	Opto - / In 1
2	Opto - / In 2
3	Opto - / In 3
4	Opto - / In 4
5	Opto - / In 5
6	Opto - / In 6
7	Opto - / In 7
8	Opto - / In 8
9	Opto - / In 9
10	Opto - / In 10
11	Opto - / In 11
12	Opto - / In 12
13	Opto - / In 13
14	Opto - / In 14
15	Opto - / In 15
16	Opto - / In 16
17	n.c.
18	n.c.
19	n.c.
20	n.c.
21	n.c.
22 *	+ Volt <sup>2</sup>
23 *	+ Volt <sup>2</sup>
24	Comm. Opto + Volt in
25	GND
26	GND

**! GPI outputs** solder a connection between Pin24 and Pin 25, or use a potential free external GND.

**! GPI inputs** solder a connection between Pin 23 and Pin 24, or use a potential free external voltage.

\* The current in sum on pin 22 and 23 must not exceed 450mA !.

\* The sum currents of the GPIO outputs 1-16 must not exceed 1,5A

<sup>2</sup> **Caution !** +Volt is +24V in frame version 1.0 and +7,5V in frame version 2.0 (See specification section)

**switch...it TCP/IP Protokolle**

IBT switch...it Panel Protokoll  
 Probel SWP-02  
 Probel SWP-08  
 TSL 5.0  
 VTS IMD Monitore  
 Kahuna 360 serial Tally  
 Sony ROT16  
 LAWO Remote MNOPL  
 Nevion MRP  
 RT Soft Remote Desk  
 Grass Valley GVS Tally  
 Miranda Kaleido Remote

**switch...it Systemkabel**

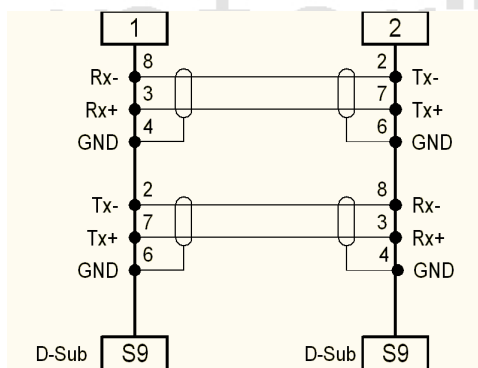
**Serial RS-422 cable for IBT panel / matrixes Snell, Miranda, Nevion(Multicon)**

SER-2	to	switch...it Panel RS-422
SER-2	to	Nevion matrix with Multicon (Probel) Protocol
SER-2	to	Miranda Nvision
SER-2	to	Probel Sirius marix
SER-2	to	Probel matrix TM Serie
SER-2	to	SER-2

D-Sub. S9 (male)	1	to	D-Sub. S9 (male)	2
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**Drawing:**



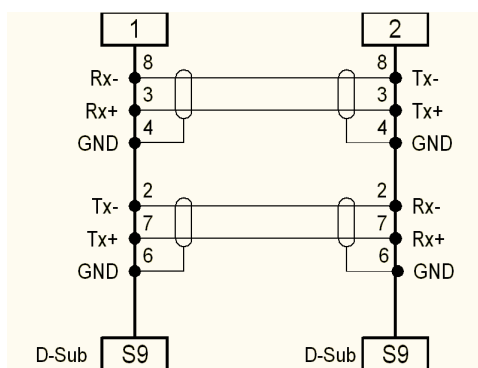


**Serial RS-422 cable for switcher Kahuna, MVS-3000/65xx,XtendD, DD30,KAYAK**

SER-2 to Switcher DD30 MPK/ACOS Protokoll  
 SER-2 to Switcher MVS-3000 / MVS-65xx  
 SER-2 to Switcher XtendD MPK/ACOS Protokoll  
 SER-2 to Switcher KAYAK MPK/ACOS Protokoll  
 SER-2 to Switcher Kahuna

D-Sub. S9 (male) 1 to D-Sub. S9 (male) 2

**Drawing:**

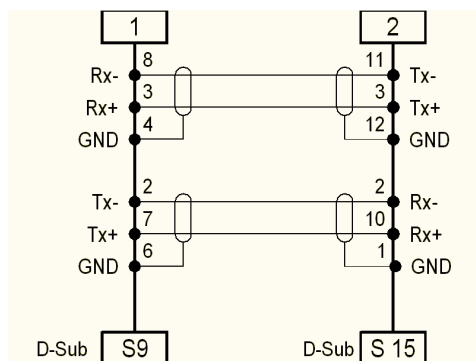


**Serial RS-422 cable for switcher Sony MVS-6000/8000 Mischer**

SER-2 to System Control Unit (MKS-8010B Editor Panel Port D-Sub B15)

D-Sub. S9 (male) 1 to D-Sub. S15 (male) 2

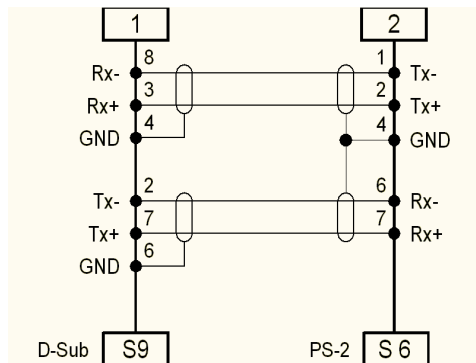
**Drawing:**



### Serial RS-422 cable for Stagetec Nexus

SER-2 to IBT UMD  
 D-Sub. S9 (male) 1 to PS-2 (male) 2

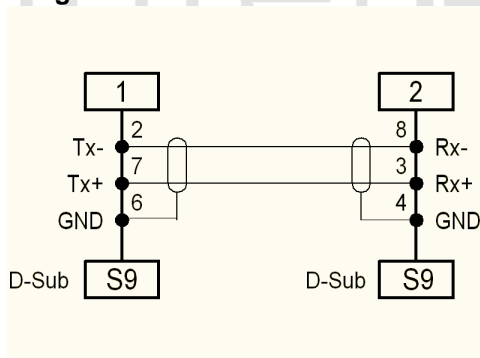
Drawing:



### Serial RS-422 cable for „first“ IBT-UMD of daisy chain bus

SER-2 to IBT UMD  
 D-Sub. S9 (male) 1 to D-Sub. S9 (male) 2

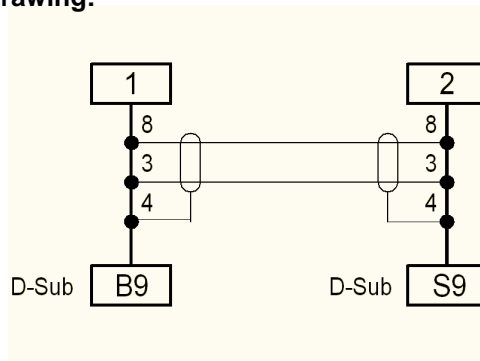
Drawing:



### Serial RS-422 cable for IBT-UMD daisy chain bus

IBT UMD to IBT UMD  
 D-Sub. S9 (male) 1 to D-Sub. S9 (male) 2

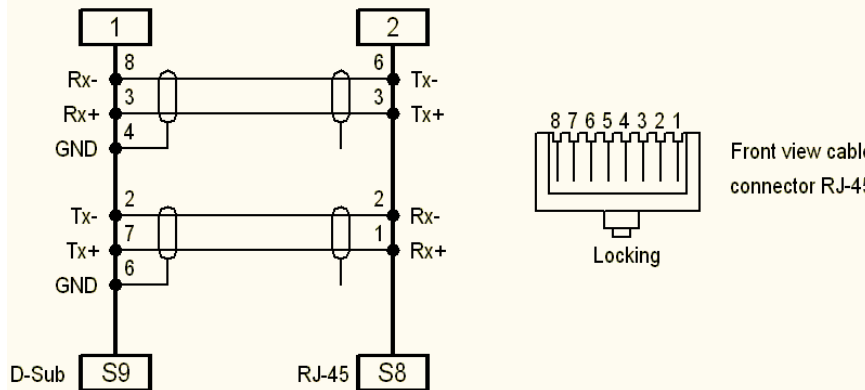
Drawing:



### Serial RS-422 cable for Multiviewer Miranda KX Serie

SER-2 to Multiviewer KX-16  
 D-Sub. S9 (male) 1 to RJ-45 S8 (male) 2

Drawing:

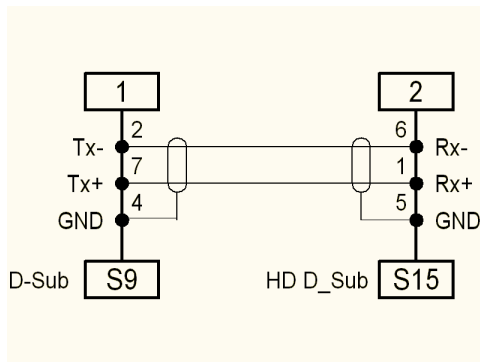


**Serial RS-422 cable for Multiviewer Evertz MVW VIP A8 Duo**

SER-2 to Multiviewer VIP A8 DUO

D-Sub. S9 (male) 1 to HD- D-Sub S15 (male) 2

Drawing:

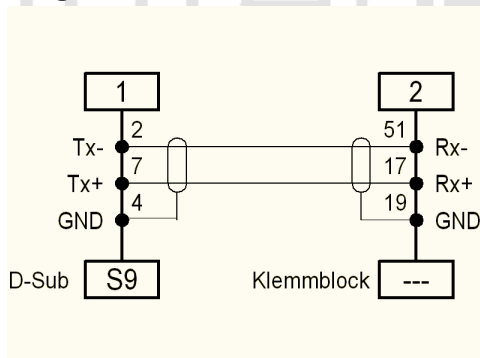


**Serial RS-422 cable for Multiviewer Evertz Quad VIP 4**

SER-2 to Quadsplit VIP 4

D-Sub. S9 (male) 1 to Screw connection 2

Drawing:

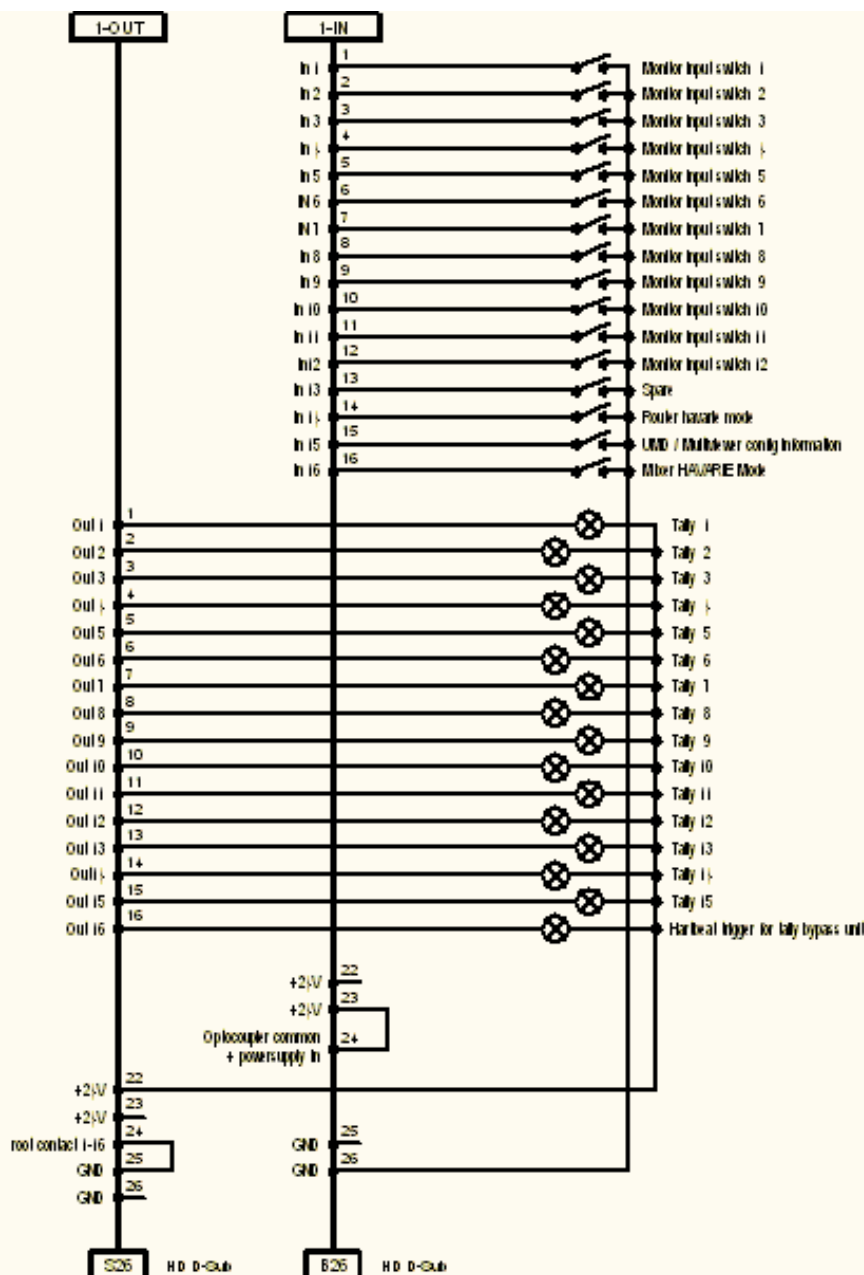


### GPIO input / output connections

GPIO card IN / OUT	to	GPI IN / OUT
HD-D-Sub.S26 (male on cable)	to	GPI Outputs
HD-D-Sub.B26 (female on cable)	to	GPI Inputs

The drawing shows a manufactured cable:  
 (GPIO OUT = Male on cable and female on unit card)  
 (GPIO IN = Female on cable and male on unit card)

**Drawing:**



## Troubleshooting

### GUI can not open (Website not found)

Check that our GUI servertask is running, if not.

Start GUI server:

Windows Startmenu -> switch...it -> switch...it start server

Stop GUI server:

Windows Startmenu -> switch...it -> switch...it stop server

### Daten per FTP ins System übertragen fails with timeout

1. Check that the switch..it frame can be pinged on the expected IP-Address.
2. Check the Network connection (lower RJ-45) connector on the switch...it frame to be connected.
3. Check the switch...it frame IP address see set-up client IP-address section in this installation guide.
4. Check that the Unit IP-Address in the GUI -> Menu -> System Set-up page is entered as expected without leading zeros.

Example:

Right: 192..44.32.10

Wrong: 192.044.032.010

### Webpanel can not connect

1. Check that the GUI IP-Address in the GUI -> Menu -> System Setup page is entered as expected without leading zeros. Expected is here the IP-Address of the configuration PC itself

Example:

Right: 192..44.32.10

Wrong: 192.044.032.010

Furthermore check that our GUI servertask is running, if not.

Start GUI server:

Windows Startmenu -> switch...it -> switch...it start server

Stop GUI server:

Windows Startmenu -> switch...it -> switch...it stop server

### TSL Protocol

Serial TSL v3.1 parameters 38400, Parity Even, 1 Stopbit.  
TCP/IP TSL v5.0 Port 8901

### Nvision Protocol

Serial parameters 38400, Parity None, 1 Stopbit.

If the matrix is switching with an offset, please modify the matrix configuration set-up.

Use the vendors configuration software, to report Input/Output 1 as a 0 in the Nvision serial protocol.

## Nevion MRP Protocol

Firmware must be greater or equal version 2.6.2  
TCP/IP MRP Protokoll Port 4381



### Common specifications

- **Dimension (WxHxD)**  
19" 1HE 447 x 44 x 480 mm
- **Power consumption**  
approx. 100 Watt
- **Operating range**  
Temperature 5°C to 30°C  
Relative Humidity  
20% to 80% non-condensing
- **Storage**  
Temperature -20°C to 60°C  
Relative Humidity  
5% to 95% non-condensing

### Frame version depending specifications

Frame 1.0 serial number < XX-00242 selling date before 06.05.2015

- **Power supply**  
AC 230V~ max. 1A
- **Wight**  
approx. 9,5Kg

Frame 2.0 serial number >= XX-00242 selling date after 06.05.2015

- **Power supply**  
AC 100-240V~ max. 1A
- **Wight**  
approx. 7,0Kg

### Changeindex

Version	Date	Done by	Change
v1.00	18.05.2010	NK	Neu erstellt
v1.01	31.05.2010	NK	Korrektur Multiviewerkabel Seite 11
v1.02	04.06.2010	NK	Textkorrekturen
v1.03	01.02.2011	NK	Spezifikationen hinzugefügt und Korrektur GPI Stromaufnahme
v1.04	15.03.2012	NK	Miranda Nvision Kabel
v1.05	25.09.2012	NK	Sonderkabel für Sony, Evertz und Stagetec hinzugefügt
v1.06	26.09.2012	NK	VTS IMD Monitor TCP/IP Protokoll hinzugefügt
v1.07	29.05.2013	NK	MVS-3000 / MVS-65xx hinzugefügt
v1.08	06.06.2013	NK	Troubleshooting hinzugefügt
v1.09	29.01.2015	NK	Korrektur der Pfeile im Übersichtsbild / Kabel KAYAK Mischer / Troubleshooting div
v1.10	06.07.2015	NK	Changed to English language, added IP address stuff and Frame 2.0 specifications
v1.11	09.12.2016	NK	Modify Nvision troubleshooting and changed IBT address



