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KAB-ePanel-mgx

Part-No : 60902

	Technical Manual (Preliminary!)
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1.0	User Information
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1.3 Warranty

Each board is carefully and thoroughly tested before being shipped. If, however, problems should occur during the operation, please check your user specific settings of all boards included in your system. This is often the source of the fault. If a board is defective, it can be sent to your supplier for repair. Please take care of the following steps:

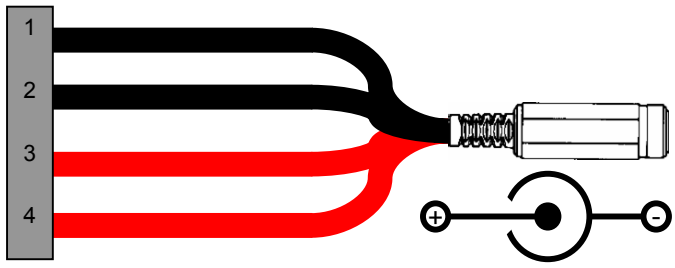
- The board returned should correspond to the factory default settings since a test is only possible under this settings.
- In order to repair your board as fast as possible , we require some additional information from you. Please fill out the attached Repair Form and include it with the defective board.
- If possible, the board will be upgraded to the latest version without additional cost.
- Upon receipt of the board, please be aware that your user specific settings were changes during the test.

Within the guarantee, the repair is free as long as the guarantee conditions were kept. If no fault has been found, you will be charged with the test cost due to the high test expenditure. Repairs outside of the guarantee will be charged.
This Kontron product is warranted against defects in material and workmanship for our guaranteed warranty period from the date of shipment. During the warranty period, Kontron will, at its option, either repair or replace products which prove to be defective.
For warranty service or repair, the product must be returned to a service facility designated by Kontron.
The foregoing warranty shall not apply to defects resulting from improper or inadequate maintenance or handling by buyer, unauthorized modification or misuse, operation outside of the environmental specifications for the product, or improper installation or maintenance.
Kontron will not be responsible for any defects or damages due to a faulty Kontron product other than the products supplied by Kontron.

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2.0	Technical Information Summary
	KAB-ePanel-mgx is used to connect Power, Smart Battery, Matrix-Keyboard, 4/8 wire touchpanel and Debug Interface to Kontron´s mobile embedded PC ePanel-mgx. This cableset is just an evaluation kit for quick start up and testing purposes.

3.0	Connectors		
3.1	DC INPUT	X1700	
3.2	BATT IN	X1702	
3.3	AUX	X1406	
3.4	TOUCHPANEL	X1404	
3.5	MATRIX KEYBOARD	X1405	
3.6	“POWER” – Button	ePanel-ADAPT – P1	
3.7	“RESET” – Button	ePanel-ADAPT – P1	

3.1	Cable for Connector X1700 – DC INPUT			
	Connector: Hirose, DF3-4S-2C, single row, 200mm single wires Connector: DC Power Jack, Center Pin Diameter: 2,1mm			
Description	**Name**	**PCB-Pin**	***!! Caution !! Connector Pin1 is not PCB Pin1***	
Power Ground	GND	**4**		
Power Ground	GND	**3**		
+12 Volt Power Input	DCIN	**2**		
+12 Volt Power Input	DCIN	**1**		

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3.2 Cable for Connector X1702 – BATT IN

Connector: Hirose, DF3-7S-2C, single row,
200mm single wires
Connector: AMP, 787428-1, single row, 5mm pitch

Description	Name	PCB-Pin	!! Caution !! Connector Pin1 is not PCB Pin1	Pin
Battery Ground	GND	**7**	1	**black**
Battery Ground	GND	**6**	2	**black**
Battery temp. control	THM	**5**	3	**green**
Battery data	MEM SDA	**4**	4	**blue**
Battery clock	MEM SCL	**3**	5	**white**
Battery voltage	BAT+	**2**	6	**red**
Battery voltage	BAT+	**1**	7	**red**

3.3 Cable for Connector X1406 – AUX

Connector: Molex, 51021-1000, single row, 200mm single wires

Description	Name	PCB-Pin		Color
Power Ground	GND	**1**	1	Black
TTL RX	CPU SIN1	**2**	2	Blue
TTL TX	CPU SOUT1	**3**	3	White
+5 Volt Output	VCC5	**4**	4	Red
+5 Volt Output	VCC5	**5**	5	Red
DDC I²C Clock	DDC SCL	**6**	6	Green
DDC I²C Data	DDC SDA	**7**	7	White
Power Ground	GND	**8**	8	Black
+12 Volt Output	VCC12	**9**	9	Yellow
Backup Battery	BBATT+	**10**	10	Violet

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3.4 Cable for Connector X1404 – TOUCHPANEL

Connector: 2x8pol, RM:2mm, double row, 200mm single wires

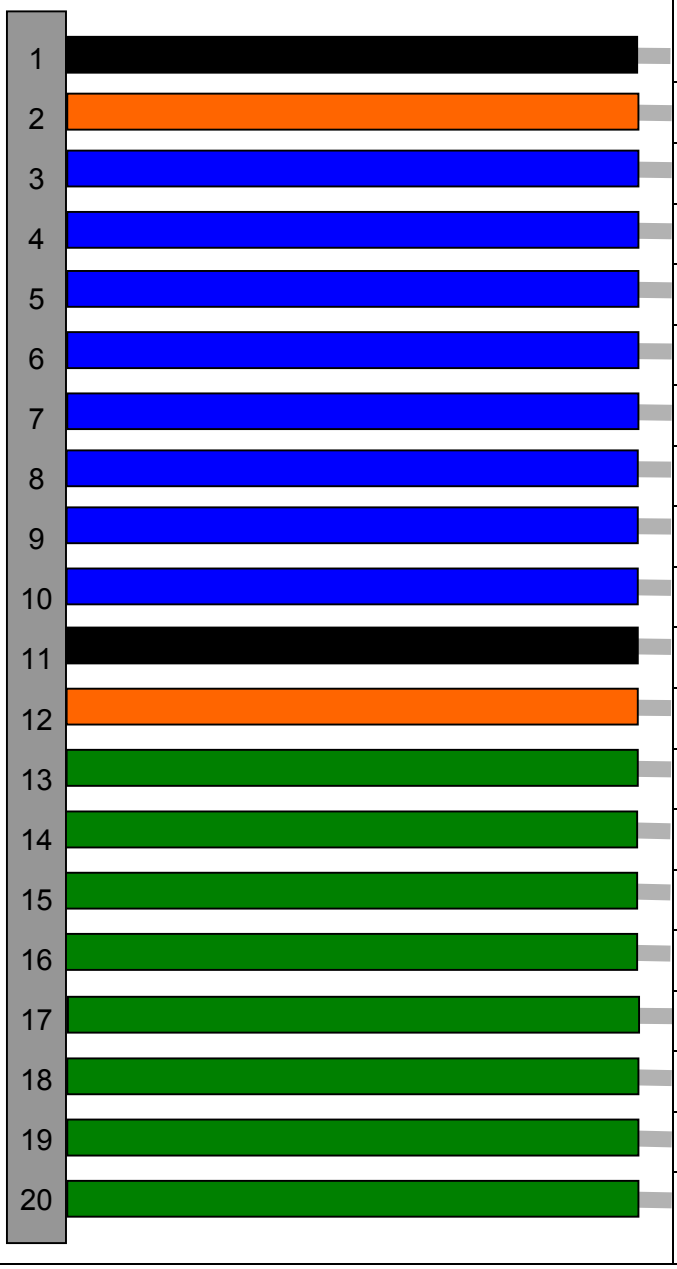
Description	Name	PCB-Pin		Color
Power Ground	GND	**1**	1	Black
Y-Axis Bottom	YB	**2**	2	Brown
Send Y-Axis Bottom	SYB	**3**	3	White
Power Ground	GND	**4**	4	Black
Y-Axis Top	YT	**5**	5	Blue
Send Y-Axis Top	SYT	**6**	6	White
Power Ground	GND	**7**	7	Black
X-Axis Left	XL	**8**	8	Green
Send X-Axis Left	SXL	**9**	9	White
Power Ground	GND	**10**	10	Black
X-Axis Right	XR	**11**	11	Violet
Send X-Axis Right	SXR	**12**	12	White
Power Ground	GND	**13**	13	Black
Touch Right Buttom	TRB#	**14**	14	Grey
Touch Left Buttom	TLB#	**15**	15	White
Power Ground	GND	**16**	16	Black

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3.4 Cable for Connector X1404 – MATRIX

Connector: 2x10pol, RM:2mm, double row, 200mm single wires

Description	Name	PCB-Pin	Color
Power Ground	GND	**1**	Black
+3.3Volt Power	VCC3	**2**	Orange
Matrix Output 0	MKBD_O0	**3**	Blue
Matrix Output 1	MKBD_O1	**4**	Blue
Matrix Output 2	MKBD_O2	**5**	Blue
Matrix Output 3	MKBD_O3	**6**	Blue
Matrix Output 4	MKBD_O4	**7**	Blue
Matrix Output 5	MKBD_O5	**8**	Blue
Matrix Output 6	MKBD_O6	**9**	Blue
Matrix Output 7	MKBD_O7	**10**	Blue
Power Ground	GND	**11**	Black
+3.3Volt Power	VCC3	**12**	Orange
Matrix Input 0	MKBD_I0	**13**	Green
Matrix Input 1	MKBD_I1	**14**	Green
Matrix Input 2	MKBD_I2	**15**	Green
Matrix Input 3	MKBD_I3	**16**	Green
Matrix Input 4	MKBD_I4	**17**	Green
Matrix Input 5	MKBD_I5	**18**	Green
Matrix Input 6	MKBD_I6	**19**	Green
Matrix Input 7	MKBD_I7	**20**	Green



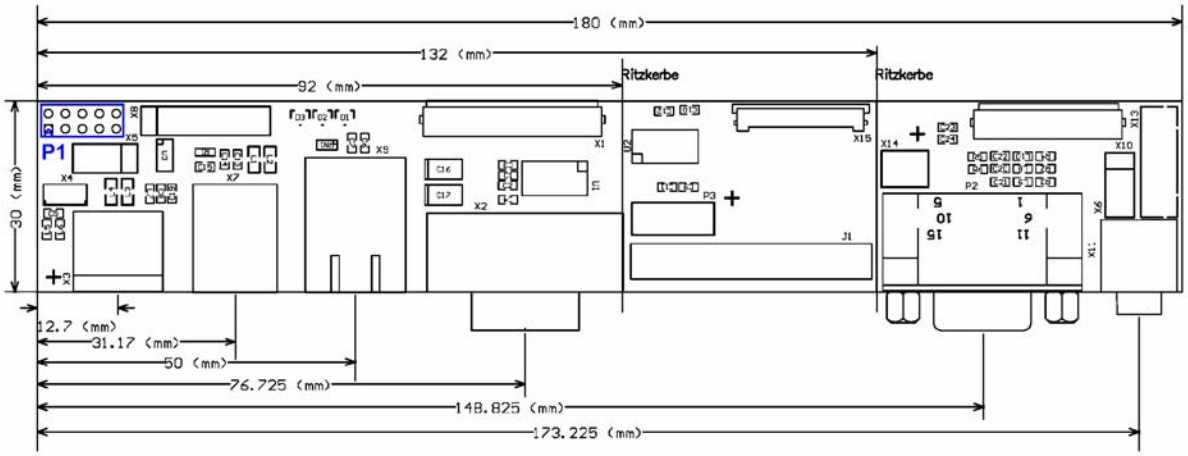
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3.5	Power Button for ePanel-ADAPT – P1			
	Connector: single row, 2pol., RM: 2,54mm, 200mm single wires Pushbutton Switch: 1pol., (NO), Button color: **green**			
Description	**Name**	**P1-Pin**		
Power Button	PWR BTN#	**9**		
Power Ground	GND	**10**		

3.6	Reset Button for ePanel-ADAPT – P1			
	Connector: single row, 2pol., RM: 2,54mm, 200mm single wires Pushbutton Switch: 1pol., (NO), Button color: **red**			
Description	**Name**	**P1-Pin**		
Master Reset	MR#	**5**		
Power Ground	GND	**6**		

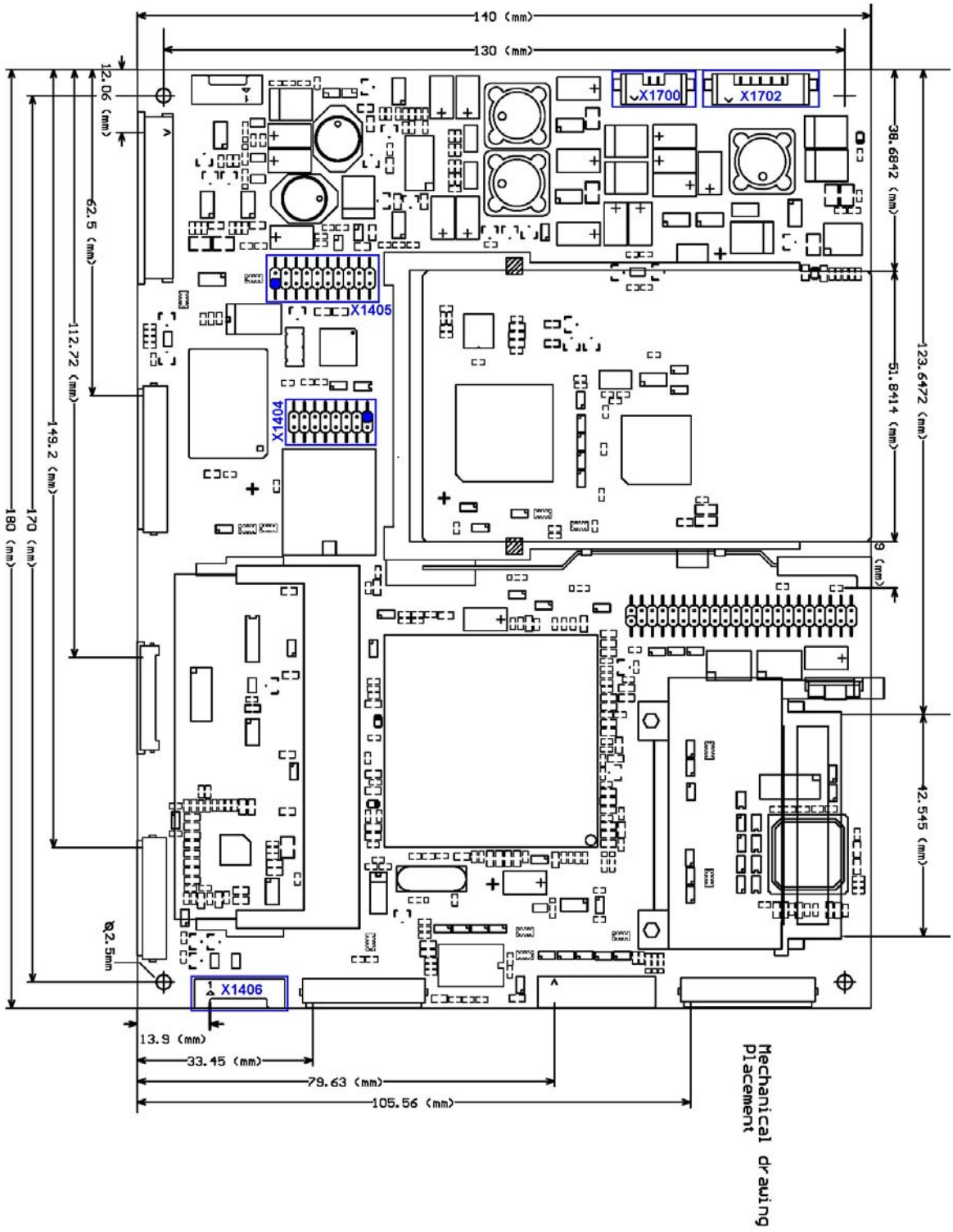
4.0 Layout / Dimensions

ePanel-ADAPT



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ePanel-mgx



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5.0 Schematic

6.0 Technical Support

Please report any errors or problems to this email address: info@dr-berghaus.com.
Normally, there is no telephone support. In your email message, please include the following information :

Company Name
Your Name
Address
Email
Telephone/Fax
Exact description of the hardware, etc.
Exact description of the software in used (for example: Win 95 with driver XYZ)
Exact description of the error.

7.0 Revision History

Date	Author	Version	Description
04.12.2002	S. Moritz	1.0	Initial Release
28.04.2003	S. Moritz	1.1	change X1702 description
07.07.2003	S. Moritz	1.2	change X1404 description, add DC-INPUT-Adapter (3.1.1)
11.07.2003	S. Moritz	1.3	change X1700 description remove DC-INPUT-Adapter (3.1.1) add “Power”- and “Reset”-Button
30.07.2003	S. Moritz	1.4	remove Akku-Connector