

## Backplanes, technical specifications



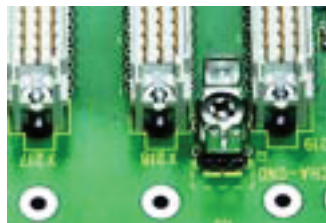
### Automatic daisy chaining J1 and J1/J2

Via the use of connectors with integral mechanical switches, the contact is automatically opened when the daughterboard is inserted, and closed again when it is extracted.



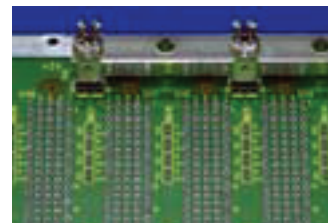
### Automatic daisy chaining VME64x

The second option for automatic daisy chaining is achieved here by an "or" logic integrated onto the backplane. If the daughterboard is extracted, the logic closes the daisy chain.



### Chassis GND connection

An electrically conductive chassis GND surface is attached to the subracks in the mounting section of the backplane. This facilitates EMC-sealed mounting of the backplane on the sub-racks. With VME64x, RF linking of the subracks and system earth is achieved via capacitors (10nF, 200 V at each slot). Static charges are discharged via a resistor ( $\geq 1 \text{ M}\Omega$ ). A combined connection component (screw M4 and FASTON 2.8 or 6.3 x 0.8 mm) is provided for connection of the enclosure earth.



### Power connections

Infeed of the main operating voltage +5 V/+3.3 V and GND is provided via busbars with M6 screw terminal. The auxiliary operating voltages are supplied via double FASTONS with additional M4 screw thread. Optimum supply of the daughterboards and hence problem-free operation is ensured, thanks to the arrangement of the infeed modules on the backplane.

### Utility connector

The special signals to the power pack and to external LEDs are routed on a separate connector on the backplanes.

A 7-pole, a 10-pole or a 14-pole connector with 2.54 mm spacing is provided, depending on the backplane type.

### Pin assignment, 10/14 pins

GND	1	2	GND sense (5 V)
+5 V	3	4	+5 V Sense
ACFAIL-	5	6	ACFAIL-
SYSFAIL-	7	8	SYSFAIL-
SYSRESET-	9	10	SYSRESET-
+3,3 V	11	12	+3.3 V Sense
GND	13	14	GND sense (3.3 V)

J1, J1/J2: 10 pins, VME64x: 14 pins

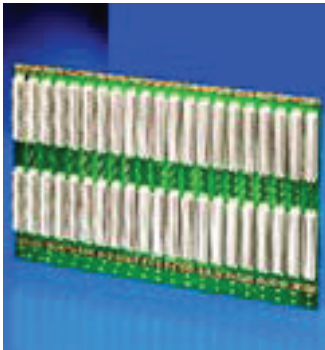
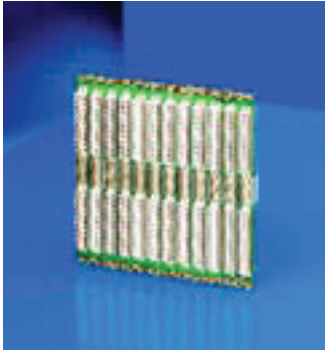
### Geographical address pin assignments (VME64x)

Slot no.	GAP Pin J1-D9	GA4 Pin J1-D17	GA3 Pin J1-D15	GA2 Pin J1-D13	GA1 Pin J1-D11	GA0 Pin J1-D10
1	Open	Open	Open	Open	Open	GND
2	Open	Open	Open	Open	GND	Open
3	GND	Open	Open	Open	GND	GND
4	Open	Open	Open	GND	Open	Open
5	GND	Open	Open	GND	Open	GND
6	GND	Open	Open	GND	GND	Open
7	Open	Open	Open	GND	GND	GND
8	Open	Open	GND	Open	Open	Open
9	GND	Open	GND	Open	Open	GND
10	GND	Open	GND	Open	GND	Open
11	Open	Open	GND	Open	GND	GND
12	GND	Open	GND	GND	Open	Open
13	Open	Open	GND	GND	Open	GND
14	Open	Open	GND	GND	GND	Open
15	GND	Open	GND	GND	GND	GND
16	Open	GND	Open	Open	Open	Open
17	GND	GND	Open	Open	Open	GND
18	GND	GND	Open	Open	GND	Open
19	Open	GND	Open	Open	GND	GND
20	GND	GND	Open	GND	Open	Open
21	Open	GND	Open	GND	Open	GND

### Pin assignments J0

Pin no.	ROW Z	ROW A	ROW B	ROW C	ROW D	ROW E	ROW F
1 – 19	GND	User Defined	User Defined	User Defined	User Defined	User Defined	GND

## Backplanes VME64x



## Backplanes VME64x

## Technical specifications:

Number of layers	10
Layer structure	Optimised for optimum RF performance. Outer layers designed as shielding surface.
PCB thickness	4.5 mm $\pm$ 10 %
Ohmic resistance of the signal tracks	< 1 Ohm
Surge impedance Z of the signal tracks	55 Ohm
Basic power consumption, terminated at both ends	Active: < 200 mA, Passive: < 2 A
Power supply: – Busbar with M6 screw terminal – M4 screw terminal and FASTON 6.3 x 0.8 mm – < 5 slots	+5 V, +3.3 V and 0 V $\pm$ 12 V, +5 V STBY, $\pm$ V1, $\pm$ V2 and case FASTON 6.3 x 0.8 mm
Current carrying capacity of busbar	max. 200 A
Current carrying capacity of a combined double flat-pin connector/screw terminal	25 A
Current carrying capacity of a FASTON flat connector	10 A
Current carrying capacity of the assembly per slot	+3.3 V 12.5 A +5 V 9.0 A +12 V 1.5 A –12 V 1.5 A +5 V STDBY 1.5 A +48 V (38 – 75 V) 3.0 A
Termination ON-/IN-board	6 U: active, 6.5 U: active (may be switched to passive)
Installation height	6 U/6.5 U
Distance between slots	4 HP
Connectors	Press-fit technique quality class 2, 400 connection cycles 160 pins compatible with C96 P0 spacing 2 mm, 95/133 pins
Operating temperature range	Active termination 0° ... +70°C Passive termination –40° ... +85°C
Relative humidity	90 %, non-condensing

## VME64x 6U

Slots	Dimensions		Model No. RP	
	Height mm	Width mm	without P0 connector	with P0 connector
2	261.7	39.5	<b>9912.423</b>	<b>9912.410</b>
3	261.7	59.5	<b>9912.424</b>	<b>9912.411</b>
4	261.7	80	<b>9912.425</b>	<b>9912.362</b>
5	261.7	100	<b>3687.608</b>	<b>3687.609</b>
6	261.7	120.5	<b>9912.426</b>	<b>9912.412</b>
7	261.7	141	<b>3687.610</b>	<b>3687.611</b>
8	261.7	161.5	<b>9912.427</b>	<b>9912.413</b>
9	261.7	181.5	<b>9904.930</b>	<b>9904.932</b>
10	261.7	202	<b>9904.931</b>	<b>9904.933</b>
11	261.7	222.5	<b>9912.428</b>	<b>9912.414</b>

Slots	Dimensions		Model No. RP	
	Height mm	Width mm	without P0 connector	with P0 connector
12	261.7	242.5	<b>3686.634</b>	<b>3686.473</b>
13	261.7	263	<b>9912.429</b>	<b>9912.415</b>
14	261.7	283	<b>9912.430</b>	<b>9912.416</b>
15	261.7	303.5	<b>9912.431</b>	<b>9912.417</b>
16	261.7	324	<b>9912.432</b>	<b>9912.418</b>
17	261.7	344	<b>9912.433</b>	<b>9912.419</b>
18	261.7	364.5	<b>9912.434</b>	<b>9912.420</b>
19	261.7	385	<b>9912.435</b>	<b>9912.421</b>
20	261.7	405	<b>9912.436</b>	<b>9912.422</b>
21	261.7	425.5	<b>3686.635</b>	<b>3686.474</b>

## VME64x 6.5U

Slots	Dimensions		Model No. RP	
	Height mm	Width mm	without P0 connector	with P0 connector
5	283.7	100	<b>9910.012</b>	<b>9910.007</b>
7	283.7	141	<b>9910.013</b>	<b>9910.008</b>
9	283.7	181.5	<b>9910.014</b>	<b>9910.009</b>
10	283.7	202	<b>9904.928</b>	<b>9904.929</b>
12	283.7	242.5	<b>9910.015</b>	<b>9910.010</b>
21	283.7	425.5	<b>9910.016</b>	<b>9910.011</b>

## Material:

Fibreglass epoxy to IEC 60 249 (type FR4)

## Supply includes:

Backplane, fully populated.



## Accessories:

For backplane mounting:

Conductive strips

Insulating strips

## Backplanes VME



## Backplanes VME J1/J2

## Monolithic

## Technical specifications:

Number of layers	6
Layer structure	Optimised for optimum RF performance. Outer layers designed as shielding surface.
PCB thickness	3.2 mm $\pm$ 10 %
Ohmic resistance of the signal tracks	< 1 Ohm
Surge impedance Z of the signal tracks	60 Ohm
Basic power consumption, terminated at both ends	Active: < 200 mA Passive: < 1.5 A
Power supply: – Busbar with screw terminal M6 – Screw terminal M4 and FASTON 6.3 x 0.8 mm – < 5 slots	+5 V and 0 V $\pm$ 12 V, +5 V STBY and case FASTON 6.3 x 0.8 mm
Current carrying capacity of busbar	max. 200 A
Current carrying capacity of a combined double flat-pin connector/screw terminal	25 A
Current carrying capacity of a FASTON flat connector	10 A
Current carrying capacity of the assembly per slot	+5 V            9.0 A +12 V         1.5 A –12 V         1.5 A +5 V STDBY   1.5 A
Termination ON-/IN-board	active (may be switched to passive)
Installation height	6U
Distance between slots	4 HP
Connectors	Press-fit technique quality class 2, 400 connection cycles C96
Operating temperature range	Active termination 0° . . . +70°C Passive termination –40° . . . +85°C
Relative humidity	90 %, non-condensing

Slots	Dimensions		Model No. RP
	Height mm	Width mm	
2	261.7	39.5	3686.495
3	261.7	59.5	3686.496
4	261.7	80	3686.497
5	261.7	100	3686.498
6	261.7	120.5	3686.499
7	261.7	141	3686.500
8	261.7	161.5	3686.501
9	261.7	181.5	3686.502
10	261.7	202	3686.503
11	261.7	222.5	3686.504
12	261.7	242.5	3686.505
13	261.7	263	3686.506
14	261.7	283	3686.507
15	261.7	303.5	3686.508
16	261.7	324	3686.509
17	261.7	344	3686.510
18	261.7	364.5	3686.511
19	261.7	385	3686.512
20	261.7	405	3686.513
21	261.7	425.5	3686.514

**Material:**

Fibreglass epoxy to IEC 60 249 (type FR4)

**Supply includes:**

Backplane, fully populated.

**Accessories:**For backplane mounting:  
Conductive strips  
Insulating strips

Backplanes VME



VME J1 system bus

Technical specifications:

	VME J1	VME J2
Number of layers	6	2
Layer structure	Optimised for optimum RF performance. Outer layers designed as shielding surface.	
PCB thickness	3.2 mm ±10 %	3.2 mm ±10 %
Ohmic resistance of the signal tracks	< 1 Ohm	< 1 Ohm
Surge impedance Z of the signal tracks	60 Ohm	60 Ohm
Basic power consumption, terminated at both ends	Active: < 150 mA Passive: < 1.2 A	Passive: < 0.6 A
Power supply: – M4 screw terminal and FASTON 6.3 x 0.8 mm – < 5 slots	+5 V, 0 V, ±12 V, ±5 V STBY and case FASTON 6.3 x 0.8 mm	x FASTON 6.3 x 0.8 mm
Current carrying capacity of a combined double flat-pin connector/screw terminal	25 A	25 A
Current carrying capacity of a FASTON flat connector	10 A	10 A
Current carrying capacity of the assembly per slot	+5 V            4.5 A +12 V          1.5 A –12 V          1.5 A +5 V STDBY    1.5 A	+5 V            4.5 A
Termination ON-/IN-board	active (may be switched to passive)	active (may be switched to passive)
Installation height	3 U	3 U
Distance between slots	4 HP	4 HP
Connectors	Press-fit technique quality class 2, 400 connection cycles C96	Press-fit technique quality class 2, 400 connection cycles C96
Operating temperature range	Active termination 0° ... +70°C Passive termination –40° ... +85°C	Passive termination –40° ... +85°C
Relative humidity	90 %, non-condensing	90 %, non-condensing

Slots	Dimensions		Model No. RP
	Height mm	Width mm	
3	128.4	59.5	3686.555
4	128.4	80	3686.556
5	128.4	100	3686.557
6	128.4	120.5	3686.558
7	128.4	141	3686.559
8	128.4	161.5	3686.560
9	128.4	181.5	3686.561
10	128.4	202	3686.562

Slots	Dimensions		Model No. RP
	Height mm	Width mm	
12	128.4	242.5	3686.563
13	128.4	263	3686.564
14	128.4	283	3686.565
15	128.4	303.5	3686.566
18	128.4	364.5	3686.567
20	128.4	405	3686.568
21	128.4	425.5	3686.569

Material:

Fibreglass epoxy to IEC 60 249 (type FR4)

Supply includes:

Backplane, fully populated.



Accessories:

For backplane mounting:  
Conductive strips  
Insulating strips



VME J2 expansion bus

Material:

Fibreglass epoxy to IEC 60 249 (type FR4)

Supply includes:

Backplane, fully populated.



Accessories:

For backplane mounting:  
Conductive strips  
Insulating strips

Slots	Dimensions		Model No. RP
	Height mm	Width mm	
3	128.4	59.5	3686.585 <sup>1)</sup>
4	128.4	80	3686.586 <sup>1)</sup>
5	128.4	100	3686.587 <sup>1)</sup>
6	128.4	120.5	3686.588 <sup>1)</sup>
7	128.4	141	3686.589 <sup>1)</sup>
8	128.4	161.5	3686.590 <sup>1)</sup>
9	128.4	181.5	3686.591 <sup>1)</sup>
10	128.4	202	3686.592 <sup>1)</sup>

Slots	Dimensions		Model No. RP
	Height mm	Width mm	
12	128.4	242.5	3686.593 <sup>1)</sup>
13	128.4	263	3686.594 <sup>1)</sup>
14	128.4	283	3686.595 <sup>1)</sup>
15	128.4	303.5	3686.596 <sup>1)</sup>
18	128.4	364.5	3686.597 <sup>1)</sup>
20	128.4	405	3686.598 <sup>1)</sup>
21	128.4	425.5	3686.599 <sup>1)</sup>

<sup>1)</sup> Delivery times available on request.

<sup>1)</sup> Delivery times available on request.