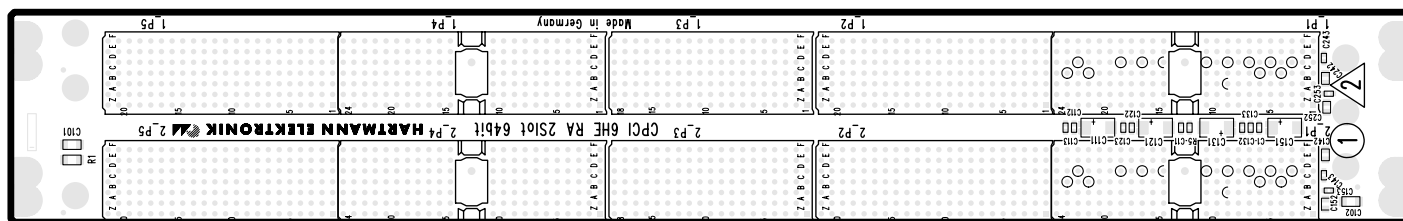


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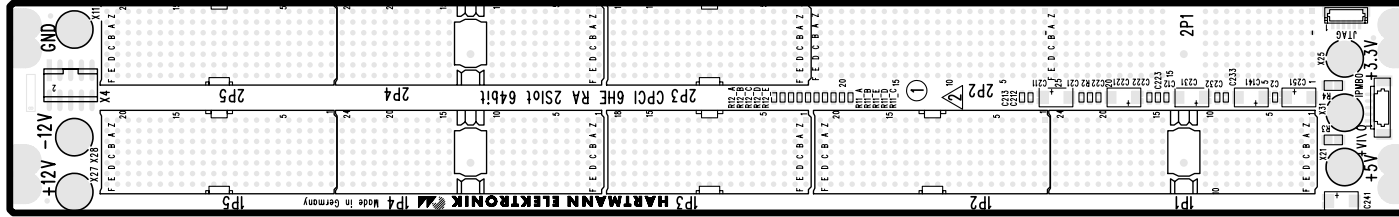
Silkscreen Top  
Pads Top

| Coding Key | V(I/O)                                                                              |                                                                                     |
|------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|            | +3.3V                                                                               | +5V                                                                                 |
|            |  |  |
|            | Cadmium                                                                             | Brilliant                                                                           |

|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  |                |
|-----|-------------|-----|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|-----------------------------------------------------------------------------|--|----------------|
|     |             |     |      | 2007                                                                                                                                                            | Date   | Name     | Title<br>Hartmann Elektronik<br>CPCI 6HE RA 2Slot 64bit<br>BUS545<br>Rev.BB |  |                |
|     |             |     |      | Author                                                                                                                                                          | 18.06. | Wiedmann |                                                                             |  |                |
|     |             |     |      | Check                                                                                                                                                           | 18.06. | Wiedmann |                                                                             |  |                |
|     |             |     |      | DIN A3<br>M 1:1                                                                                                                                                 |        |          |                                                                             |  |                |
|     |             |     |      | <br><b>HARTMANN<br/>ELEKTRONIK</b><br>MOTORSTRASSE 43<br>D-70499 STUTTGART |        |          | Number                                                                      |  | Sheet          |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  | of             |
| Rev | Description | Day | Name |                                                                                                                                                                 |        |          | Device: HE-C36RA026--4                                                      |  | File: BUS545BB |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  |                |

Hartmann Elektronik  
CPCI 6HE RA 2Slot 64bit  
BUS545 Rev.BB

| X4 Pin Assignment |                   |
|-------------------|-------------------|
| Pin               | Signal            |
| 1                 | PPB1-2            |
| 2                 | FAL-              |
| 3                 | DEC-              |
| 4                 | +3.3V-Sense       |
| 5                 | +5.3V             |
| 6                 | GND-Sense (+5.3V) |
| 7                 | GND               |
| 8                 | GND-Sense (+5V)   |



| X4 Pin Assignment |                   |
|-------------------|-------------------|
| Pin               | Signal            |
| 1                 | PPB1-2            |
| 2                 | FAL-              |
| 3                 | DEC-              |
| 4                 | +3.3V-Sense       |
| 5                 | +5.3V             |
| 6                 | GND-Sense (+5.3V) |
| 7                 | GND               |
| 8                 | GND-Sense (+5V)   |

| X4 Pin Assignment |                   |
|-------------------|-------------------|
| Pin               | Signal            |
| 1                 | PPB1-2            |
| 2                 | FAL-              |
| 3                 | DEC-              |
| 4                 | +3.3V-Sense       |
| 5                 | +5.3V             |
| 6                 | GND-Sense (+5.3V) |
| 7                 | GND               |
| 8                 | GND-Sense (+5V)   |

Busbar for +5V keying

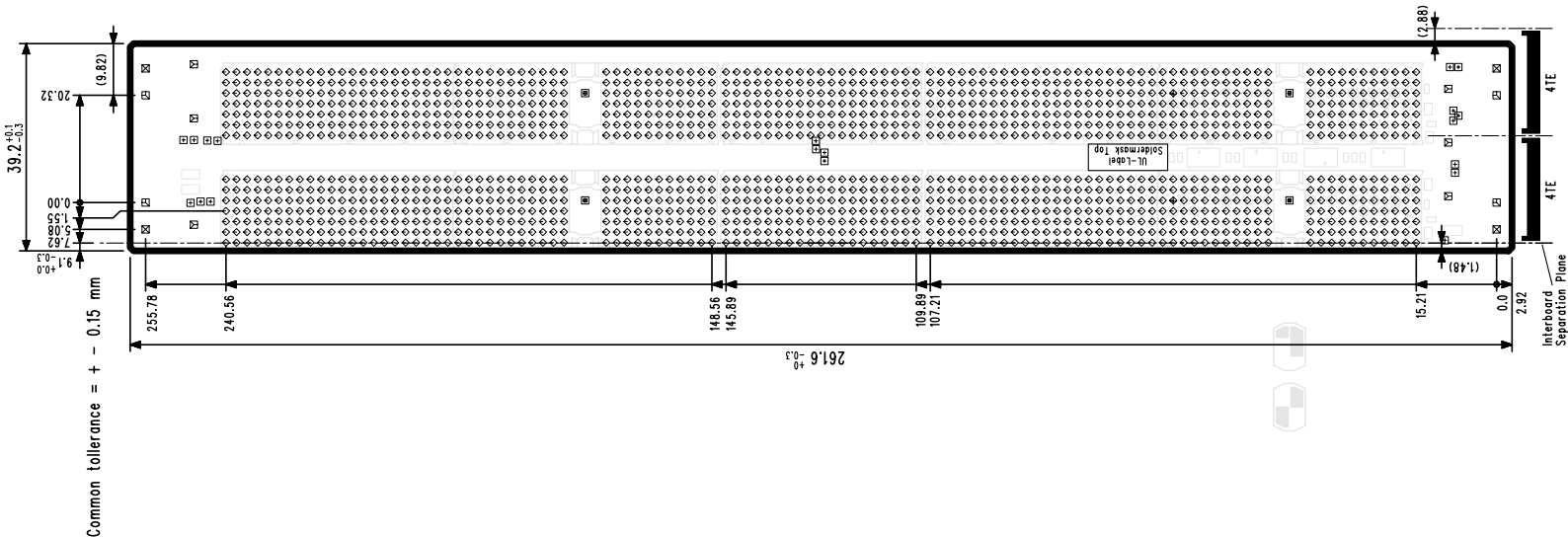
Busbar for +3.3V keying

Silkscreen Bottom  
Pads BottomBUS545 Rev.BB  
CPCI 6HE RA 2Slot 64bit  
Hartmann Elektronik

| Rev | Description | Day | Name | 2007   | Date   | Name     | Title                                                           |  |
|-----|-------------|-----|------|--------|--------|----------|-----------------------------------------------------------------|--|
|     |             |     |      | Author | 18.06. | Wiedmann |                                                                 |  |
|     |             |     |      | Check  | 18.06. | Wiedmann |                                                                 |  |
|     |             |     |      |        |        | DIN A3   | Hartmann Elektronik<br>CPCI 6HE RA 2Slot 64bit<br>BUS545 Rev.BB |  |
|     |             |     |      |        |        | M 1:1    |                                                                 |  |
|     |             |     |      |        |        |          | Number                                                          |  |
|     |             |     |      |        |        |          |                                                                 |  |
|     |             |     |      |        |        |          | Device: HE-C36RA026--4   File: BUS545BB                         |  |
|     |             |     |      |        |        |          |                                                                 |  |
|     |             |     |      |        |        |          | Sheet                                                           |  |
|     |             |     |      |        |        |          |                                                                 |  |
|     |             |     |      |        |        |          | of                                                              |  |
|     |             |     |      |        |        |          |                                                                 |  |

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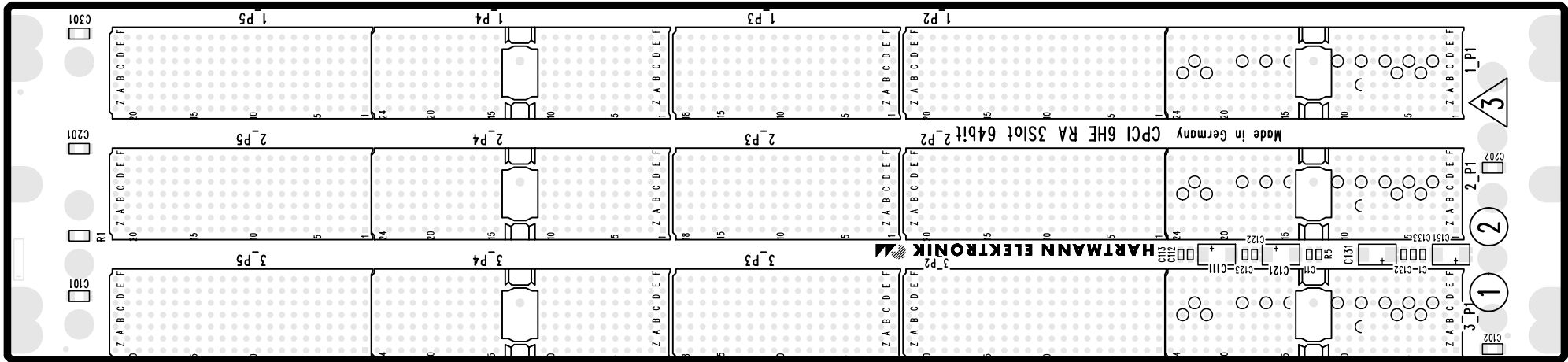
| Design Rules            | Outer layer | Inner layer |
|-------------------------|-------------|-------------|
| Track width             | 140 $\mu$ m | 140 $\mu$ m |
| Distance pad to track   | 200 $\mu$ m | 140 $\mu$ m |
| Distance track to track | 200 $\mu$ m | 140 $\mu$ m |
| Restring                | 150 $\mu$ m | 150 $\mu$ m |



Hartmann Elektronik  
CPCI 6HE RA 2Slot 64bit  
BUS545 Rev.BB

|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  |                |
|-----|-------------|-----|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|-----------------------------------------------------------------------------|--|----------------|
|     |             |     |      | 2007                                                                                                                                                            | Date   | Name     | Title<br>Hartmann Elektronik<br>CPCI 6HE RA 2Slot 64bit<br>BUS545<br>Rev.BB |  |                |
|     |             |     |      | Author                                                                                                                                                          | 18.06. | Wiedmann |                                                                             |  |                |
|     |             |     |      | Check                                                                                                                                                           | 18.06. | Wiedmann |                                                                             |  |                |
|     |             |     |      | DIN A3<br>M 1:1                                                                                                                                                 |        |          |                                                                             |  |                |
|     |             |     |      | <br><b>HARTMANN<br/>ELEKTRONIK</b><br>MOTORSTRASSE 43<br>D-70499 STUTTGART |        |          | Number                                                                      |  | Sheet          |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  | of             |
| Rev | Description | Day | Name |                                                                                                                                                                 |        |          | Device: HE-C36RA026--4                                                      |  | File: BUS545BB |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  |                |

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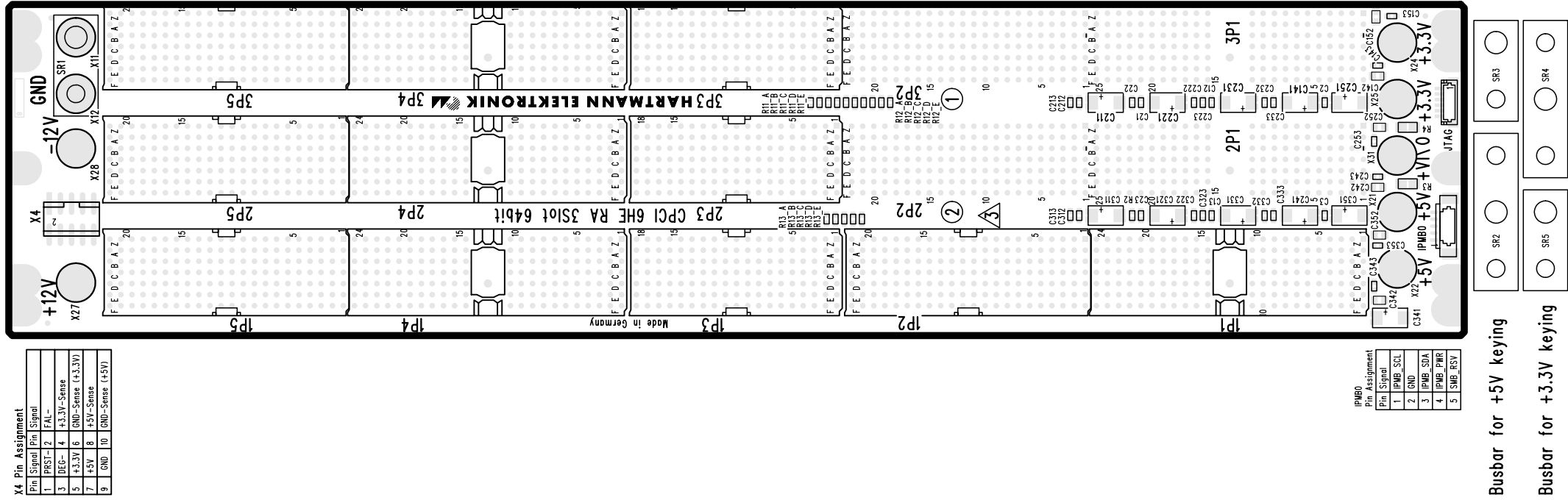


| Coding Key     |                |
|----------------|----------------|
| V(I/O)         | +5V            |
| +3.3V          | Brilliant Blue |
| Cadmium Yellow |                |

Hartmann Elektronik  
CPCI 6HE RA 3Slot 64bit  
BUS544 Rev.BA

Silkscreen Top  
Pads Top

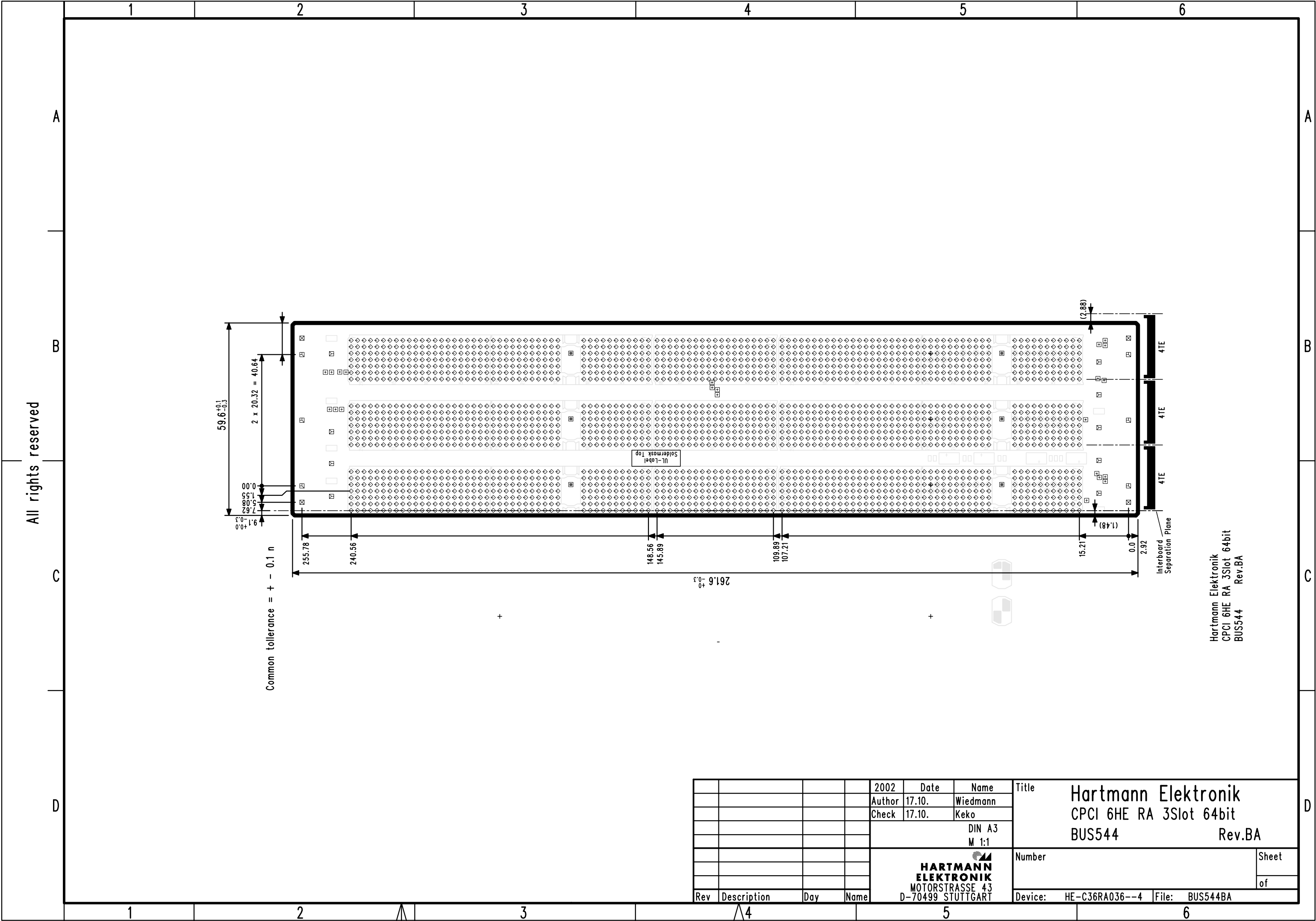
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  |       |         |                |
|-----|-------------|-----|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|-----------------------------------------------------------------------------|--|-------|---------|----------------|
|     |             |     |      | 2002                                                                                                                                                            | Date   | Name     | Title<br>Hartmann Elektronik<br>CPCI 6HE RA 3Slot 64bit<br>BUS544<br>Rev.BA |  |       |         |                |
|     |             |     |      | Author                                                                                                                                                          | 17.10. | Wiedmann |                                                                             |  |       |         |                |
|     |             |     |      | Check                                                                                                                                                           | 17.10. | Keko     |                                                                             |  |       |         |                |
|     |             |     |      | DIN A3<br>M 1:1                                                                                                                                                 |        |          |                                                                             |  |       |         |                |
|     |             |     |      | <br><b>HARTMANN<br/>ELEKTRONIK</b><br>MOTORSTRASSE 43<br>D-70499 STUTTGART |        |          | Number                                                                      |  | Sheet |         |                |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  | of    |         |                |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  |       |         |                |
| Rev | Description | Day | Name |                                                                                                                                                                 |        |          |                                                                             |  |       | Device: | HE-C36RA036--4 |



Rev.BA  
B02244 CBCL 6HE RA 32104 64pit  
Hartmann Elektronik

Silkscreen Bottom  
Pads Bottom

|     |             |     |      |                                                                                                                                                             |        |          |                        |                                                                 |                |  |
|-----|-------------|-----|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|------------------------|-----------------------------------------------------------------|----------------|--|
|     |             |     |      | 2002                                                                                                                                                        | Date   | Name     | Title                  | Hartmann Elektronik<br>CPCI 6HE RA 3Slot 64bit<br>BUS544 Rev.BA |                |  |
|     |             |     |      | Author                                                                                                                                                      | 17.10. | Wiedmann |                        |                                                                 |                |  |
|     |             |     |      | Check                                                                                                                                                       | 17.10. | Keko     |                        |                                                                 |                |  |
|     |             |     |      | DIN A3<br>M 1:1                                                                                                                                             |        |          |                        |                                                                 |                |  |
|     |             |     |      | <br><b>HARTMANN ELEKTRONIK</b><br>MOTORSTRASSE 43<br>D-70499 STUTTGART |        |          | Number                 |                                                                 | Sheet          |  |
|     |             |     |      |                                                                                                                                                             |        |          | of                     |                                                                 |                |  |
| Rev | Description | Day | Name |                                                                                                                                                             |        |          | Device: HE-C36RA036--4 |                                                                 | File: BUS544BA |  |
|     |             |     |      |                                                                                                                                                             |        |          |                        |                                                                 |                |  |



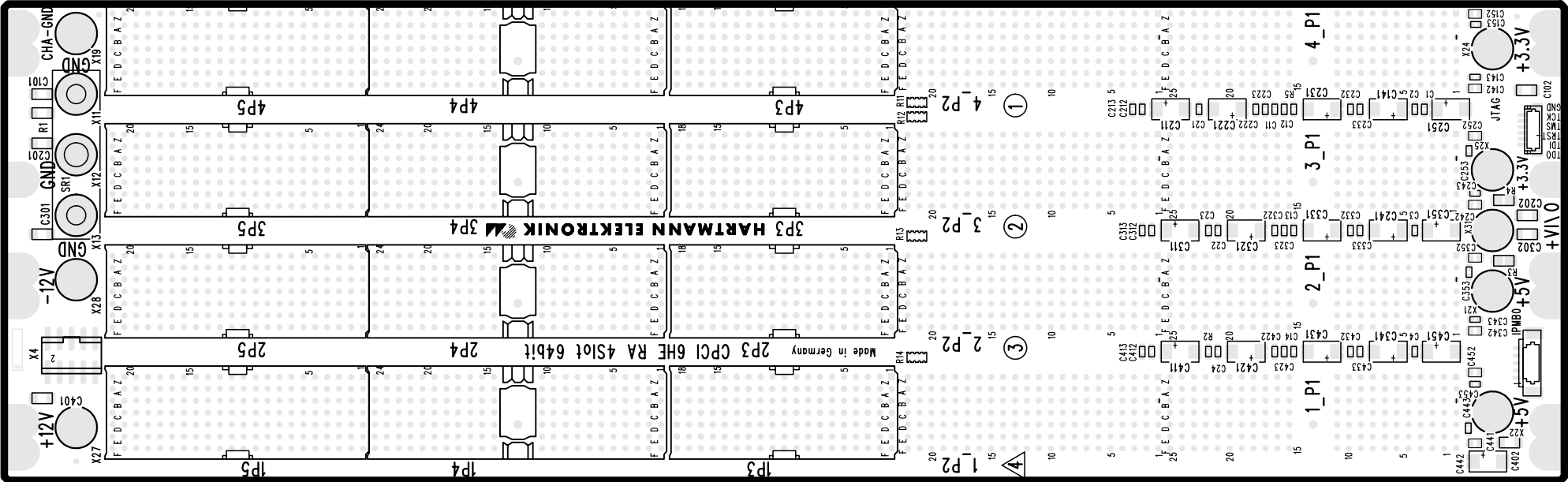
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Hartmann Elektronik  
CPCI 6HE RA 3Slot 64bit  
BUS544 Rev.BA

|     |             |     |      |        |        |                                                                                                                                                                 |                                                                          |                |
|-----|-------------|-----|------|--------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------|
|     |             |     |      | 2002   | Date   | Name                                                                                                                                                            | Title<br>Hartmann Elektronik<br>CPCI 6HE RA 3Slot 64bit<br>BUS544 Rev.BA |                |
|     |             |     |      | Author | 17.10. | Wiedmann                                                                                                                                                        |                                                                          |                |
|     |             |     |      | Check  | 17.10. | Keko                                                                                                                                                            |                                                                          |                |
|     |             |     |      |        |        | DIN A3<br>M 1:1                                                                                                                                                 | Number                                                                   |                |
|     |             |     |      |        |        |                                                                                                                                                                 |                                                                          |                |
|     |             |     |      |        |        | <br><b>HARTMANN<br/>ELEKTRONIK</b><br>MOTORSTRASSE 43<br>D-70499 STUTTGART | Sheet                                                                    |                |
|     |             |     |      |        |        |                                                                                                                                                                 |                                                                          |                |
| Rev | Description | Day | Name |        |        | Device:                                                                                                                                                         | HE-C36RA036--4                                                           | File: BUS544BA |



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| JTAG |        |
|------|--------|
| Pin  | Signal |
| 1    | GND    |
| 2    | TX     |
| 3    | TX     |
| 4    | TRST   |
| 5    | TDI    |
| 6    | TDO    |

| PMB0 |          |
|------|----------|
| Pin  | Signal   |
| 1    | IPMB_SCL |
| 2    | GND      |
| 3    | IPMB_SDA |
| 4    | IPMB_PMR |
| 5    | SMB_RST  |

BUS549 Rev.BB  
CPCI 6HE RA 4Slot 64bit  
Hartmann Elektronik

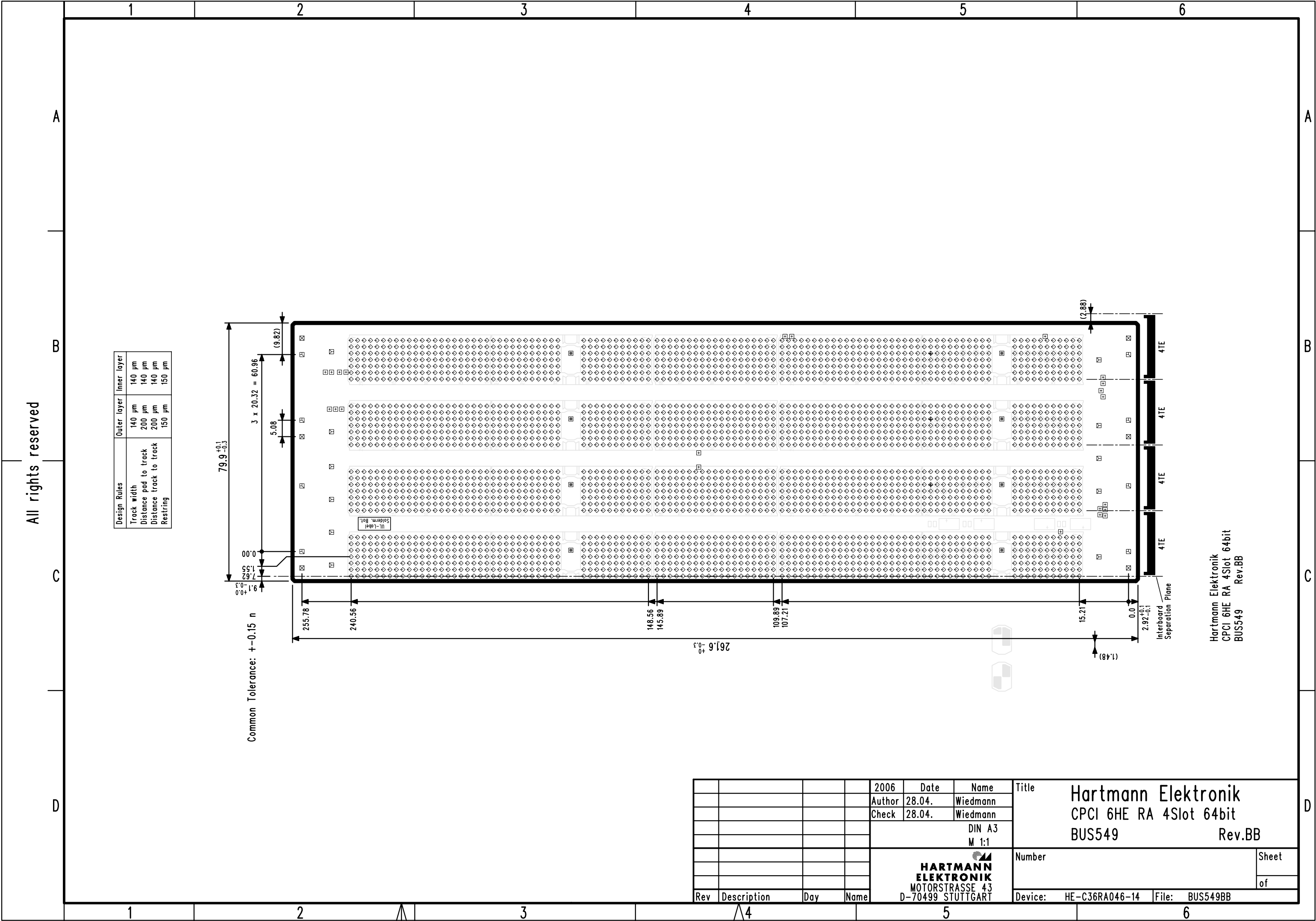
Silkscreen Bottom  
Pads Bottom

Busbar for +5V keying

Busbar for +3.3V keying

|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |                |       |          |  |
|-----|-------------|-----|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|-----------------------------------------------------------------------------|----------------|-------|----------|--|
|     |             |     |      | 2006                                                                                                                                                            | Date   | Name     | Title<br>Hartmann Elektronik<br>CPCI 6HE RA 4Slot 64bit<br>BUS549<br>Rev.BB |                |       |          |  |
|     |             |     |      | Author                                                                                                                                                          | 28.04. | Wiedmann |                                                                             |                |       |          |  |
|     |             |     |      | Check                                                                                                                                                           | 28.04. | Wiedmann |                                                                             |                |       |          |  |
|     |             |     |      | DIN A3<br>M 1:1                                                                                                                                                 |        |          |                                                                             |                |       |          |  |
|     |             |     |      | <br><b>HARTMANN<br/>ELEKTRONIK</b><br>MOTORSTRASSE 43<br>D-70499 STUTTGART |        |          | Number                                                                      |                | Sheet |          |  |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |                | of    |          |  |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |                |       |          |  |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |                |       |          |  |
| Rev | Description | Day | Name |                                                                                                                                                                 |        |          | Device:                                                                     | HE-C36RA046-14 | File: | BUS549BB |  |

Hartmann Elektronik  
CPCI 6HE RA 4Slot 64bit  
BUS549 Rev.BB



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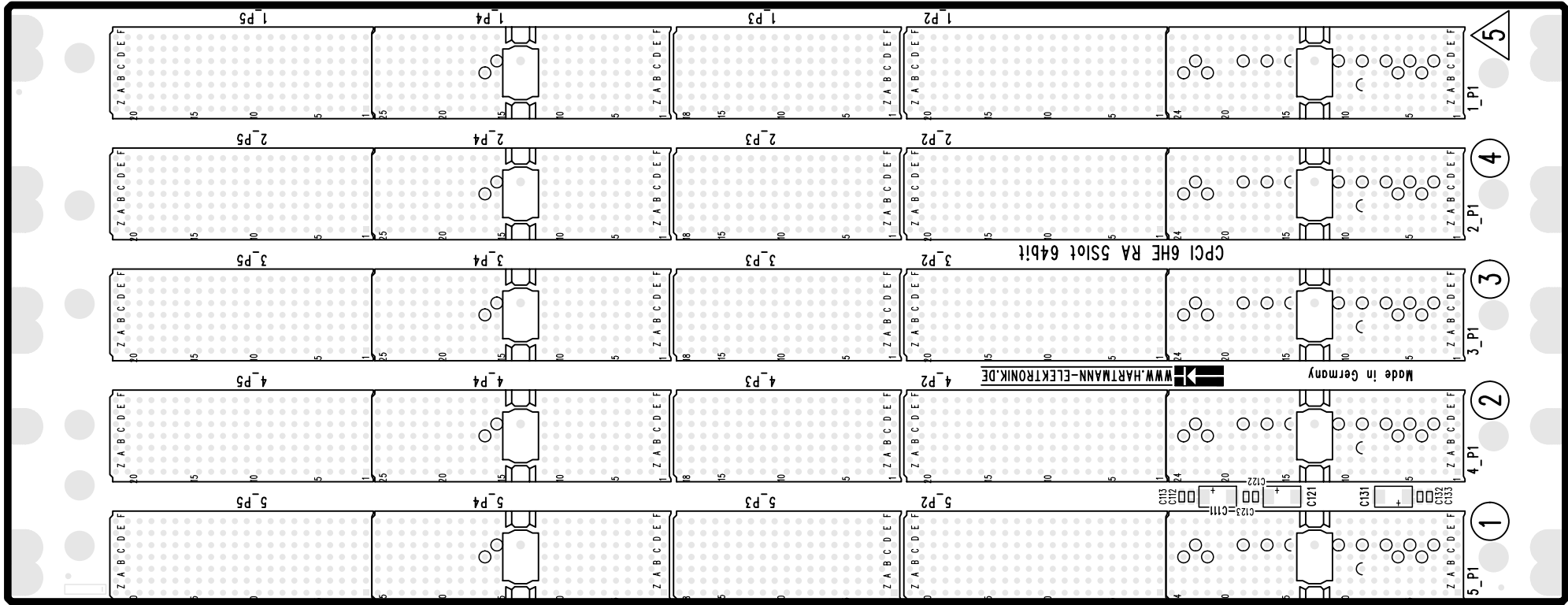
| Design Rules            | Outer layer | Inner layer |
|-------------------------|-------------|-------------|
| Track width             | 140 µm      | 140 µm      |
| Distance pad to track   | 200 µm      | 140 µm      |
| Distance track to track | 200 µm      | 140 µm      |
| Restring                | 150 µm      | 150 µm      |

Hartmann Elektronik  
CPCI 6HE RA 4Slot 64bit  
BUS549 Rev.BB

|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |                |                |  |  |
|-----|-------------|-----|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|-----------------------------------------------------------------------------|----------------|----------------|--|--|
|     |             |     |      | 2006                                                                                                                                                            | Date   | Name     | Title<br>Hartmann Elektronik<br>CPCI 6HE RA 4Slot 64bit<br>BUS549<br>Rev.BB |                |                |  |  |
|     |             |     |      | Author                                                                                                                                                          | 28.04. | Wiedmann |                                                                             |                |                |  |  |
|     |             |     |      | Check                                                                                                                                                           | 28.04. | Wiedmann |                                                                             |                |                |  |  |
|     |             |     |      | DIN A3<br>M 1:1                                                                                                                                                 |        |          |                                                                             |                |                |  |  |
|     |             |     |      | <br><b>HARTMANN<br/>ELEKTRONIK</b><br>MOTORSTRASSE 43<br>D-70499 STUTTGART |        |          | Number                                                                      |                | Sheet          |  |  |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |                | of             |  |  |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |                |                |  |  |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |                |                |  |  |
| Rev | Description | Day | Name |                                                                                                                                                                 |        |          | Device:                                                                     | HE-C36RA046-14 | File: BUS549BB |  |  |

Hartmann Elektronik  
CPCI 6HE RA 4Slot 64bit  
BUS549 Rev.BB

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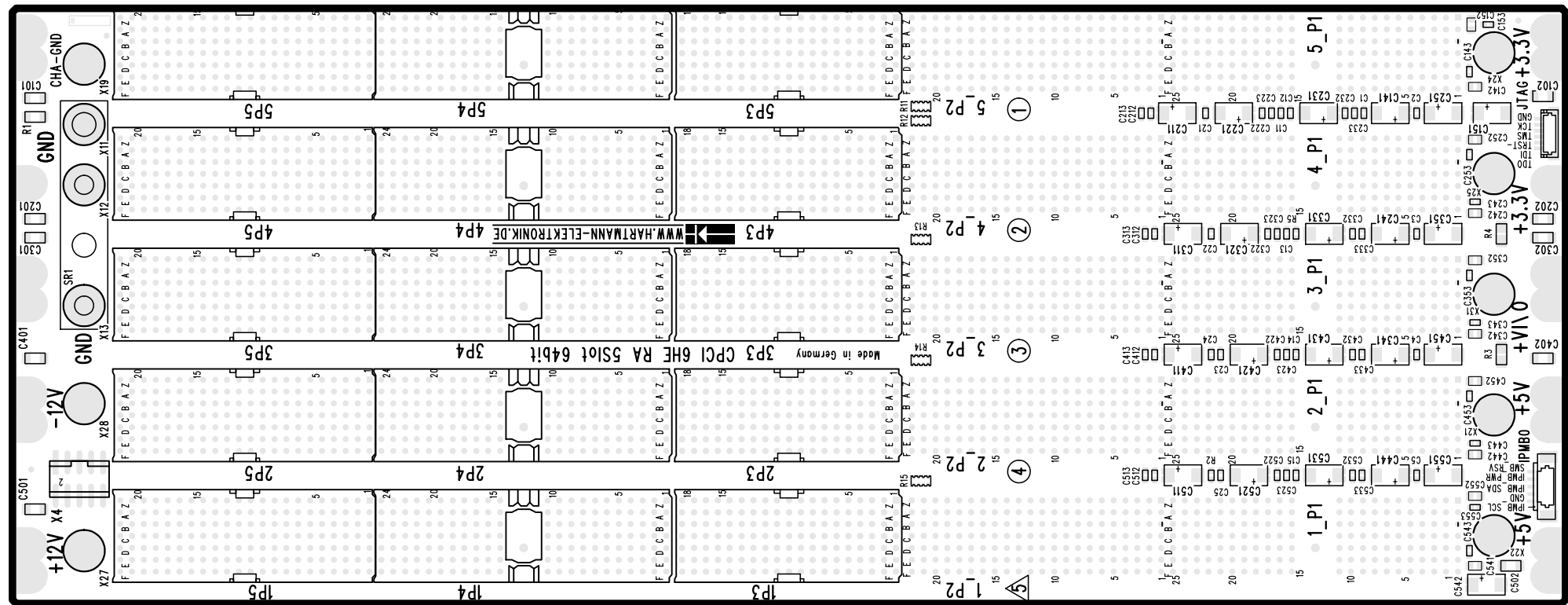
| Coding Key     |                |
|----------------|----------------|
| V(I/O)         |                |
| +3.3V          |                |
| +5V            |                |
| Cadmium Yellow | Brilliant Blue |

|     |             |     |      |                                                                                                                                                      |        |          |                                                                             |  |       |         |                |
|-----|-------------|-----|------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|-----------------------------------------------------------------------------|--|-------|---------|----------------|
|     |             |     |      | 2001                                                                                                                                                 | Date   | Name     | Title<br>Hartmann Elektronik<br>CPCI 6HE RA 5Slot 64bit<br>BUS543<br>Rev.BA |  |       |         |                |
|     |             |     |      | Author                                                                                                                                               | 05.04. | Wiedmann |                                                                             |  |       |         |                |
|     |             |     |      | Check                                                                                                                                                | 05.04. | Hamann   |                                                                             |  |       |         |                |
|     |             |     |      | DIN A3<br>M 1:1                                                                                                                                      |        |          |                                                                             |  |       |         |                |
|     |             |     |      |  HARTMANN<br>ELEKTRONIK<br>MOTORSTRASSE 43<br>D-70499 STUTTGART |        |          | Number                                                                      |  | Sheet |         |                |
|     |             |     |      |                                                                                                                                                      |        |          |                                                                             |  | of    |         |                |
|     |             |     |      |                                                                                                                                                      |        |          |                                                                             |  |       |         |                |
| Rev | Description | Day | Name |                                                                                                                                                      |        |          |                                                                             |  |       | Device: | HE-C36RA056-14 |

Hartmann Elektronik  
CPCI 6HE RA 5Slot 64bit  
BUS543 Rev.BA

Silkscreen Top  
Pads Top

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Busbar for +5V keying

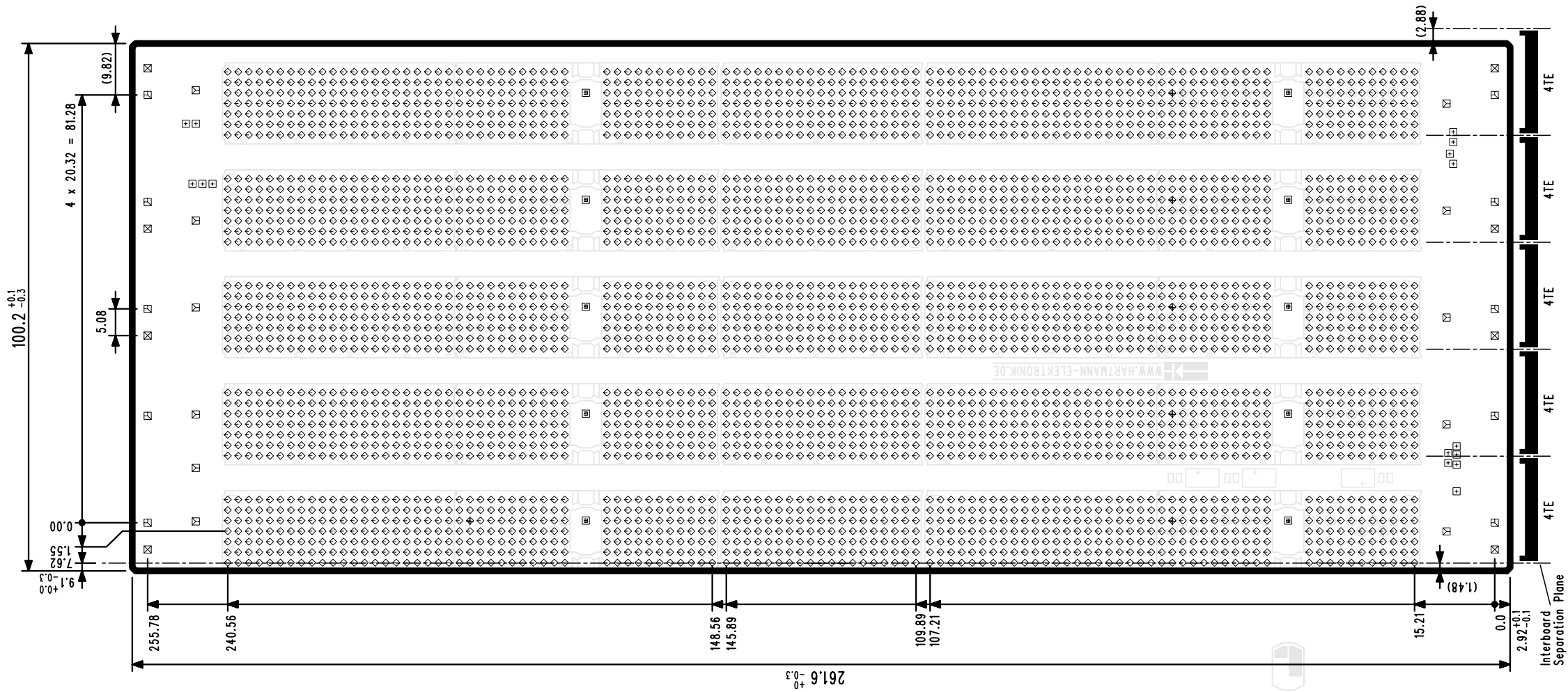
Busbar for +3.3V keying

BUS543 Rev.BA  
CPCI 6HE RA 5Slot 64bit  
Hartmann Elektronik

Silkscreen Bottom  
Pads Bottom

|     |             |     |      |                                                                                                                                                      |        |          |                                                                             |  |                        |  |                |
|-----|-------------|-----|------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|-----------------------------------------------------------------------------|--|------------------------|--|----------------|
|     |             |     |      | 2001                                                                                                                                                 | Date   | Name     | Title<br>Hartmann Elektronik<br>CPCI 6HE RA 5Slot 64bit<br>BUS543<br>Rev.BA |  |                        |  |                |
|     |             |     |      | Author                                                                                                                                               | 05.04. | Wiedmann |                                                                             |  |                        |  |                |
|     |             |     |      | Check                                                                                                                                                | 05.04. | Hamann   |                                                                             |  |                        |  |                |
|     |             |     |      | DIN A3<br>M 1:1                                                                                                                                      |        |          |                                                                             |  |                        |  |                |
|     |             |     |      |  HARTMANN<br>ELEKTRONIK<br>MOTORSTRASSE 43<br>D-70499 STUTTGART |        |          | Number                                                                      |  | Sheet                  |  |                |
|     |             |     |      |                                                                                                                                                      |        |          |                                                                             |  | Device: HE-C36RA056-14 |  | of             |
| Rev | Description | Day | Name |                                                                                                                                                      |        |          |                                                                             |  |                        |  | File: BUS543BA |

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Hartmann Elektronik  
CPCI 6HE RA 5Slot 64bit  
BUS543 Rev.BA

|     |             |     |      |                                                                                                                                                      |        |          |                                                                             |  |       |         |                |
|-----|-------------|-----|------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|-----------------------------------------------------------------------------|--|-------|---------|----------------|
|     |             |     |      | 2001                                                                                                                                                 | Date   | Name     | Title<br>Hartmann Elektronik<br>CPCI 6HE RA 5Slot 64bit<br>BUS543<br>Rev.BA |  |       |         |                |
|     |             |     |      | Author                                                                                                                                               | 05.04. | Wiedmann |                                                                             |  |       |         |                |
|     |             |     |      | Check                                                                                                                                                | 05.04. | Hamann   |                                                                             |  |       |         |                |
|     |             |     |      | DIN A3<br>M 1:1                                                                                                                                      |        |          |                                                                             |  |       |         |                |
|     |             |     |      |  HARTMANN<br>ELEKTRONIK<br>MOTORSTRASSE 43<br>D-70499 STUTTGART |        |          | Number                                                                      |  | Sheet |         |                |
|     |             |     |      |                                                                                                                                                      |        |          |                                                                             |  | of    |         |                |
| Rev | Description | Day | Name |                                                                                                                                                      |        |          |                                                                             |  |       |         |                |
|     |             |     |      |                                                                                                                                                      |        |          |                                                                             |  |       | Device: | HE-C36RA056-14 |

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**A**

B

C

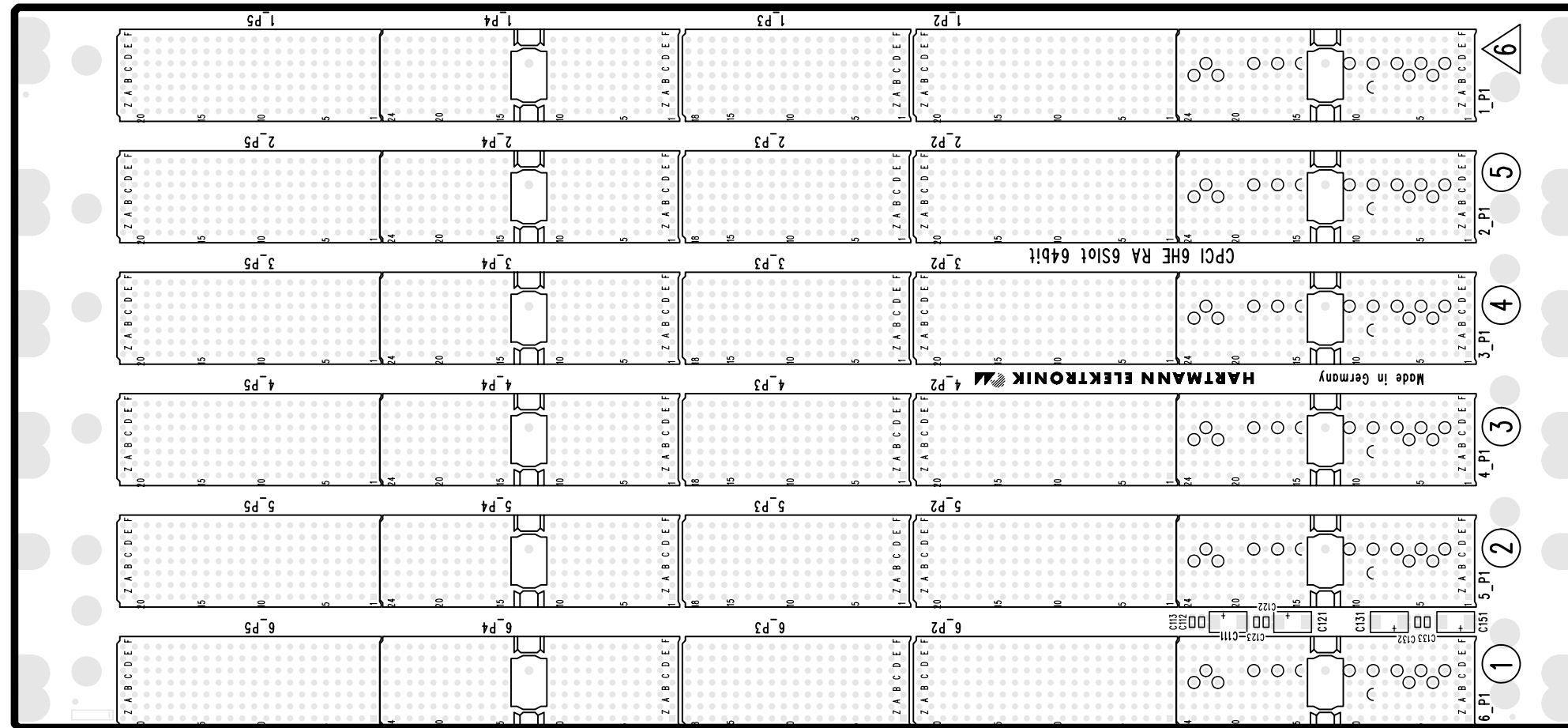
D

**A**

**E**

C

D



|            |                                                                                       |                                                                                       |
|------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Coding Key |                                                                                       |                                                                                       |
|            | V(I/O)                                                                                |                                                                                       |
| +3.3V      |  |  |
| +5V        |  |  |

|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  |                |
|-----|-------------|-----|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|-----------------------------------------------------------------------------|--|----------------|
|     |             |     |      | 2006                                                                                                                                                            | Date   | Name     | Title<br>Hartmann Elektronik<br>CPCI 6HE RA 6Slot 64bit<br>BUS548<br>Rev.BB |  |                |
|     |             |     |      | Author                                                                                                                                                          | 02.05. | Wiedmann |                                                                             |  |                |
|     |             |     |      | Check                                                                                                                                                           | 02.05. | Wiedmann |                                                                             |  |                |
|     |             |     |      | DIN A3<br>M 1:1                                                                                                                                                 |        |          |                                                                             |  |                |
|     |             |     |      | <br><b>HARTMANN<br/>ELEKTRONIK</b><br>MOTORSTRASSE 43<br>D-70499 STUTTGART |        |          | Number                                                                      |  | Sheet          |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  | of             |
| Rev | Description | Day | Name |                                                                                                                                                                 |        |          | Device: HE-C36RA066-14                                                      |  | File: BUS548BB |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  |                |

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A

B

C

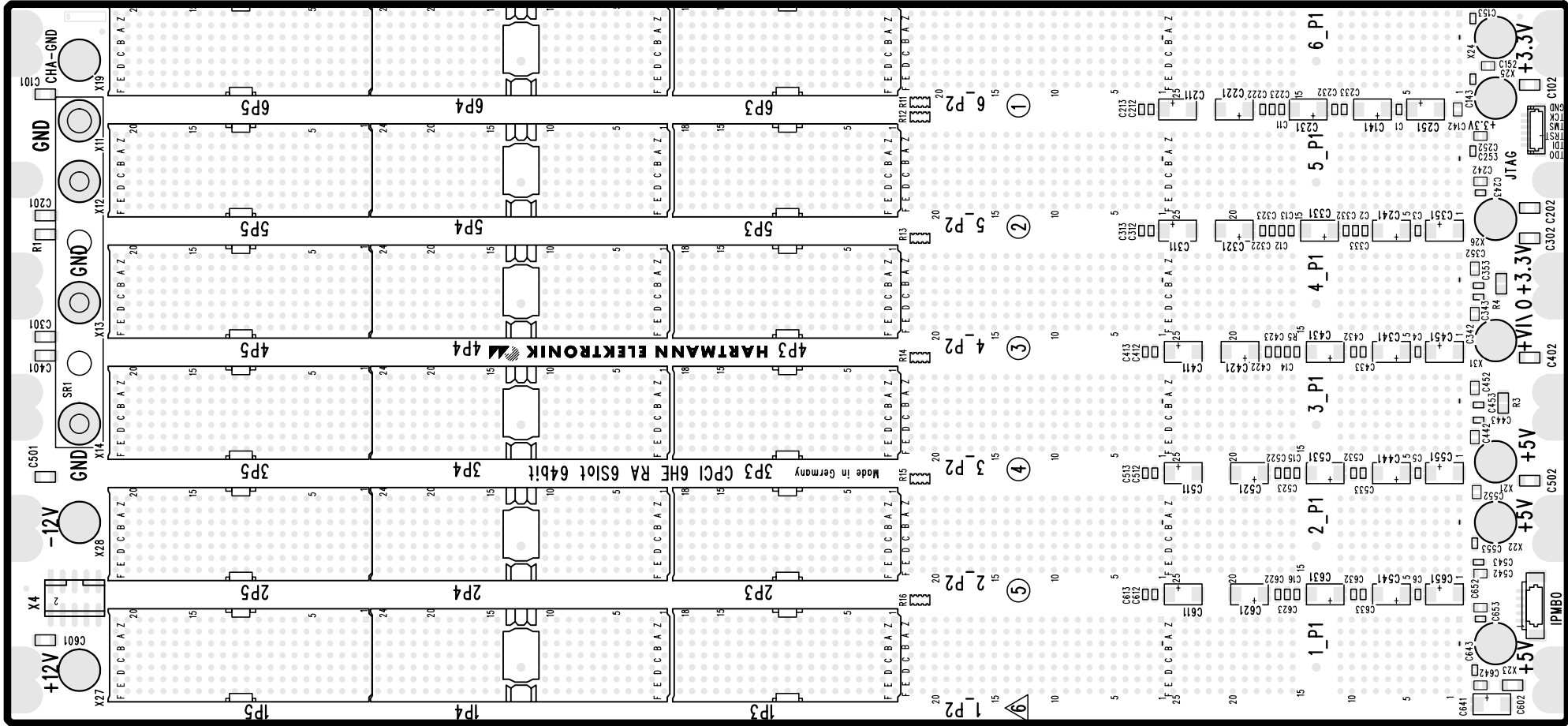
D

A

B

C

D



| JTAG Pin Assignment |        |
|---------------------|--------|
| Pin                 | Signal |
| 1                   | GND    |
| 2                   | TCK    |
| 3                   | TMS    |
| 4                   | TRST-  |
| 5                   | TDI    |
| 6                   | TDO    |

| IPMB0 Pin Assignment |          |
|----------------------|----------|
| Pin                  | Signal   |
| 1                    | IPMB SCL |
| 2                    | GND      |
| 4                    | IPMB PWR |
| 5                    | SMB RSV  |

BR2248 Rev.BB  
CPCI 6HE RA 6Slot 64bit  
Hartmann Elektronik

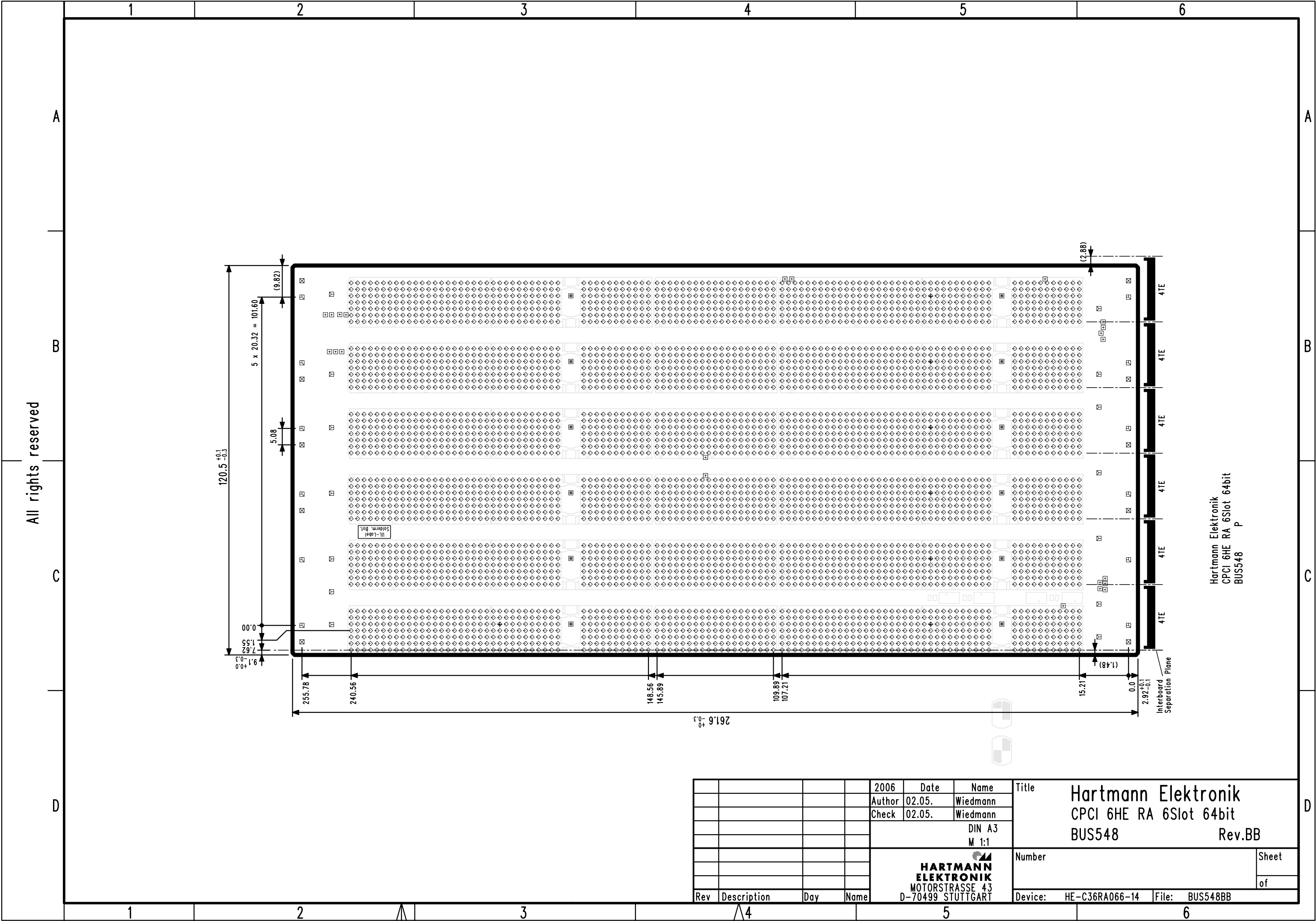
Silkscreen Bottom  
Pads Bottom

Busbar for +5V keying

Busbar for +3.3V keying

|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  |       |         |                |
|-----|-------------|-----|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|-----------------------------------------------------------------------------|--|-------|---------|----------------|
|     |             |     |      | 2006                                                                                                                                                            | Date   | Name     | Title<br>Hartmann Elektronik<br>CPCI 6HE RA 6Slot 64bit<br>BUS548<br>Rev.BB |  |       |         |                |
|     |             |     |      | Author                                                                                                                                                          | 02.05. | Wiedmann |                                                                             |  |       |         |                |
|     |             |     |      | Check                                                                                                                                                           | 02.05. | Wiedmann |                                                                             |  |       |         |                |
|     |             |     |      | DIN A3<br>M 1:1                                                                                                                                                 |        |          |                                                                             |  |       |         |                |
|     |             |     |      | <br><b>HARTMANN<br/>ELEKTRONIK</b><br>MOTORSTRASSE 43<br>D-70499 STUTTGART |        |          | Number                                                                      |  | Sheet |         |                |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  | of    |         |                |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  |       |         |                |
| Rev | Description | Day | Name |                                                                                                                                                                 |        |          |                                                                             |  |       | Device: | HE-C36RA066-14 |

Hartmann Elektronik  
CPCI 6HE RA 6Slot 64bit  
BUS548 Rev.BB



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|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  |  |         |                |       |
|-----|-------------|-----|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|-----------------------------------------------------------------------------|--|--|---------|----------------|-------|
|     |             |     |      | 2006                                                                                                                                                            | Date   | Name     | Title<br>Hartmann Elektronik<br>CPCI 6HE RA 6Slot 64bit<br>BUS548<br>Rev.BB |  |  |         |                |       |
|     |             |     |      | Author                                                                                                                                                          | 02.05. | Wiedmann |                                                                             |  |  |         |                |       |
|     |             |     |      | Check                                                                                                                                                           | 02.05. | Wiedmann |                                                                             |  |  |         |                |       |
|     |             |     |      | DIN A3<br>M 1:1                                                                                                                                                 |        |          |                                                                             |  |  |         |                |       |
|     |             |     |      | <br><b>HARTMANN<br/>ELEKTRONIK</b><br>MOTORSTRASSE 43<br>D-70499 STUTTGART |        |          | Number                                                                      |  |  | Sheet   |                |       |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  |  | of      |                |       |
|     |             |     |      |                                                                                                                                                                 |        |          |                                                                             |  |  |         |                |       |
| Rev | Description | Day | Name |                                                                                                                                                                 |        |          |                                                                             |  |  | Device: | HE-C36RA066-14 | File: |

$$** V(I/O) = 3V_3 **$$

140.96

9.06

261.85

00

**HARTMANN ELEKTRONIK**

Symbol A0  
Symbol A1

Holes-NDK

|       |          |        |            |      |                |                              |        |
|-------|----------|--------|------------|------|----------------|------------------------------|--------|
|       |          |        | Datum      | Name | Kunde:         | Hartmann Elektronik          |        |
|       |          | Bearb. | 14.05.2008 | Keko | Projekt:       | CPCI 6HE Ra Master 7SI 6d0it |        |
|       |          | Gegr.  | 14.05.2008 | Keko | Pr.-Nr.:       | BS994                        | Rev.BA |
|       |          | Nomr   |            |      |                |                              |        |
|       |          |        |            |      |                |                              |        |
|       |          |        |            |      |                |                              |        |
|       |          |        |            |      |                |                              |        |
|       |          |        |            |      |                |                              |        |
|       |          |        |            |      |                |                              |        |
| Zust. | Änderung | Datum  | Name       |      | HE-C3GRAMT6-14 | Blatt                        |        |
|       |          |        |            |      |                | VON                          |        |
|       |          |        |            |      | Datei:         | HE\CP\BI\BS994BA             |        |

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X4

### Pin Assignment

| Pin | Signal | Pin | Signal          |
|-----|--------|-----|-----------------|
| 1   | PRST-  | 2   | FAL-            |
| 3   | DEG-   | 4   | +3.3V-Sense     |
| 5   | +3_3V  | 6   | GND_Sense_+3.3V |
| 7   | +5V    | 8   | +5V-Sense       |
| 9   | GND    | 10  | GND Sense +5V   |

## IPMB

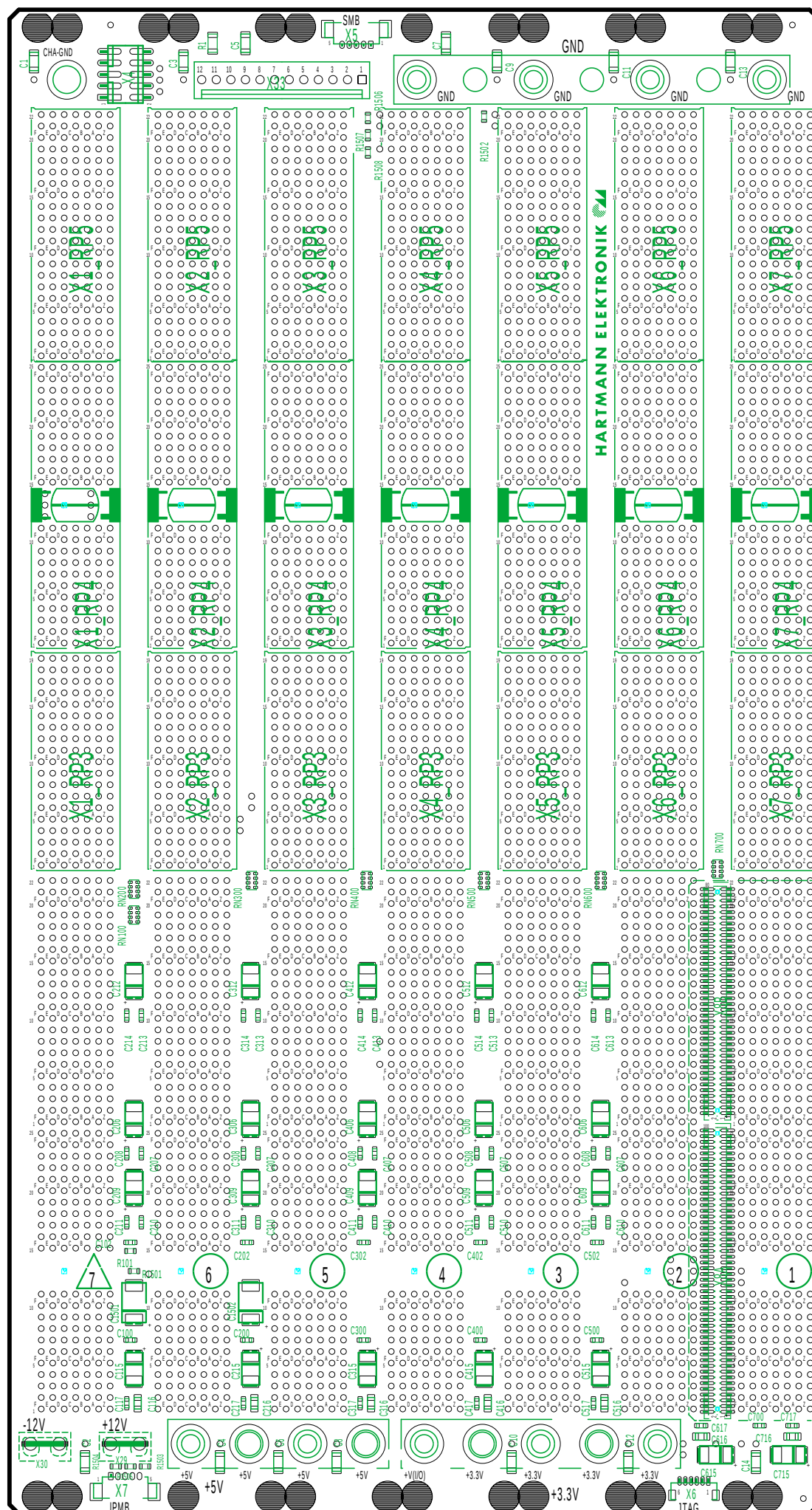
### Pin Assignment

| Pin | Signal   |
|-----|----------|
| 1   | IPMB_SCL |
| 2   | GND      |
| 3   | IPMB_SDA |
| 4   | IPMB_PWR |
| 5   | SMB RSV  |

## JTAG

### Pin Assignment

| Pin | Signal |
|-----|--------|
| 1   | GND    |
| 2   | TCK    |
| 3   | TMS    |
| 4   | TRST-  |
| 5   | TDI    |
| 6   | TDO    |



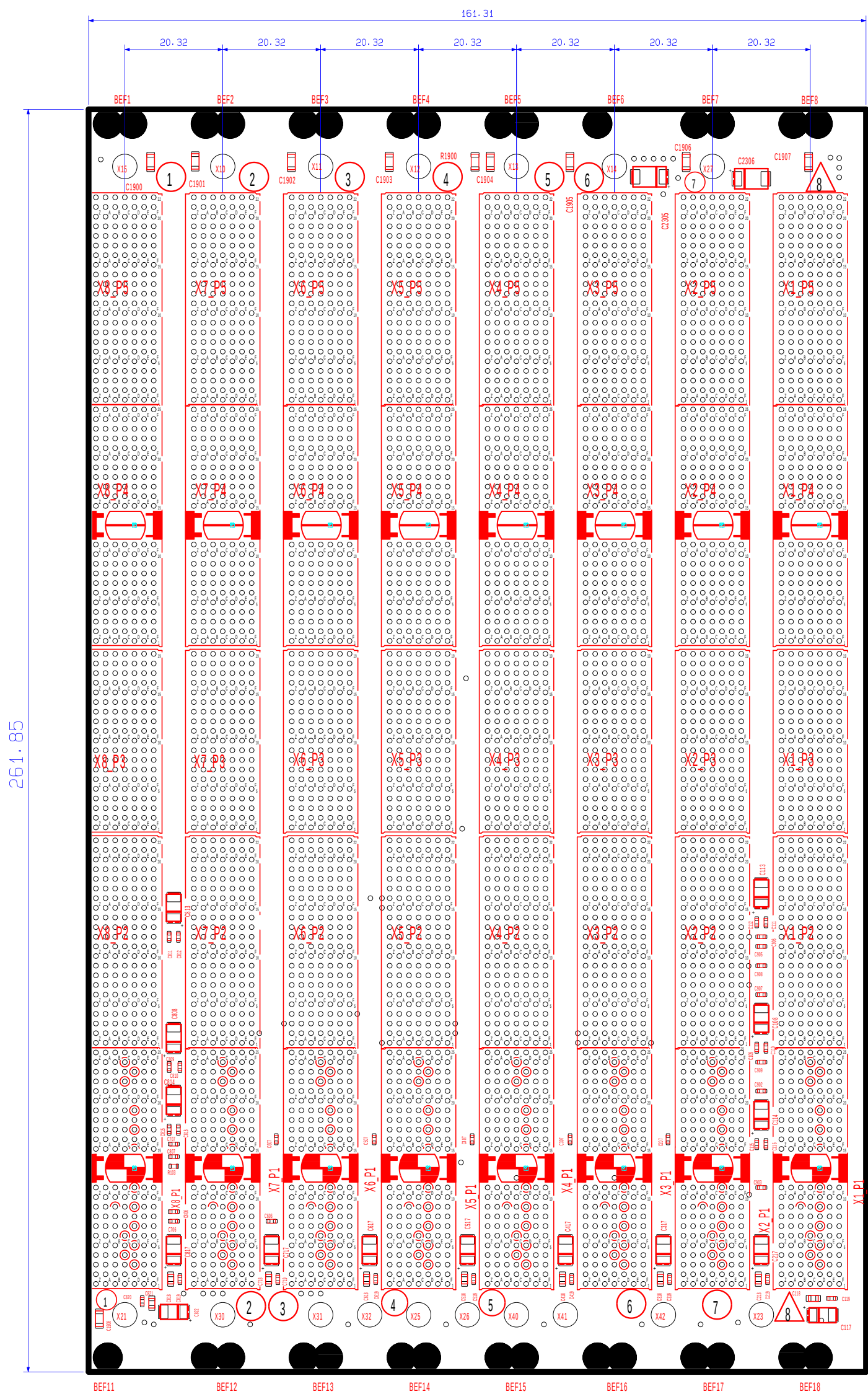
Symbol B0  
Symbol B1

Holes-NDK

|                                                                                                  |          |       |        |            |                  |                     |                              |        |
|--------------------------------------------------------------------------------------------------|----------|-------|--------|------------|------------------|---------------------|------------------------------|--------|
|                                                                                                  |          |       | Datum  | Name       | Kunde:           | Hartmann Elektronik |                              | Rev.BA |
|                                                                                                  |          |       | Bearb: | 14.05.2006 | Keko             | Projekt:            | CPCI 6HE RA Master 7SI 64bit |        |
|                                                                                                  |          |       | Gepf:  | 14.05.2006 | Keko             | Pr.-Nr.:            | BUS994                       |        |
|                                                                                                  |          |       | Norm   |            |                  |                     |                              |        |
|                                                                                                  |          |       |        |            |                  |                     |                              |        |
|                                                                                                  |          |       |        |            |                  |                     |                              |        |
| <div></div> |          |       |        |            | HE-C36RAM76-14   |                     | Blatt                        |        |
|                                                                                                  |          |       |        |            |                  |                     | von                          |        |
|                                                                                                  |          |       |        |            |                  |                     |                              |        |
| Zust.                                                                                            | Änderung | Datum | Name   | Daten:     | HE/CPCI/BUS994BA |                     |                              |        |

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**\*\* V(I/O) = 3V3 \*\***



Pads A

Symbol A-1

HOLE NDK

|       |           |        |            |                                                                                       |          |          |                         |        |   |
|-------|-----------|--------|------------|---------------------------------------------------------------------------------------|----------|----------|-------------------------|--------|---|
|       |           |        |            | Datum                                                                                 | Name     | Kunde:   | Hartmann Elektronik     |        |   |
|       |           | Bearb. | 19.11.2007 |                                                                                       | Wiedmann | Projekt: | CPCI 6HE RA 8Slot 64Bit |        |   |
|       |           | Gepr.  | 19.11.2007 |                                                                                       | Hamann   | Pr.-Nr.: | BUS943                  | Rev.BA |   |
|       |           | Norm   |            |                                                                                       |          |          |                         |        |   |
|       |           |        |            |                                                                                       |          |          |                         |        |   |
|       |           |        |            |                                                                                       |          |          |                         |        |   |
|       |           |        |            |                                                                                       |          |          |                         |        |   |
|       |           |        |            |                                                                                       |          |          |                         |        |   |
| Zust. | Aenderung | Datum  | Name       |  |          |          |                         | Blatt  | . |
|       |           |        |            |                                                                                       |          |          |                         | von    | . |
|       |           |        |            |                                                                                       |          | Datei:   | HEICPCIBUS943BA         |        |   |

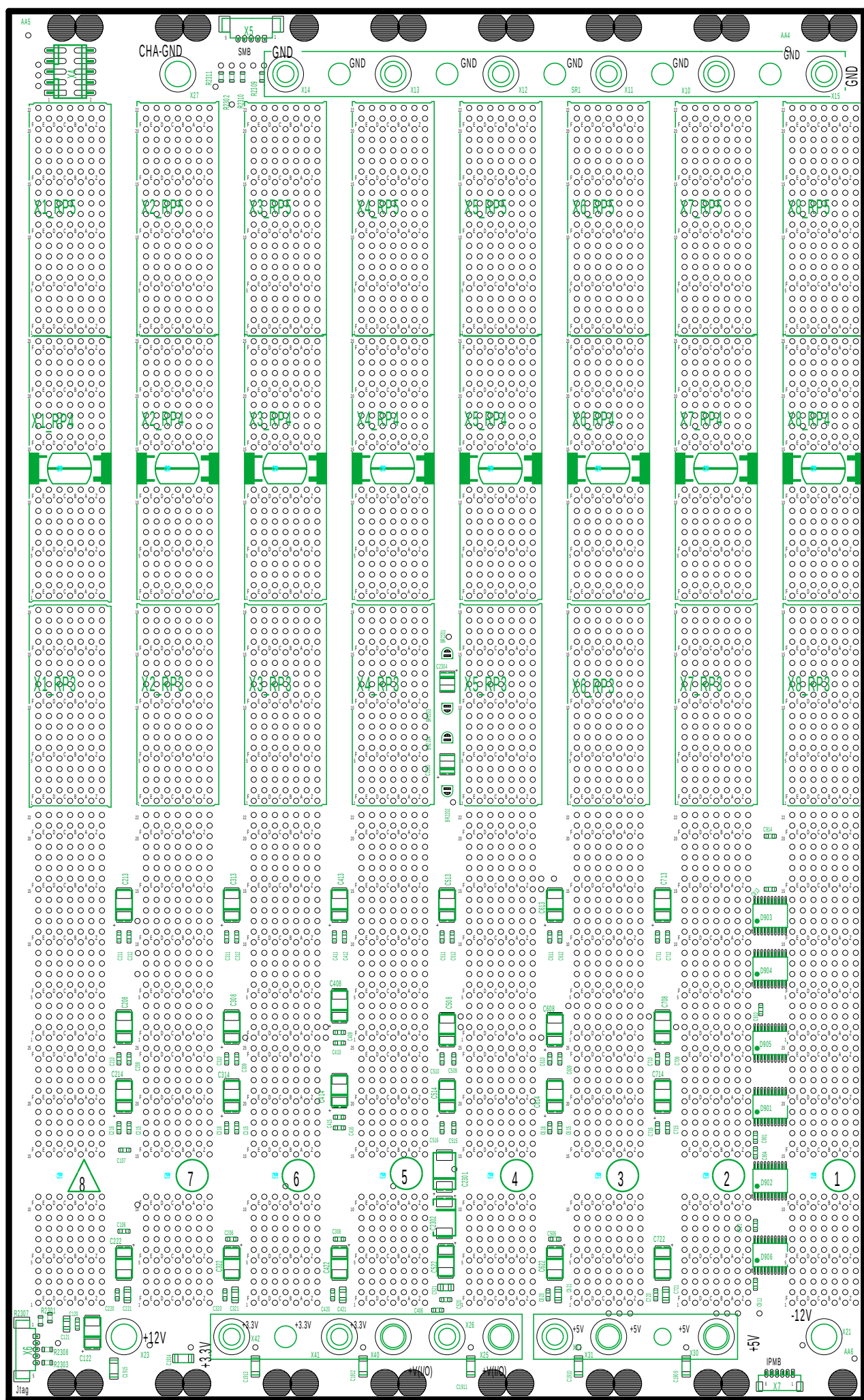
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**\*\* V(I/O) = 3V3 \*\***

X4

### Pin Assignment

| Pin | Signal | Pin | Signal          |
|-----|--------|-----|-----------------|
| 1   | PRST-  | 2   | FAL-            |
| 3   | DEG-   | 4   | +3.3V-Sense     |
| 5   | +3.3V  | 6   | GND_Sense_+3.3V |
| 7   | +5V    | 8   | +5V-Sense       |
| 9   | GND    | 10  | GND_Sense_+5V   |



Pads B

Symbol B-1

HOLE INK

|       |           |       |        |                                                                                       |          |          |                         |              |
|-------|-----------|-------|--------|---------------------------------------------------------------------------------------|----------|----------|-------------------------|--------------|
|       |           |       |        | Datum                                                                                 | Name     | Kunde:   | Hartmann Elektronik     |              |
|       |           |       | Bearb. | 19.11.2007                                                                            | Wiedmann | Projekt: | CPCI 6HE RA 8Slot 64Bit |              |
|       |           |       | Gepr.  | 19.11.2007                                                                            | Hamann   | Pr.-Nr.: | BUS943                  | Rev.BA       |
|       |           |       | Norm   |                                                                                       |          |          |                         |              |
|       |           |       |        |                                                                                       |          |          |                         |              |
|       |           |       |        |                                                                                       |          |          |                         |              |
|       |           |       |        |                                                                                       |          |          |                         |              |
| Zust. | Aenderung | Datum | Name   |  |          |          |                         | Blatt<br>von |
|       |           |       |        |                                                                                       |          | Datei:   | HE\CPCI\BUS943BA        |              |

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$$** V(I/O) = 3V_3 **$$

140.96

9.06

261.85

00

**HARTMANN ELEKTRONIK**

Symbol A0  
Symbol A1

Holes-NDK

|       |          |        |            |      |                |                              |              |
|-------|----------|--------|------------|------|----------------|------------------------------|--------------|
|       |          |        | Datum      | Name | Kunde:         | Hartmann Elektronik          |              |
|       |          | Bearb. | 14.05.2008 | Kiko | Projekt:       | CPCI 6HE RA Master 7SI 6d0it |              |
|       |          | Gedr.  | 14.05.2008 | Kiko | Pr.-Nr.:       | BUS994                       | Rev.BA       |
|       |          | Nomr   |            |      |                |                              |              |
|       |          |        |            |      |                |                              |              |
|       |          |        |            |      |                |                              |              |
|       |          |        |            |      |                |                              |              |
| Zust. | Änderung |        |            |      | HE-C36RAM76-14 |                              | Blatt<br>von |
|       |          | Datum  |            | Name | Datnr:         | HE/CPCI/BUS994BA             |              |

**HARTMANN  
ELEKTRONIK**

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X4

### Pin Assignment

| Pin | Signal | Pin | Signal          |
|-----|--------|-----|-----------------|
| 1   | PRST-  | 2   | FAL-            |
| 3   | DEG-   | 4   | +3.3V-Sense     |
| 5   | +3.3V  | 6   | GND_Sense_+3.3V |
| 7   | +5V    | 8   | +5V_Sense       |
| 9   | GND    | 10  | GND Sense +5V   |

## IPMB

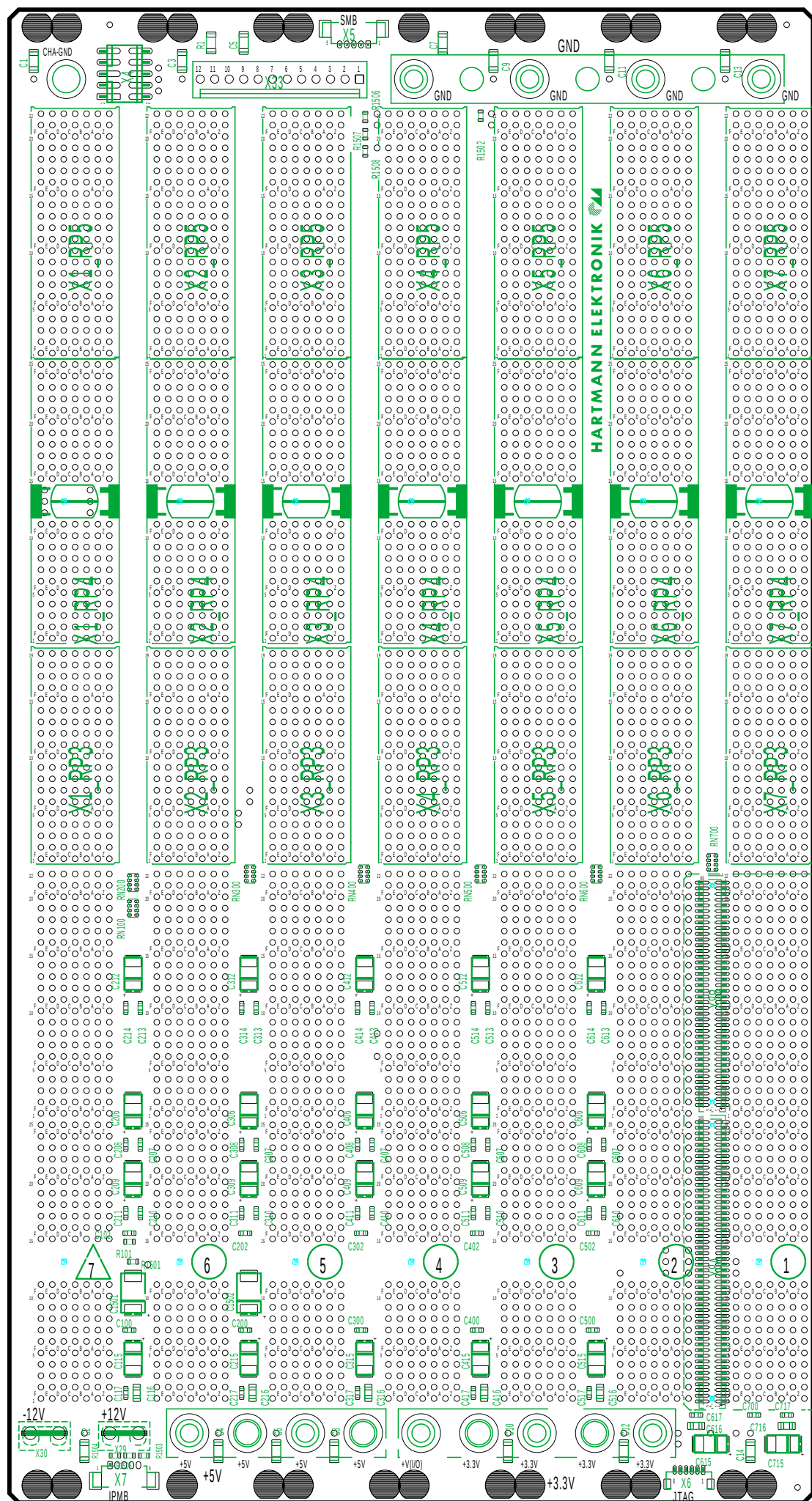
### Pin Assignment

| Pin | Signal   |
|-----|----------|
| 1   | IPMB_SCL |
| 2   | GND      |
| 3   | IPMB_SDA |
| 4   | IPMB_PWR |
| 5   | SMB_RSV  |

## JTAG

### Pin Assignment

| Pin | Signal |
|-----|--------|
| 1   | GND    |
| 2   | TCK    |
| 3   | TMS    |
| 4   | TRST-  |
| 5   | TDI    |
| 6   | TDO    |

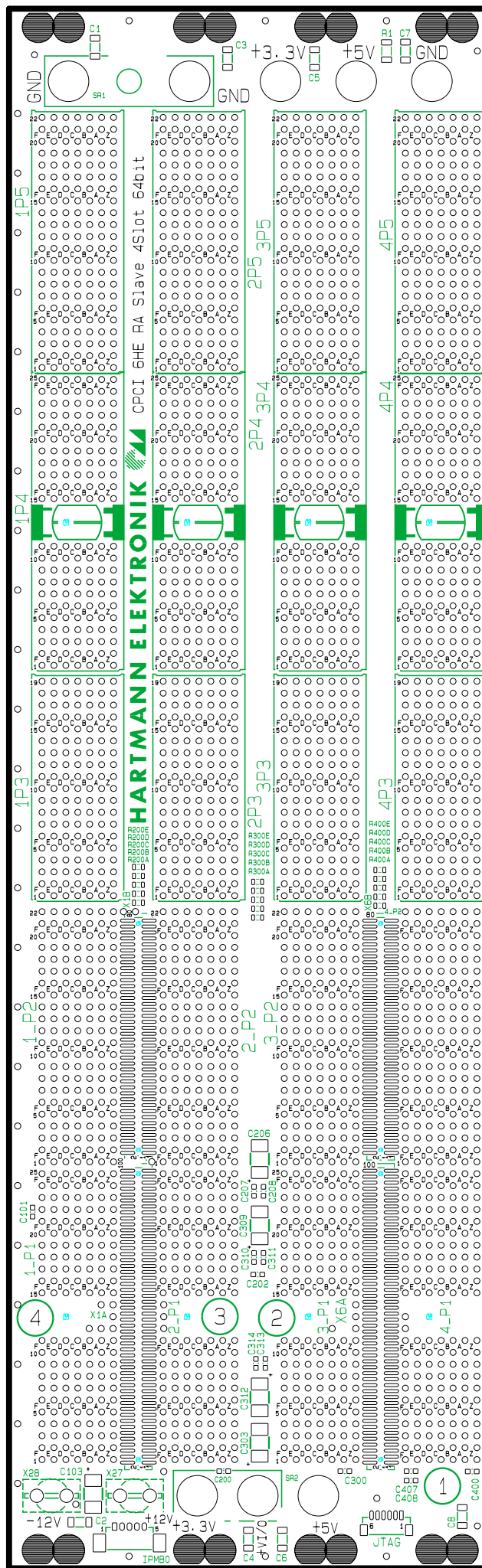


Symbol B0  
Symbol B1

Holes-VDK

|                                                                                                       |  |  |                                                                                                                         |            |       |                |                           |  |        |
|-------------------------------------------------------------------------------------------------------|--|--|-------------------------------------------------------------------------------------------------------------------------|------------|-------|----------------|---------------------------|--|--------|
|                                                                                                       |  |  |                                                                                                                         | Datum      | Name  | Kunde          | Hartmann Elektronik       |  |        |
|                                                                                                       |  |  | Bearb.                                                                                                                  | 14.05.2008 | Kello | Projekt:       | CPCI 6HE Master 7SI 64bit |  |        |
|                                                                                                       |  |  | Gepr.                                                                                                                   | 14.05.2008 | Kello | Pr.-Nr.:       | BS5994                    |  | Rev.6A |
|                                                                                                       |  |  | Norm                                                                                                                    |            |       |                |                           |  |        |
|                                                                                                       |  |  | <br><b>HARTMANN<br/>ELEKTRONIK</b> |            |       | HE-C3GRAM76-14 | Blatt                     |  |        |
|                                                                                                       |  |  |                                                                                                                         |            |       |                |                           |  | von    |
| Zust.                                                                                                 |  |  |                                                                                                                         | Datum      | Name  | Daten:         | HE/CPCI/BS5994BA          |  |        |
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```
** V(I/O) = 3V3 **
```

Symbol B2

Hoies-NDK



Inh(plc)A  
Inh(plc)B

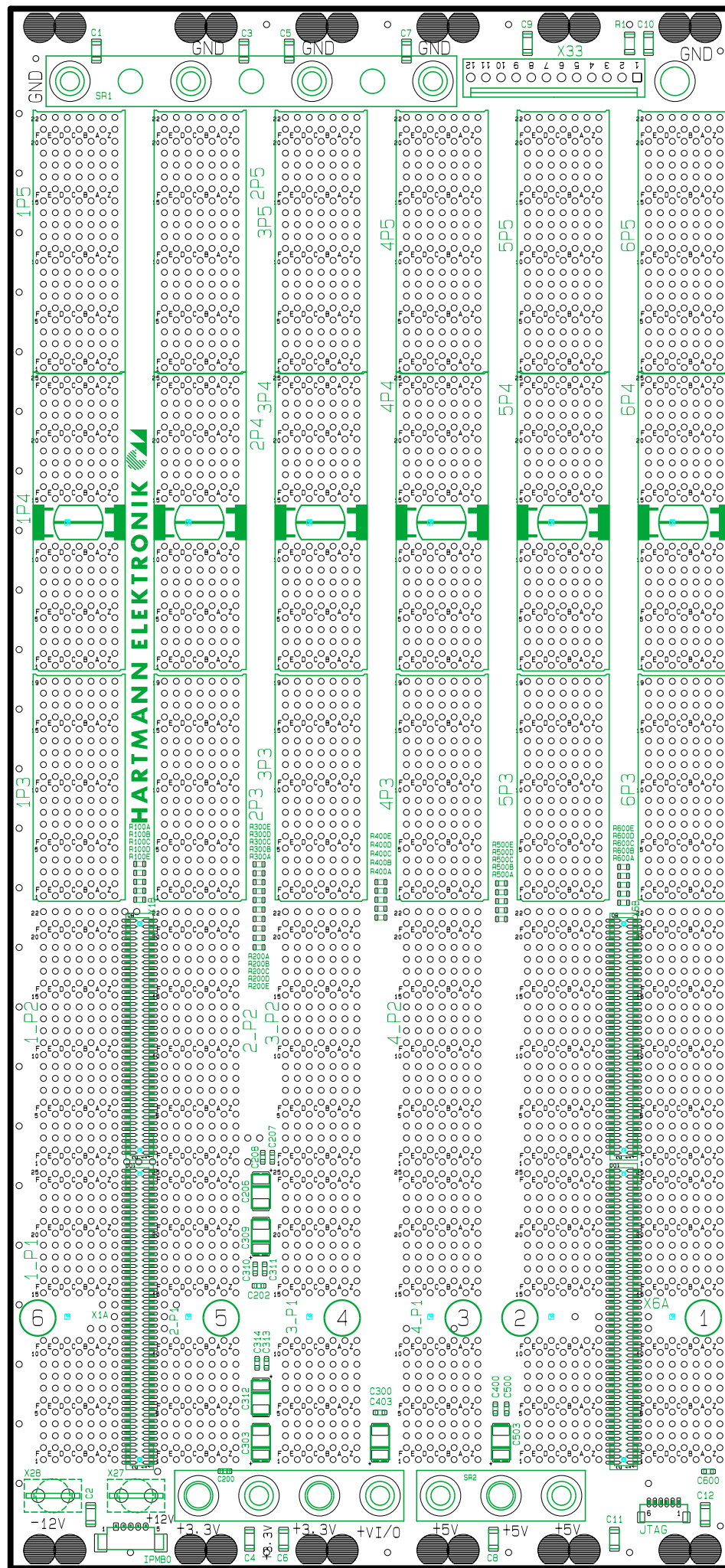
Holes-NDK

|                                                                                                                                                                           |  |            |  |                |  |                                              |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------|--|----------------|--|----------------------------------------------|--|
|                                                                                                                                                                           |  | Datum      |  | Name           |  | Kunde: <b>Hartmann Elektronik</b>            |  |
|                                                                                                                                                                           |  | 15.12.2006 |  | Hannan         |  | Projekt: <b>OPC1 6HE RB Master SSI 64bit</b> |  |
| Bearb.                                                                                                                                                                    |  | 15.12.2006 |  | Hannan         |  | Pr.-Nr.: <b>BUS990</b>                       |  |
| Gepr.                                                                                                                                                                     |  | 15.12.2006 |  | Keko           |  | Rev. <b>BA</b>                               |  |
| Norm                                                                                                                                                                      |  |            |  |                |  |                                              |  |
| <br><b>HARTMANN<br/>ELEKTRONIK</b>                                                   |  |            |  | HE-C36RBW56-14 |  | Blatt<br>von                                 |  |
|                                                                                                                                                                           |  |            |  |                |  |                                              |  |
| Zust.                                                                                                                                                                     |  | Änderung   |  | Datum          |  | Name                                         |  |
| Date: <b>HE-OPC1BUS990BA</b><br>Alle Rechte - auch fuer den Fall - von Schutzrechtsanwendungen, Verlagsanordnungen, Kopier- und Weitergaberecht, bei Hartmann Elektronik. |  |            |  |                |  |                                              |  |

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```
** V(I/O) = 3V3 **
```

Symbol B1

H01es-NDK

|                                                                                                                                          |           |       |      |                                                                                                                         |            |        |                                      |  |
|------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|------|-------------------------------------------------------------------------------------------------------------------------|------------|--------|--------------------------------------|--|
|                                                                                                                                          |           |       |      |                                                                                                                         | Datum      | Name   | Kunde: Hartmann Elektronik           |  |
|                                                                                                                                          |           |       |      | Bearb.                                                                                                                  | 20.10.2008 | Hamann | Projekt: CPCI 6HE RA Slave 6S1 64bit |  |
|                                                                                                                                          |           |       |      | Gepr.                                                                                                                   | 20.10.2008 | Hamann | Pr.-Nr.: BUS997 Rev. BA              |  |
|                                                                                                                                          |           |       |      | Norm                                                                                                                    | -          | -      | HE-C36RAS66-14                       |  |
|                                                                                                                                          |           |       |      | <br><b>HARTMANN<br/>ELEKTRONIK</b> |            |        | Blatt .                              |  |
|                                                                                                                                          |           |       |      |                                                                                                                         |            |        | von .                                |  |
| Zust.                                                                                                                                    | Aenderung | Datum | Name | Datei: HE\CPCI\BUS997BA                                                                                                 |            |        |                                      |  |
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