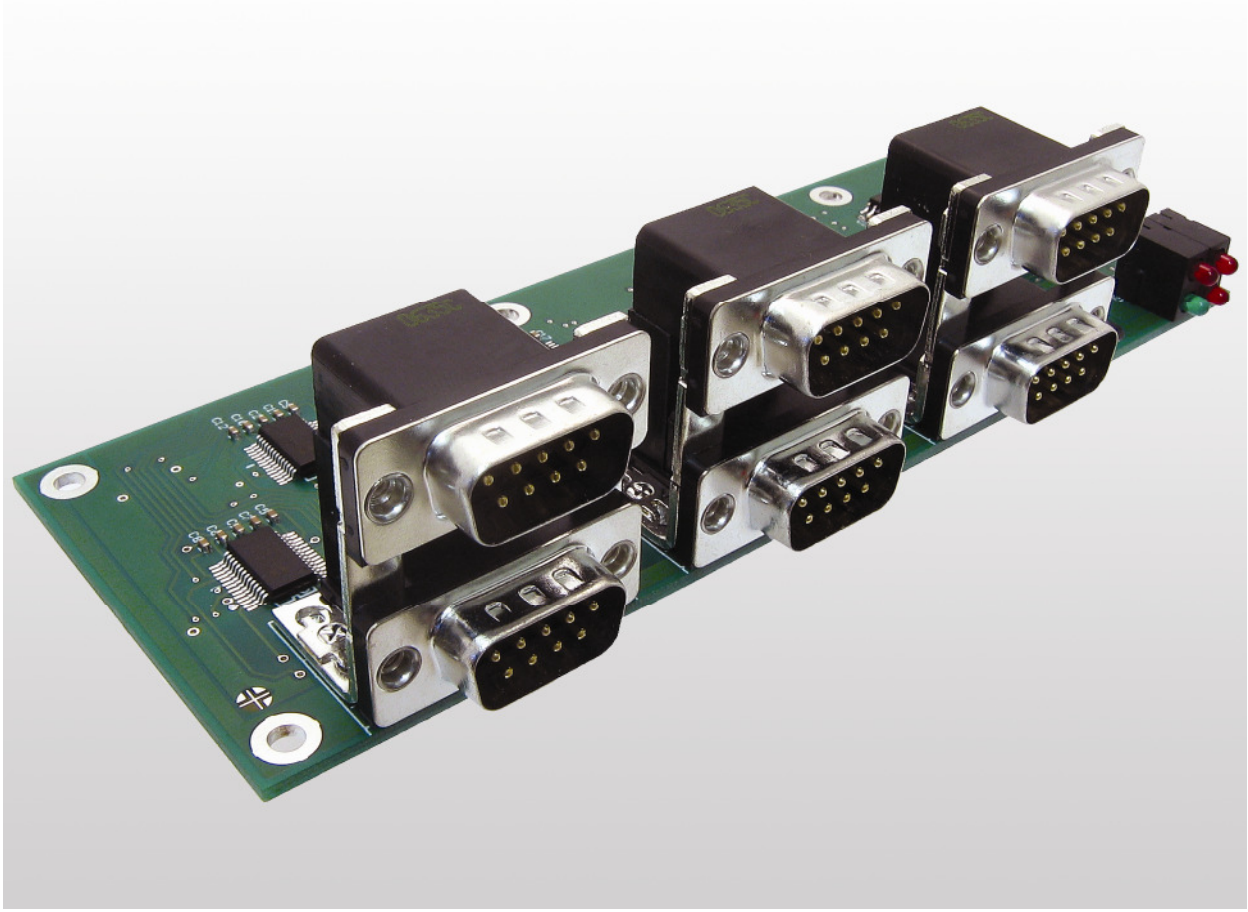
BB5/6COM

Board Revision 1.0

Hardware Reference



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1 INTRODUCTION

This document describes the hardware components of the BB5/6COM. For further information about the individual components of this product you may follow the links from our website at `http://www.ssv-comm.de`. Our website contains a lot of technical information, which will be updated in regular periods.

1.1 Safety Guidelines

Please read the following safety guidelines carefully! In case of property or personal damage by not paying attention to this document and/or by incorrect handling, we do not assume liability. In such cases any warranty claim expires.

ATTENTION: Observe precautions for handling – electrostatic sensitive device!

- Discharge yourself before you work with the device, e.g. by touching a heater of metal, to avoid damages.
- Stay grounded while working with the device to avoid damage through electrostatic discharge.

1.2 Conventions

Convention	Usage
bold	Important terms
italic	Filenames, user inputs and command lines
`monospace`	Pathnames, internet addresses and program code

Table 1: Conventions used in this Document

1.3 Block Diagram

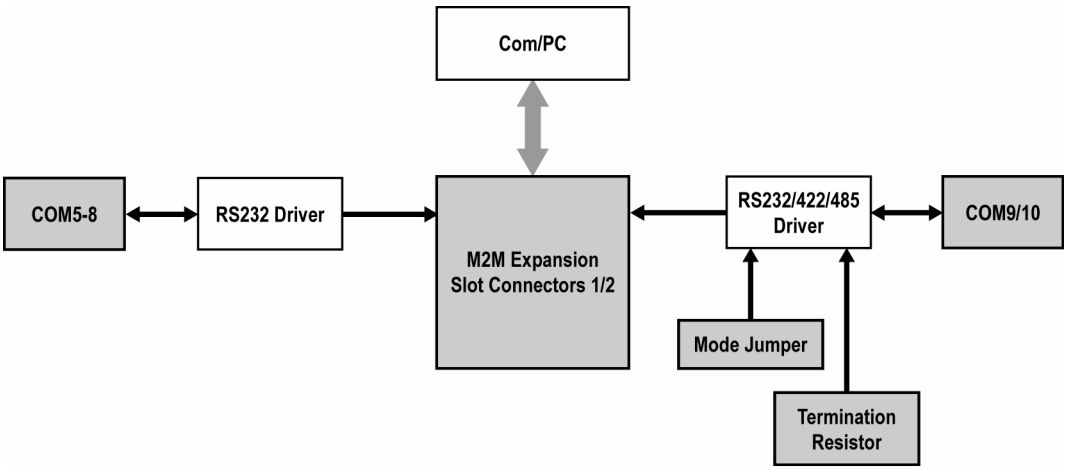
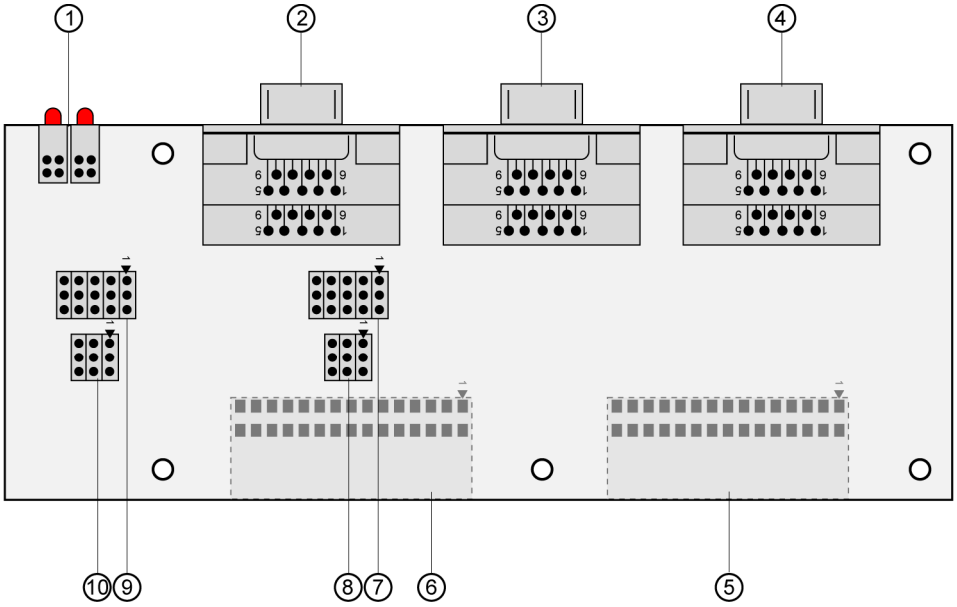


Figure 1: Block diagram of BB5/6COM

1.4 Features and Technical Data

- 4x COM connectors (Sub-D PC99) with RS232 driver only
- 2x COM connectors (Sub-D PC99) with RS232/422/485 drivers
- Maximum Baud rate for all six COM connectors: 115.200 Baud
- 3x status LED
- RoHS conform

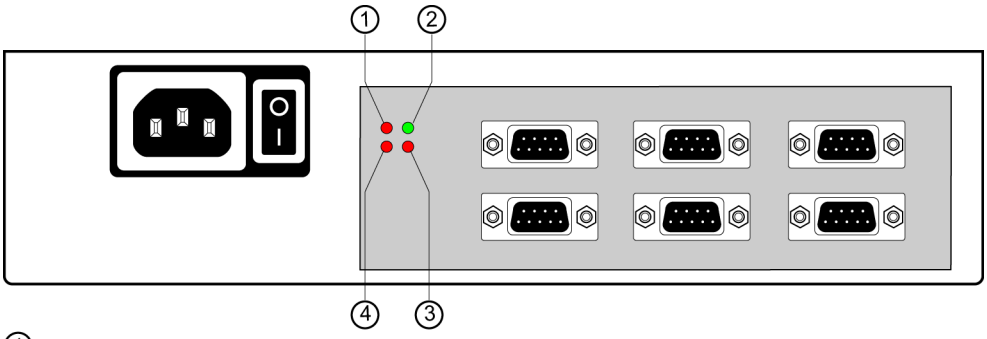
2 BOARD LAYOUT



bottom view

① Status LEDs
② J5 - COM5/6 connector
③ J4 - COM7/8 connector
④ J3 - COM9/10 connector
⑤ J1 - M2M expansion slot connector 1 (bottom side)
⑥ J2 - M2M expansion slot connector 2 (bottom side)
⑦ J14 - J18 - COM10 mode jumpers
⑧ J19 - J21 - COM10 RS422/485 termination resistors
⑨ J6 - J10 - COM9 mode jumpers
⑩ J11 - J13 - COM9 RS422/485 termination resistors

Figure 2: Board layout BB5/6COM



① IDE2 LED
② Power LED
③ LED not connected
④ IDE1 LED

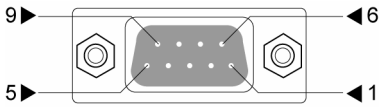
Figure 3: LED position and function

3 PINOUTS

3.1 COM5 – COM10 Connector (RS232)

Pin	Name	Function
1	DCD	COM Connector, DCD Pin
2	RXD	COM Connector, RXD Pin
3	TXD	COM Connector, TXD Pin
4	DTR	COM Connector, DTR Pin
5	GND	Ground
6	DSR	COM Connector, DSR Pin
7	RTS	COM Connector, RTS Pin
8	CTS	COM Connector, CTS Pin
9	RI	COM Connector, RI Pin

Table 2: Pinout COM5 – COM10 connector (RS232)



3.2 COM9 – COM10 Connector (RS422)

Pin	Name	Function
1	---	---
2	RX+	COM Connector, RX+ Pin
3	RX-	COM Connector, RX- Pin
4	---	---
5	---	---
6	---	---
7	TX+	COM Connector, TX+ Pin
8	TX-	COM Connector, TX- Pin
9	---	---

Table 3: Pinout COM9 – COM10 connector (RS422)

3.3 COM9 – COM10 Connector (RS485)

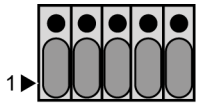
Pin	Name	Function
1	---	---
2	RX+ / TX+	COM Connector, RX+ / TX+ Pin
3	RX- / TX-	COM Connector, RX- / TX- Pin
4	---	---
5	---	---
6	---	---
7	---	---
8	---	---
9	---	---

Table 4: Pinout COM9 – COM10 connector (RS485)

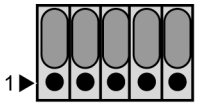
3.4 COM9 Mode Jumpers – J6 – J10

Jumper	RS232	RS422/485
J6	Pin 1-2	Pin 2-3
J7	Pin 1-2	Pin 2-3
J8	Pin 1-2	Pin 2-3
J9	Pin 1-2	Pin 2-3
J10	Pin 1-2	Pin 2-3

Table 5: Jumper settings for COM9 mode



RS232 mode enabled

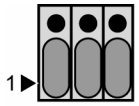


RS422/485 mode enabled

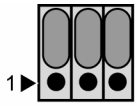
3.5 COM9 RS422/485 Termination Resistors – J11 – J13

Jumper	Disable	Enable
J11	Pin 1-2	Pin 2-3
J12	Pin 1-2	Pin 2-3
J13	Pin 1-2	Pin 2-3

Table 6: Jumper settings for COM9 termination resistors



termination resistor disabled

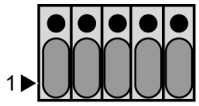


termination resistor enabled

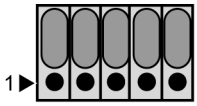
3.6 COM10 Mode Jumpers – J14 – J18

Jumper	RS232	RS422/485
J14	Pin 1-2	Pin 2-3
J15	Pin 1-2	Pin 2-3
J16	Pin 1-2	Pin 2-3
J17	Pin 1-2	Pin 2-3
J18	Pin 1-2	Pin 2-3

Table 7: Jumper settings for COM10 mode



RS232 mode enabled

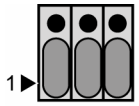


RS422/485 mode enabled

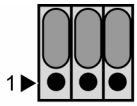
3.7 COM10 RS422/485 Termination Resistors – J19 – J21

Jumper	Disable	Enable
J19	Pin 1-2	Pin 2-3
J20	Pin 1-2	Pin 2-3
J21	Pin 1-2	Pin 2-3

Table 8: Jumper settings for COM10 termination resistors



termination resistor disabled

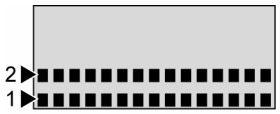


termination resistor enabled

3.8 M2M Expansion Slot Connector 1 – J1

Pin	Name	Function
1	VCC	5 VDC Power Input
2	GND	Ground
3	Not Connected	---
4	Not Connected	---
5	COM5_1	COM5 Serial Port, DCD pin (5 V TTL)
6	COM5_6	COM5 Serial Port, DSR pin (5 V TTL)
7	COM5_2	COM5 Serial Port, RXD pin (5 V TTL)
8	COM5_7	COM5 Serial Port, RTS pin (5 V TTL)
9	COM5_3	COM5 Serial Port, TXD pin (5 V TTL)
10	COM5_8	COM5 Serial Port, CTS pin (5 V TTL)
11	COM5_4	COM5 Serial Port, DTR pin (5 V TTL)
12	COM5_9	COM5 Serial Port, RI pin (5 V TTL)
13	COM6_1	COM6 Serial Port, DCD pin (5 V TTL)
14	COM6_6	COM6 Serial Port, DSR pin (5 V TTL)
15	COM6_2	COM6 Serial Port, RXD pin (5 V TTL)
16	COM6_7	COM6 Serial Port, RTS pin (5 V TTL)
17	COM6_3	COM6 Serial Port, TXD pin (5 V TTL)
18	COM6_8	COM6 Serial Port, CTS pin (5 V TTL)
19	COM6_4	COM6 Serial Port, DTR pin (5 V TTL)
20	COM6_9	COM6 Serial Port, RI pin (5 V TTL)
21	COM7_1	COM7 Serial Port, DCD pin (5 V TTL)
22	COM7_6	COM7 Serial Port, DSR pin (5 V TTL)
223	COM7_2	COM7 Serial Port, RXD pin (5 V TTL)
24	COM7_7	COM7 Serial Port, RTS pin (5 V TTL)
25	COM7_3	COM7 Serial Port, TXD pin (5 V TTL)
26	COM7_8	COM7 Serial Port, CTS pin (5 V TTL)
27	COM7_4	COM7 Serial Port, DTR pin (5 V TTL)
28	COM7_9	COM7 Serial Port, RI pin (5 V TTL)
29	VCC	5 VDC Power Input
30	GND	Ground

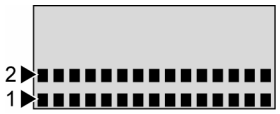
Table 9: Pinout M2M expansion slot connector 1



3.9 M2M Expansion Slot Connector 2 – J2

Pin	Name	Function
1	Not Connected	---
2	GND	Ground
3	IDE1 LED	IDE1 LED
4	IDE2 LED	IDE2 LED
5	COM8_1	COM8 Serial Port, DCD pin (5 V TTL)
6	COM8_6	COM8 Serial Port, DSR pin (5 V TTL)
7	COM8_2	COM8 Serial Port, RXD pin (5 V TTL)
8	COM8_7	COM8 Serial Port, RTS pin (5 V TTL)
9	COM8_3	COM8 Serial Port, TXD pin (5 V TTL)
10	COM8_8	COM8 Serial Port, CTS pin (5 V TTL)
11	COM8_4	COM8 Serial Port, DTR pin (5 V TTL)
12	COM8_9	COM8 Serial Port, RI pin (5 V TTL)
13	COM9_1	COM9 Serial Port, DCD pin (5 V TTL)
14	COM9_6	COM9 Serial Port, DSR pin (5 V TTL)
15	COM9_2	COM9 Serial Port, RXD pin (5 V TTL)
16	COM9_7	COM9 Serial Port, RTS pin (5 V TTL)
17	COM9_3	COM9 Serial Port, TXD pin (5 V TTL)
18	COM9_8	COM9 Serial Port, CTS pin (5 V TTL)
19	COM9_4	COM9 Serial Port, DTR pin (5 V TTL)
20	COM9_9	COM9 Serial Port, RI pin (5 V TTL)
21	COM10_1	COM10 Serial Port, DCD pin (5 V TTL)
22	COM10_6	COM10 Serial Port, DSR pin (5 V TTL)
223	COM10_2	COM10 Serial Port, RXD pin (5 V TTL)
24	COM10_7	COM10 Serial Port, RTS pin (5 V TTL)
25	COM10_3	COM10 Serial Port, TXD pin (5 V TTL)
26	COM10_8	COM10 Serial Port, CTS pin (5 V TTL)
27	COM10_4	COM10 Serial Port, DTR pin (5 V TTL)
28	COM10_9	COM10 Serial Port, RI pin (5 V TTL)
29	Not Connected	---
30	GND	Ground

Table 10: Pinout M2M expansion slot connector 2



4 MECHANICAL DIMENSIONS

All length dimensions are in millimeters and have a tolerance of 0.5 mm. The drillings are suitable for M3 screws.

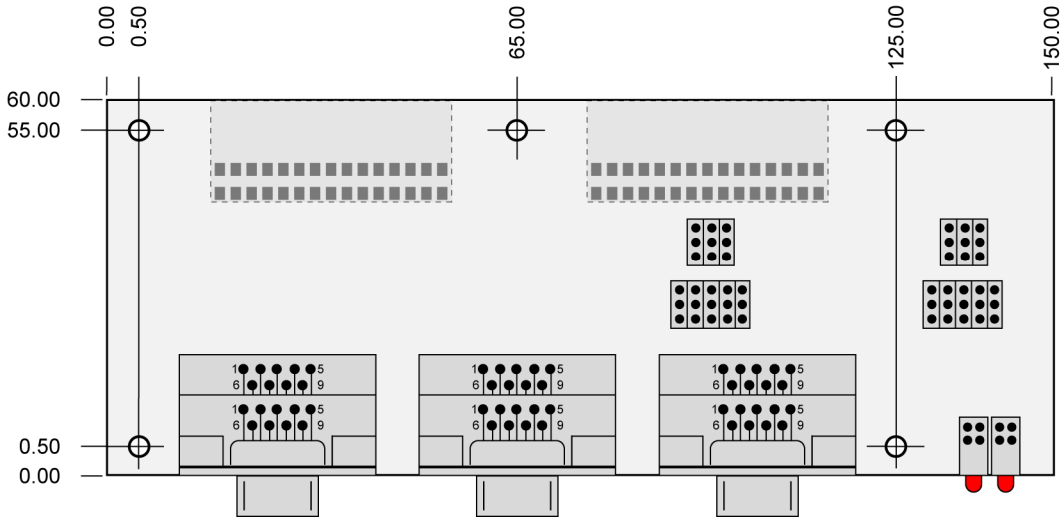


Figure 4: Mechanical dimensions of BB5/6COM

5 HELPFUL LITERATURE

- Com/PC1 hardware reference

CONTACT

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For actual information about the BB5/6COM visit us at
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DOCUMENT HISTORY

Revision	Date	Remarks	Name
1.0	2008-03-05	first version	WBU