

VScom Serial Device Servers: I need to use a custom speed on your NetCom Plus, can I do it?

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The serial ports on the NetCom Plus Serial Device Servers provide many more speed configurations as are offered for selection in typical programs. Especially when connecting very special hardware there is always the question, whether the requirements of the hardware are supported by the serial ports.

This FAQ informs which bitrates are technically possible. To get your answer quick just use the new [Online Speed Calculator](#) for VScom products. And also check [How to configure the NetCom for my baudrate? It is not available in the Device Manager](#) for instructions to use the speed in Windows applications.

For checking possible bitrates there are two formulas to calculate the bitrates, which can be configured on serial ports. One formular is for the NetCom Plus with one and two serial ports, and the second is for the NetCom Plus with four or more serial ports.

Note: A technically possible bitrate does not ensure proper communication. For example high bitrates in RS232 mode are generally problematic.

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NetCom Plus 111, 113, 123 WLAN, 211 and 213:

Speed = (48Mbps) / TCR / Divisor, divide from left to right.

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Speed

:

resulting bitrate (bit per seconds)

48Mbps

:

48,000,000 bits per second

TCR

:

signal sample count

Divisor

:

a 12 bit Integer number

TCR is either 13 or 16.

The Divisor always ranges from 1 to 16383.

You need to try parameter configurations to find your target bitrate as the result. A resulting bitrate is generally considered acceptable, if the deviation from the target bitrate is less than 3%.

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The minimum bitrate calculates as [TCR=16: Divisor=16383]: MinSpeed = 183.1 bps

The maximum bitrate calculates as [TCR=13: Divisor=1]: MaxSpeed = 3.69 Mbps

Also exactly possible are 1,000,000 bps (1 Mbps) and 31250 bps (MIDI). Every bitrate up to 150kbps is possible with less than 2% deviation. Higher custom bitrates up to MaxSpeed are still possible as defined by the formula.

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NetCom Plus 111 and 113 Mini:

Speed = (24Mbps) / Divisor.

Speed

:

resulting bitrate (bit per seconds)

96Mbps

:

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96,000,000 bits per second

Divisor

:

a 19 bit Integer number

The Divisor ranges from 16 to 131071.

You need to try Divisor values to find your target bitrate as the result. A resulting bitrate is generally considered acceptable, if the deviation from the target bitrate is less than 3%.

The minimum bitrate calculates as [Divisor=131071]: MinSpeed = 183.1 bps

The maximum bitrate calculates as [Divisor=16]: MaxSpeed = 1.5 Mbps

Also exactly possible are 1,000,000 bps (1 Mbps) and 31250 bps (MIDI). Every bitrate up to 960 kbps is possible with less than 2% deviation. Even higher custom bitrates are still possible as defined by the formula.

Also possible are 3 Mbps and 2 Mbps, these are specially defined values. They are not covered by the formula.

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NetCom Plus 411, 413, 411 POE, 413 POE, 811, 813, 811 POE, 813 POE and 811 DIO:

Speed = (96Mbps) / Divisor.

Speed

:

resulting bitrate (bit per seconds)

96Mbps

:

96,000,000 bits per second

Divisor

:

a 19 bit Integer number

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The Divisor ranges from 16 to 524284.

You need to try Divisor values to find your target bitrate as the result. A resulting bitrate is generally considered acceptable, if the deviation from the target bitrate is less than 3%.

The minimum bitrate calculates as [Divisor=524284]: MinSpeed = 183.1 bps

The maximum bitrate calculates as [Divisor=16]: MaxSpeed = 6 Mbps

Also exactly possible are 1,000,000 bps (1 Mbps) and 31250 bps (MIDI). Every bitrate up to 3.8 Mbps is possible with less than 2% deviation. Even higher custom bitrates are still possible as defined by the formula.

Also possible are 12 Mbps and 8 Mbps, these are specially defined values. They are not covered by the formula.

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