How to link serial devices through RS-485 on VP-2000

Applies to:

Platform	*OS version*	*WinPAC/ViewPAC utility version*
WP-8x3x	*N/A*	*N/A*
WP-8x4x	*N/A*	*N/A*
VP-25W1	*All versions*	*All versions*
VP-23W1	*All versions*	*All versions*

N/A: Not applicable to this platform and OS.

The ViewPAC is equipped with one RS-485 COM port (COM2) which enables a transmission rate up to a maximum of 115.2K bps. The twisted-pair, multi-drop, RS-485 network can be used to link I-7000, M-7000, RU-87Pn, high profile I-87K modules and other serial devices.

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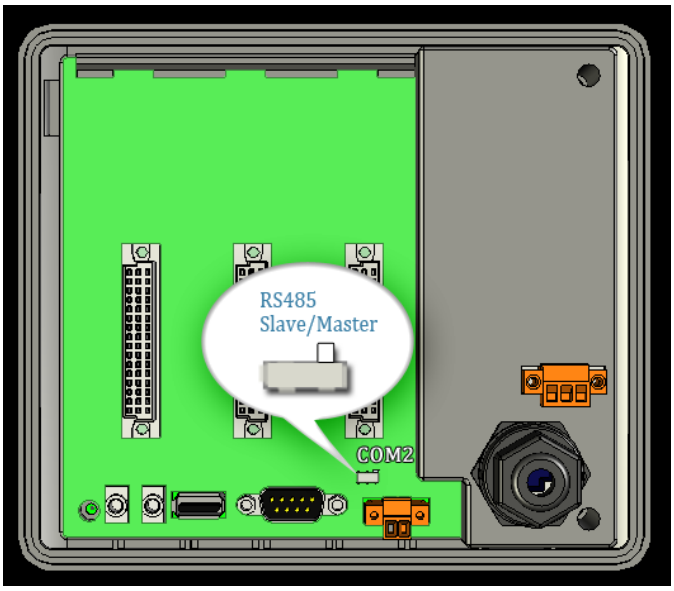
MASTER/SLAVES SETTINGS

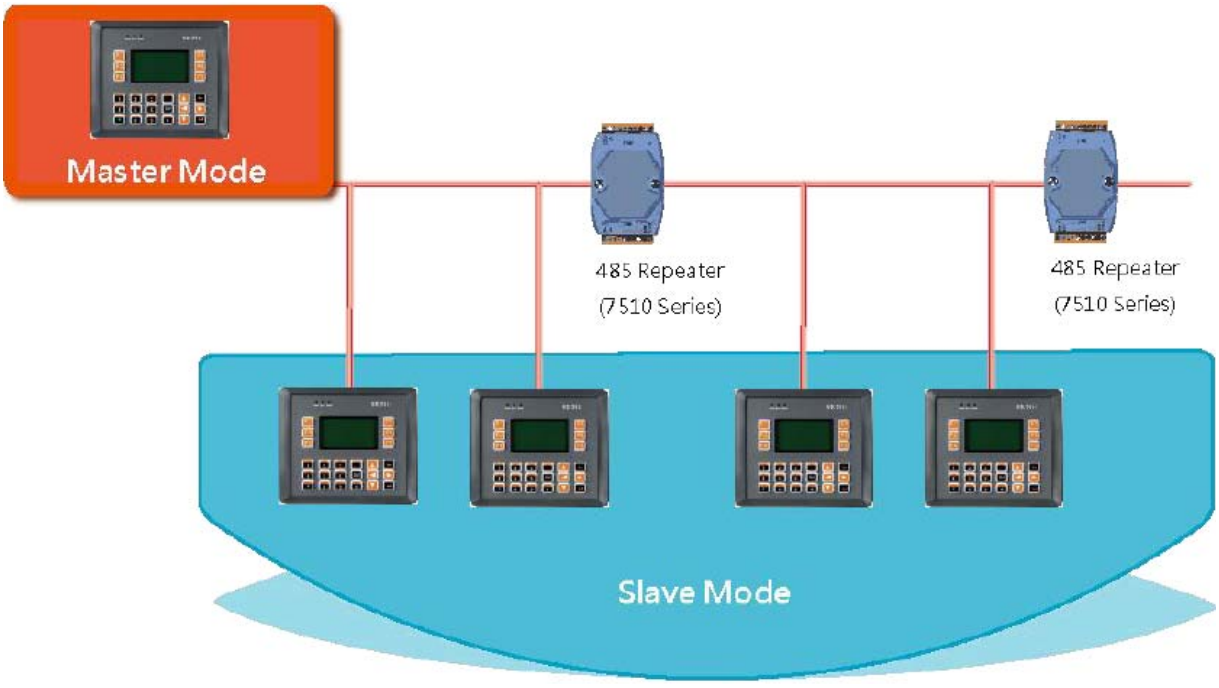
In master/slave applications, “Master” is the default configuration for ViewPAC.

Using ViewPAC as a Master (default):

When one of the ViewPAC devices is set as the master, then all the other devices on the same network must be set to slave mode.

Set a ViewPAC to Master mode by adjusting the jumpers on the power board for ViewPAC (enable the pull-high/pull-low resistors). Refer to the following figure:

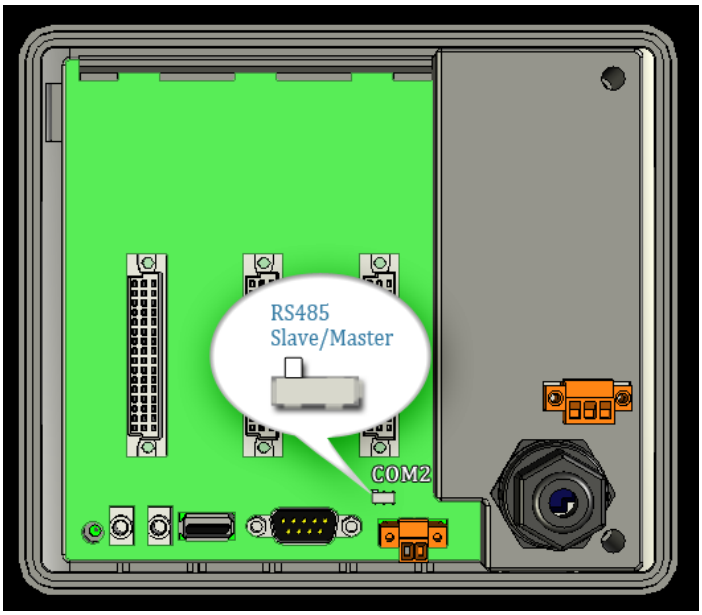


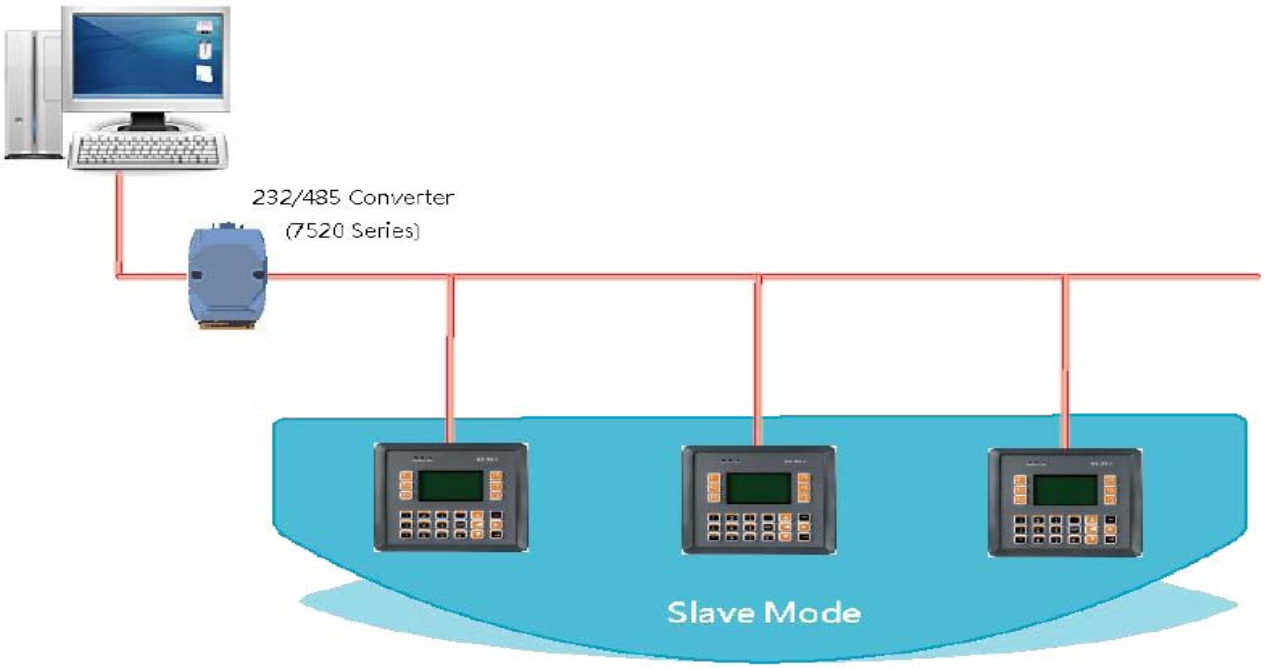


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Using ViewPAC as a Slave:

When one I-7520 series module (an RS-232/485 converter) is used or other device enables pull-high/pull-low resistors already over the RS-485 network, the ViewPAC and all the other devices on the network must be set to slave mode (to disable the pull-high/pull-low resistors). Refer to the following figure to set the jumpers to the slave mode. The jumpers are located on the power board of the ViewPAC





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Hardware Wiring

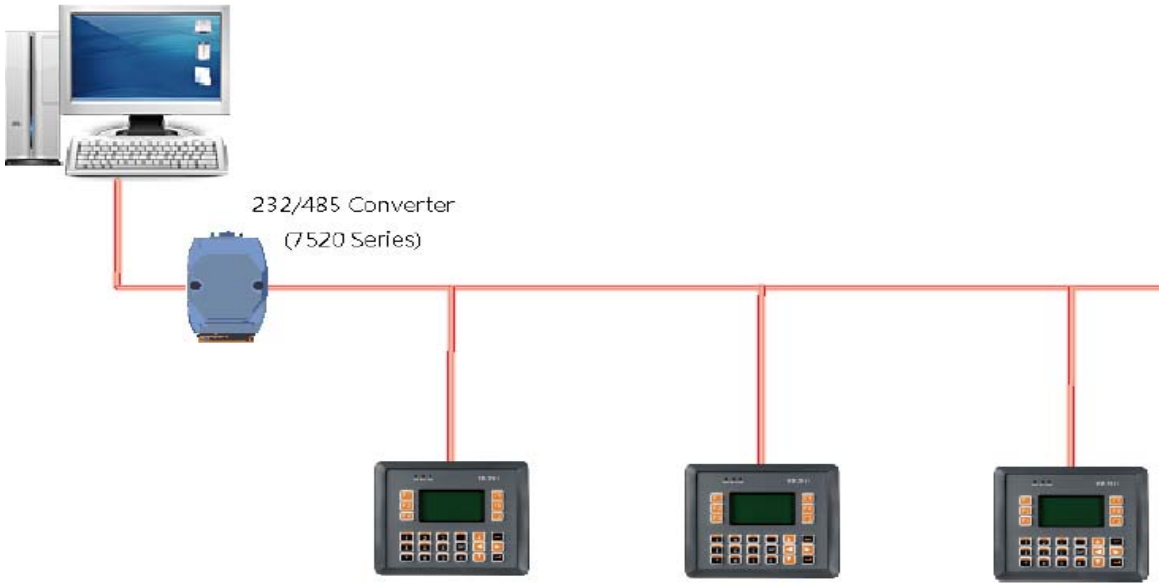
Connect the “Data+” (D+ to D+) and “Data-” (D- to D-) pins as per the example below.



Four kinds of RS-485 networks

1. Basic RS-485 Network.

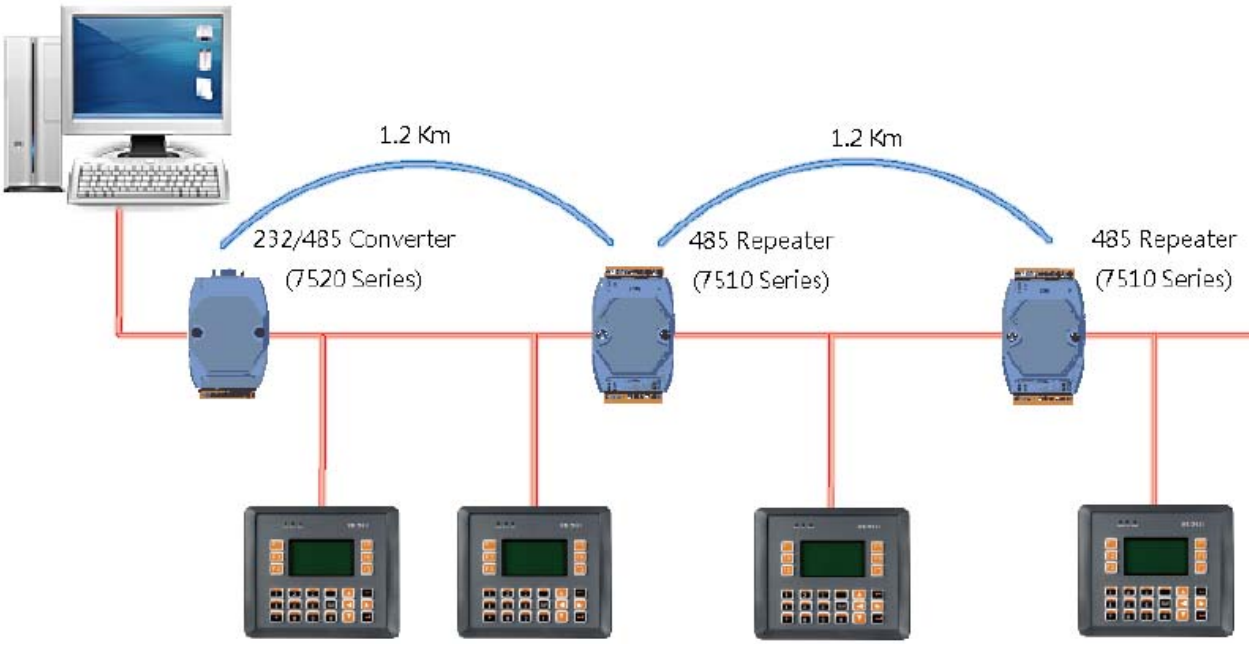
The basic components of an RS-485 network consist of a Master Controller (or a PC used as a host controller), and some RS-485 devices.



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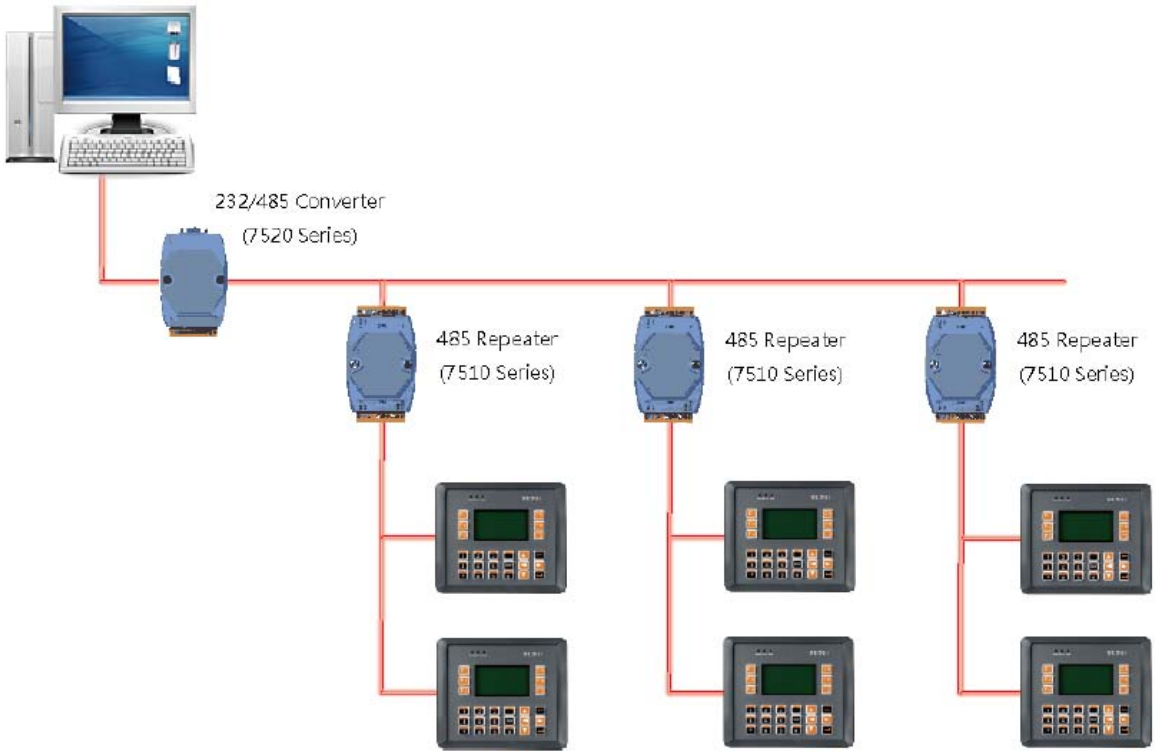
2. Daisy Chain RS-485 Network.

In the formation, all RS-485 devices are wired directly to the main network. If the total length is longer than 1.2 km, a repeater (7510 series) is needed to extend the network length.



3. Star Type RS-485 Network.

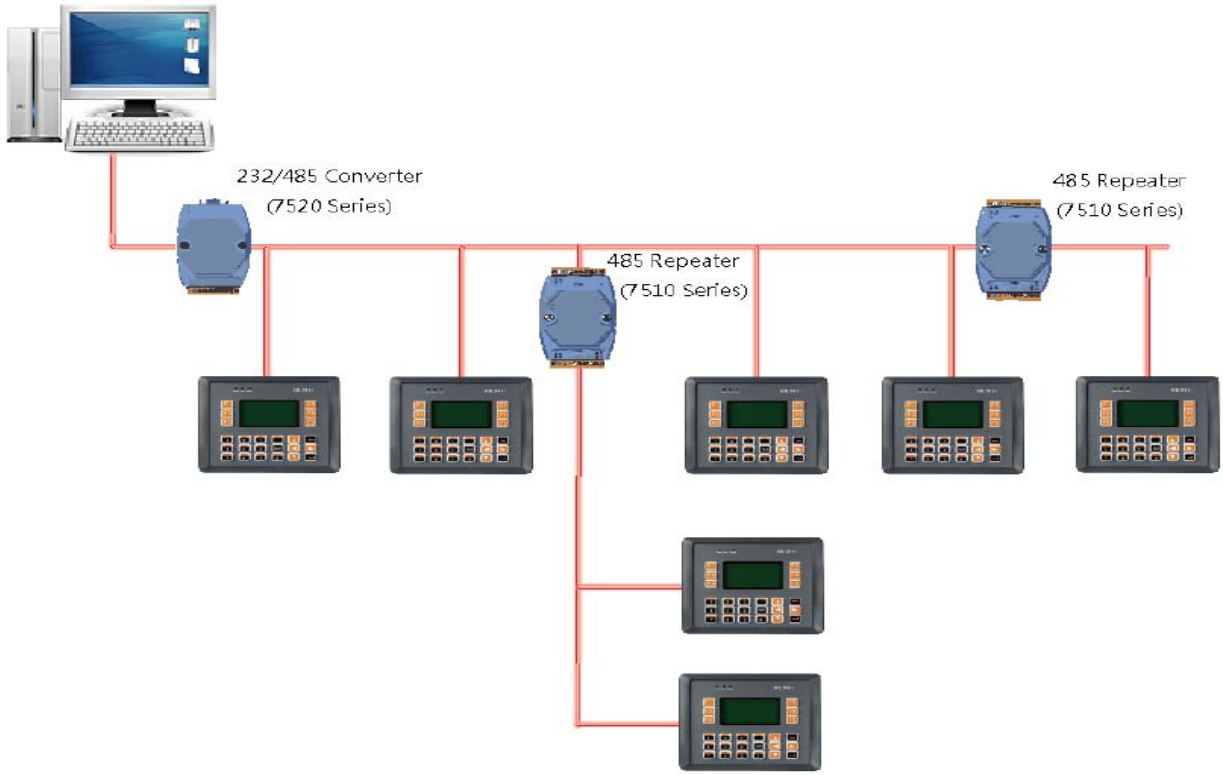
In the formation, there are branches along the main network. In this case, it is better to include a repeater to isolate or filter the noise that is made by the devices.



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4. Random RS-485 Network.

In the formation, there are branches along the main wire. In this case, it is better to include a repeater to isolate or filter the noise that is made by the devices



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Revision History

Revision	Date	Description
1.0.0	2010/02/12	Initial release

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