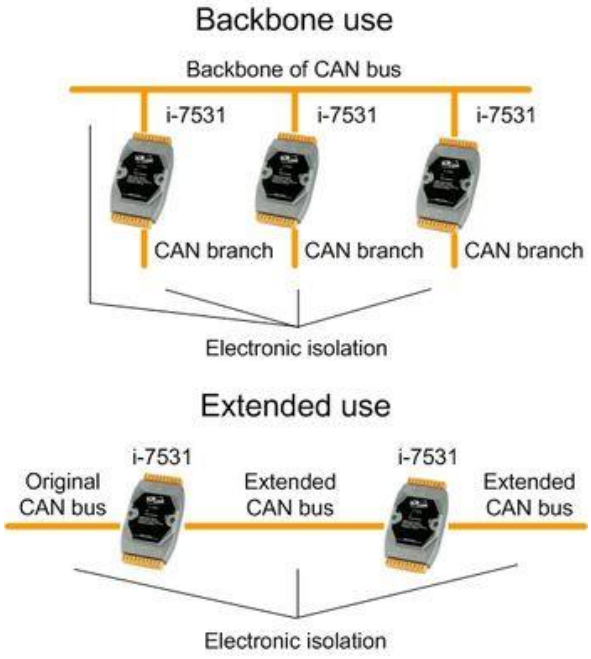
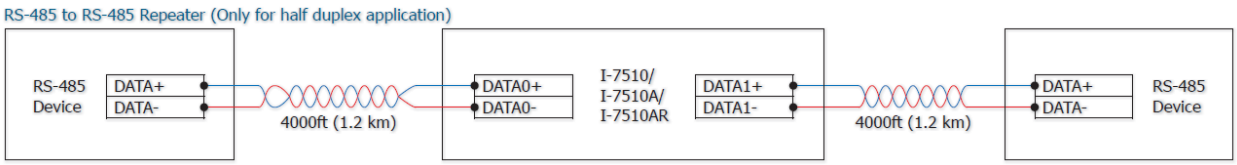
Improving CAN bus Networks using Repeaters

CAN bus is the physical bus which popular automation protocols; such as CANOpen, DeviceNet, and J1939; use to communicate to other networked devices. These protocols must adhere to the distance and speed limitations of the CAN bus properties. With all serial communication protocols, the signal must be readable. When the signal becomes unreadable, all device communications are affected.



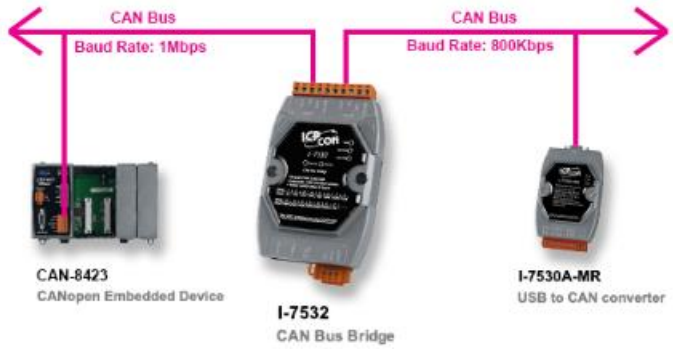
For these situations, a repeater can be used to read in weak communication and rebroadcast the clean signal to devices on the other side. Using I-7531, the CAN bus communication is read in and rebroadcast at the same baud rate. The I-7531 provides electronic isolation so that a n overvoltage or short will not damage devices on both sides. In addition, it can be used to allow for branching of CAN devices. These branches can help to shorten the overall length of the CAN Bus and allow for higher baud rates and more stable communication.

I-7531
https://www.icpdas-usa.com/i_7531.html



Also, since J1939, DeviceNET and CANOpen communicate over a CAN bus, the I-7531 can also be used for these type of networks.

Another limitation to CAN, is that all devices must communicate at the same baud rate. For some instances, in which the CAN signal is transmitted over a long distance or to a device with a fixed baud rate different than the rest of the network, this could be an issue.



For these applications, we provide a CAN Bridge. The I-7532 can read a CAN message and rebroadcast it at a different baud rate. It can be used to isolate devices as well as extend the CAN Bus. The I-7532 supports both CAN 2.0A and CAN 2.0B so, it also works for J1939, DeviceNet and CANOpen networks.

I-7532
https://www.icpdas-usa.com/i_7532.html

If you have any questions concerning any of our CAN Network devices, please contact us via email or phone. We are here to help.