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Category	■FAQ □SOP	**Related OS**	N/A
Abstract	ADAM-40XX and ADAM-41XX_The function of termination resistor		
Keyword	ADAM-40XX, ADAM-41XX, Noise, Termination resistor		
Related Product	ADAM-4024		

■ Problem Description:

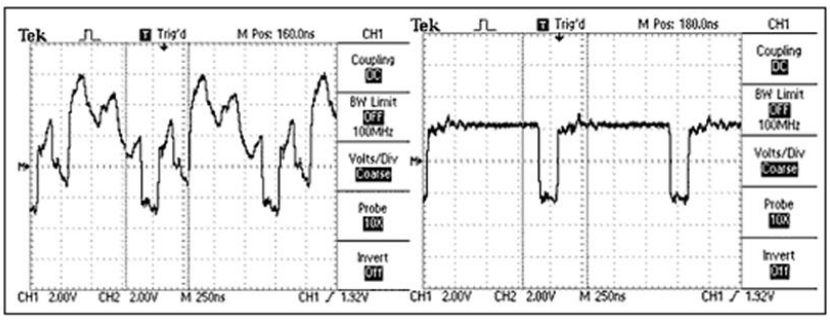
This documentation explains the function of termination resistor and how it works with ADAM-40XX and ADAM-41XX series.

■ Brief Solution - Step by Step:

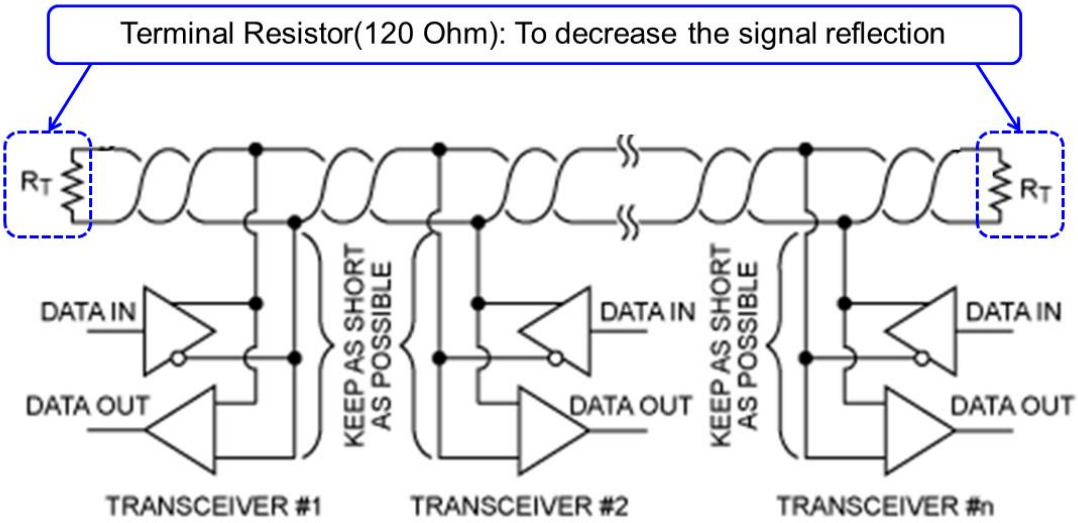
RS-485 Termination Resistor is installed at the far end for preventing the reflection.
When the environment of RS-485 data line have noise, the transmission distance is too long, the stations of RS-485 is too much or the transmission speed is high, we could add a pair of the termination resistor to make the signal more stable.
However, it will reduce the amplitude of the signal.

Left Waveform:
Energy reflected back to the source

Right Waveform:
Correctly terminated network:



Usally termination resistor will be installed **in pair**, the location of the termination resistor shoule be at the **first and the final RS-485 device** in the bus line.
Two pins of the termination resistor should cross the D+ and D- of the RS-485 device, and we would suggest the value of the resistance about 120Ω.
The actual value may depens on the length of the signal line and the wiring.


Terminal Resistor(120 Ohm): To decrease the signal reflection
RT
RT
DATA IN
DATA OUT
KEEP AS SHORT AS POSSIBLE
DATA IN
DATA OUT
KEEP AS SHORT AS POSSIBLE
DATA IN
DATA OUT
TRANSCEIVER #1
TRANSCEIVER #2
TRANSCEIVER #n

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