

## Application Note

# Summary: IEEE 1394 cable wiring

(According to IEEE Std 1394TM-1995 and 1394bTM-2002)

## Scope of this document

This document shows cable wiring for:

[IEEE 1394a](#) on page 3

[IEEE 1394b](#) on page 4

[IEEE 1394 i.LINKTM](#) on page 5

[IEEE 1394 legacy \(9-pin to 6-pin\)](#) on page 6

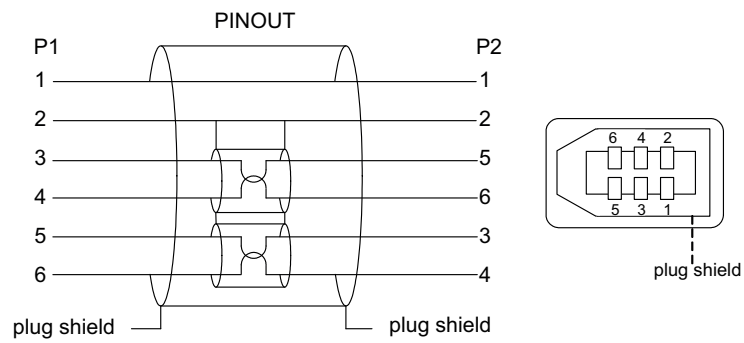
[IEEE 1394 \(6-pin to 4-pin\)](#) on page 7

[IEEE 1394 legacy \(9-pin to 4-pin\)](#) on page 8...

**Note** \_\_\_\_\_ Connectors are viewed as looking at the front plug face.

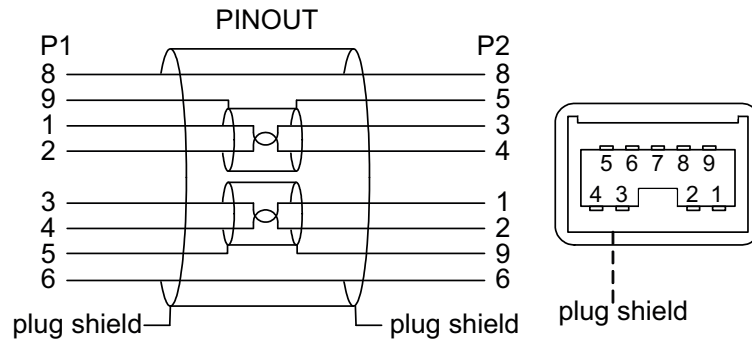


## IEEE 1394a



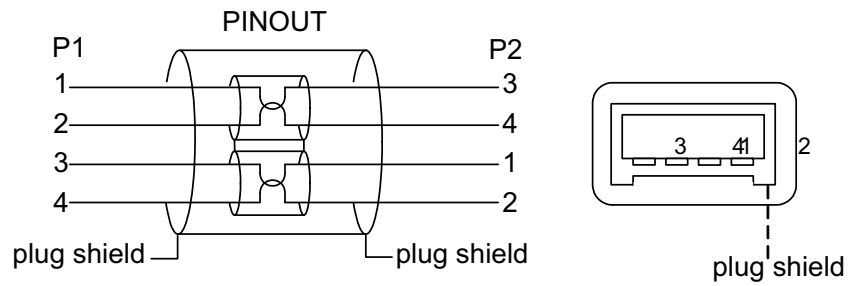
Plug 1	Signal name at plug 1 end	Plug 2
1	$V_p$ (Power Voltage)	1
2	$V_G$ (Power Ground)	2
3	TPB* (Twisted Pair B minus)	5
4	TPB (Twisted Pair B plus)	6
5	TPA* (Twisted Pair A minus)	3
6	TPA (Twisted Pair A plus)	4
Plug shield	Cable outer shield	Plug shield

## IEEE 1394b



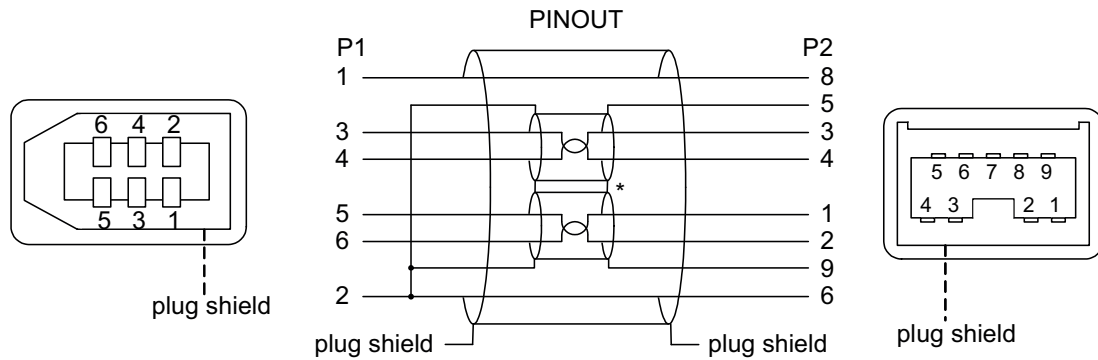
Plug 1	Signal name at plug 1 end	Plug 2
1	TPB* (Twisted Pair B minus)	3
2	TPB (Twisted Pair B plus)	4
3	TPA* (Twisted Pair A minus)	1
4	TPA (Twisted Pair A plus)	2
5	TPA (R) (Twisted Pair A ground reference)	9
6	V <sub>G</sub> (Power Ground)	6
7	No connection	7
8	V <sub>P</sub> (Power Voltage)	8
9	TPB (R) (Twisted Pair B ground reference)	5
Plug shield	Cable outer shield	Plug shield

## IEEE 1394 i.LINK™



Plug 1	Signal name at plug 1 end	Plug 2
1	TPB* (Twisted Pair B minus)	3
2	TPB (Twisted Pair B plus)	4
3	TPA* (Twisted Pair A minus)	1
4	TPA (Twisted Pair A plus)	2
Plug shield	Cable outer shield	Plug shield

## IEEE 1394 legacy (9-pin to 6-pin)



### Note

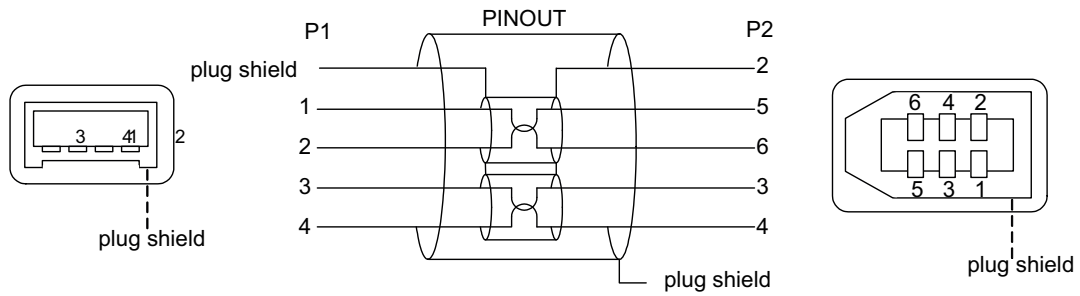
Twisted pair shields are only connected by using cable material according to IEEE Std 1394<sup>TM</sup>-1995.



If cable material according to IEEE Std 1394b<sup>TM</sup>-2002 is used, twisted pair shields are **not connected** inside the cable.

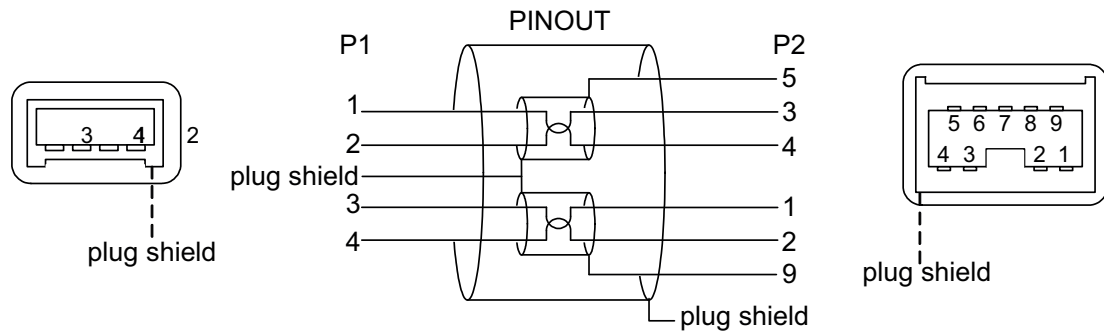
Plug 1	Signal name at plug 1 end	Plug 2
5	TPB* (Twisted Pair B minus)	1
6	TPB (Twisted Pair B plus)	2
3	TPA* (Twisted Pair A minus)	3
4	TPA (Twisted Pair A plus)	4
2	TPA (R) (Twisted Pair A ground reference)	5
2	V <sub>G</sub> (Power Ground)	6
	No connection	7
1	V <sub>P</sub> (Power Voltage)	8
2	TPB (R) (Twisted Pair B ground reference)	9
Plug shield	Cable outer shield	Plug shield

## IEEE 1394 (6-pin to 4-pin)



Plug 1	Signal name at plug 1 end	Plug 2
	$V_P$ (Power Voltage)	1
Plug shield	$V_G$ (Power Ground)	2
3	TPB* (Twisted Pair B minus)	3
4	TPB (Twisted Pair B plus)	4
1	TPA* (Twisted Pair A minus)	5
2	TPA (Twisted Pair A plus)	6
	Cable outer shield	Plug shield

## IEEE 1394 legacy (9-pin to 4-pin)



Plug 1	Signal name at plug 1 end	Plug 2
3	TPB* (Twisted Pair B minus)	1
4	TPB (Twisted Pair B plus)	2
1	TPA* (Twisted Pair A minus)	3
2	TPA (Twisted Pair A plus)	4
Plug shield	TPA (R) (Twisted Pair A ground reference)	5
	V <sub>G</sub> (Power Ground)	6
	No connection	7
	V <sub>P</sub> (Power Voltage)	8
Plug shield	TPB (R) (Twisted Pair B ground reference)	9
	Cable outer shield	Plug shield



For technical support, please contact [support@alliedvision.com](mailto:support@alliedvision.com).

For comments or suggestions regarding this document, please contact [info@alliedvision.com](mailto:info@alliedvision.com).

## Disclaimer

Due to continual product development, technical specifications may be subject to change without notice. All trademarks are acknowledged as property of their respective owners. We are convinced that this information is correct. We acknowledge that it may not be comprehensive. Nevertheless, Allied Vision Technologies ("Allied Vision") cannot be held responsible for any damage in equipment or subsequent loss of data or whatsoever in consequence of this application note.

Copyright © 2007

This document was prepared by the staff of Allied Vision and is the property of Allied Vision, which also owns the copyright therein. All rights conferred by the law of copyright and by virtue of international copyright conventions are reserved to Allied Vision. This document must not be copied, or reproduced in any material form, either wholly or in part, and its contents and any method or technique available therefrom must not be disclosed to any other person whatsoever without the prior written consent of Allied Vision.