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HUAWEI ENTERPRISE A BETTER WAY

Consideration on Y-Cable Application

Yan Zhuang, Huawei Technologies

Rui Hua, Huawei Technologies

enterprise.huawei.com

HUAWEI TECHNOLOGIES CO., LTD.

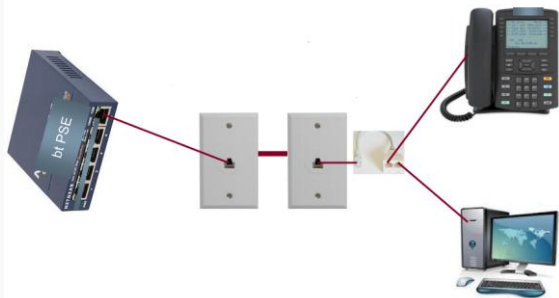


Supporters

Outlines

- **“Y-Cable” application in the market**
- **Will “Y-Cable” exist and increase in the 4-Pair High Power PoE market?**
- **Summary**

“Y-Cable” application in the market

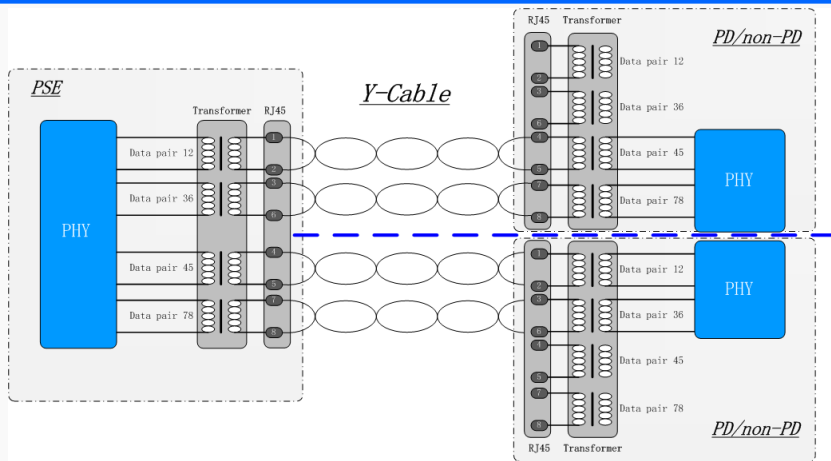


Typical “Y-Cable” application

- This is a typical “Y-Cable” application in the office environment people care about.
- It is used for **data sharing on a single port**. Hence, **both endpoints require data transmission**.

Concerns on Data transmission

- In order to provide data transmission, devices on both ends have to negotiate their link operational modes to set up a data link first .
- For “Y-cable”, the PHY on a single port should negotiate with two PHYs of different devices on the other end before setting up a data link simultaneously.



One PHY should negotiate with two PHYs endpoints simultaneously before setting up a data link.

“Y-Cable” application limits the data transmission

EXP1#: Connect one 1000BT port to two 100BT devices.

NO.	Tested Equipment	Deployment	Data link
1	Vendor 1 LSW GE Vendor 2 LSW FE	GE 1, 2, 3, 6 to FE 1, 2, 3, 6	Work
2	Vendor 1 LSW GE Vendor 2 LSW FE	GE 4, 5, 7, 8 to FE 4, 5, 7, 8	No
3	Vendor 1 LSW GE Vendor 2 LSW FE	GE 4, 5, 7, 8 to FE 1, 2, 3, 6	No
4	Vendor 1 LSW GE Vendor 2 LSW FE	GE 1, 2, 3, 6 to FE 4, 5, 7, 8	No



Test report:

Only the data link connected to the 1236-pairs of the GE port works, while the other link doesn't.

EXP2#: Connect one 1000BT port to another 1000BT port with half the pairs.

NO.	Tested Equipment	Deployment	Data link
5	LSW GE	GE 1, 2, 3, 6 to GE 1, 2, 3, 6	No
6	LSW GE	GE 4, 5, 7, 8 to GE 4, 5, 7, 8	No
7	LSW GE	GE 4, 5, 7, 8 to GE 1, 2, 3, 6	No
8	LSW GE	GE 1, 2, 3, 6 to GE 4, 5, 7, 8	No



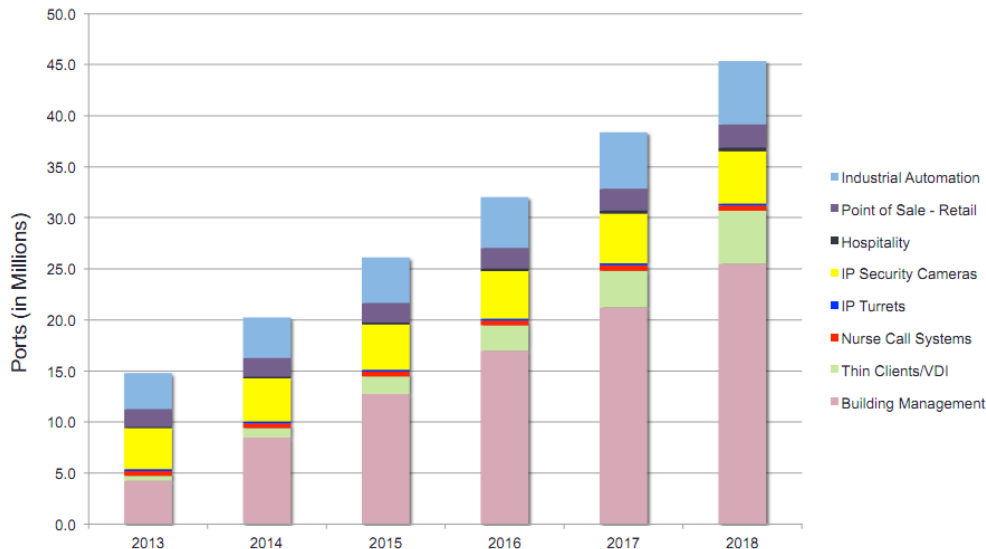
Test report:

The data link for GE transmission doesn't work when only connecting half the pairs.

Y-cable cannot support data link service for both 100BT endpoints.

Will “Y-Cable” application exist in the future 4 Pair market?

4-Pair High Power Market Potential



Concerns on potential high power market

This is a vision of potential 4-Pair High Power market in CFI, which is the reason why we are here.

The obstacles of “Y-Cable” for future high power market”:

- (1) Insufficient power supply, cannot go over 30W for each endpoint;
- (2) Limited data rate, cannot reach 100Mbps for both endpoints.

With these two reasons, we think “Y-cable” is difficult to expand in future high power market.

The specific “Y-cable” case may be a small part “Thin Clients” when there are areas to focus on, such as “Building Management” which have different requirements.

Summary

Although “Y-Cable”:

- Is intended for sharing data channel not for splitting power on a single port;
- Cannot satisfy the data rate requirement of high speed PDs (100BT or higher);
- A case in PoE, most of which don't use this kind of connection;
- Limited potential market.

Include this application into the new PoE standard?

Thank you!