
# 2P/4P Migration for AT

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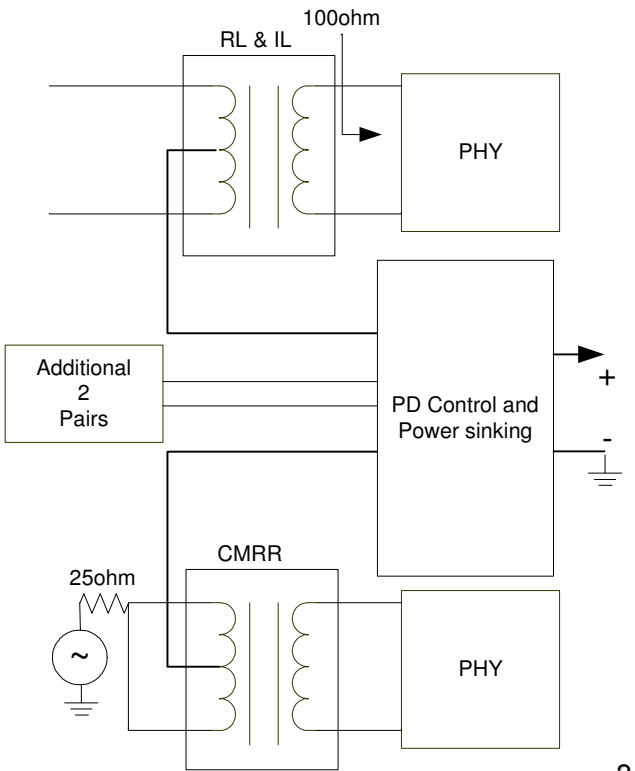
*IEEE®* 802.3at Presentation
Denver, CO
Mar 6th-9th 2006

# 4P Classification Drivers

- What should drive the classification method decision?
  - Cost & technical challenges
  - Transition ease & flexibility
  - Applications advantages



# 2x2P

- Cost & Technical  Challenges
  - PD structure use replicated elements – low design/test cost, risk
    - Signature resistance
    - Duplicated classification circuitry & power switch
  - Load splitting and/or power combining
    - Enables PDs with split power requirements (i.e. cameras with PTZ controls)
    - PDs with single power require pwr combining, even in 4P systems
- Transitional ease
  - More modular – Peak app power added as necessary on alternate pair
  - Enables AF/AT mix in PSE - can be built on current solution base
- Application advantage
  - Power Migration from 2P LP / MP devices easily enabled - 2nd PSE
  - Supports basic loads with high peak/transient power needs (on 2nd pair)

# 4P

- Costs & Technical challenges
  - Common 4P PD designs must support 2P .af
    - New design, more complex, still needs 2P state machine
    - Test time can't take advantage of duplicated structures
  - Power combining in PD required for common load
- Transitional ease
  - Does not enable existing AF PSE base
  - Require new PSEs for MP applications, which could otherwise be served by 2xAF PSEs
  - Cannot support split pairs
- Application advantage
  - Power migration from 2P LP or MP devices not incremental, needs new hadware
  - Can't support high peak power loads using AF PSEs

# Conclusion and Recommendations

- Conclusions
  - Easer migration for 2x2P from .af and current non-standard applications
  - 4P does not solve current problems, yet adds further costs
- Recommend a 2x2P for .at classification