

# Single vs. Dual PD Signatures

**David Abramson**

**Texas Instruments**

**IEEE 802.3bt Task Force**

**March 2015**

# What is a PD Signature?

- There are three “signatures” defined in Clause 33.
  - Detection signature
    - Resistance/capacitance of PD during detection
  - Classification signature
    - Current drawn by PD during classification
  - Maintain power signature (MPS)
    - Current waveform drawn by PD to stay powered

# What is Single Signature PD?

- A “single signature PD” shares the same detection signature, classification signature, and maintain power signature between both pair sets.
  - The detection resistance is shared between pair sets and has an effective resistance of 25K.
  - The classification current will be shared by the two pair sets (Total power = Class A = Class B).
  - MPS will be shared between pair sets (total current = MPS current).

# What is a Dual Signature PD?

- A “dual signature PD” has independent detection signatures, classification signatures, and maintain power signatures on each pair set.
  - There is a 25K detection resistance on each pair set.
  - There is independent classification currents on each pair set (total power = Class A + Class B).
  - MPS will be enforced on each pair set.