

# The Leader in Systematic Margin Analysis



# About CLKDA



- ❑ Leaders in Variance Analysis – market, technology, expertise
- ❑ FX is the first transistor model and simulator specifically engineered for digital variance and delay analysis
- ❑ FX Platform is a state of the art distributed static analysis engine
- ❑ Variance FX is the leading solution for derate generation
- ❑ In production at 28nm, 22nm, 20nm, 16nm, 14nm...

# Variance FX



- ❑ Complete solution for derate generation
  - 10,000's x faster than SPICE based solutions
  - Accurate to within 2% of SPICE
  - In production at the leading IC Houses world wide at the most advanced nodes
- ❑ Delivers complete derate capability
  - AOCV, POCV, LVF, constraint uncertainty
  - Combinational logic, sequential, complex macros
  - Process, voltage, temperature
- ❑ Broad capabilities
  - Generates database of all possible variances
  - Allows users to tailor derate structure
  - Incremental, distributed
  - Handles Gaussian and Non-Gaussian variance

# Do the Impossible



- ❑ End users expect variance characterization to take the same or less time than base characterization, using the same compute resources
  - Even though they know that using MC SPICE should by default take 1000s of times longer
  
- ❑ So we have to deliver:
  - A solution that matches MC SPICE (but orders of magnitude faster)
  - Is bullet proof, full featured, supports latest and greatest processes as soon as they are available, push-button, fully distributed, works on every network regardless of how insanely configured, automatically handles everyone's secret derate recipe, etc, etc
  - And self-justifies itself to management by simultaneously improving slack in all corners without any change in methodology or PD capability