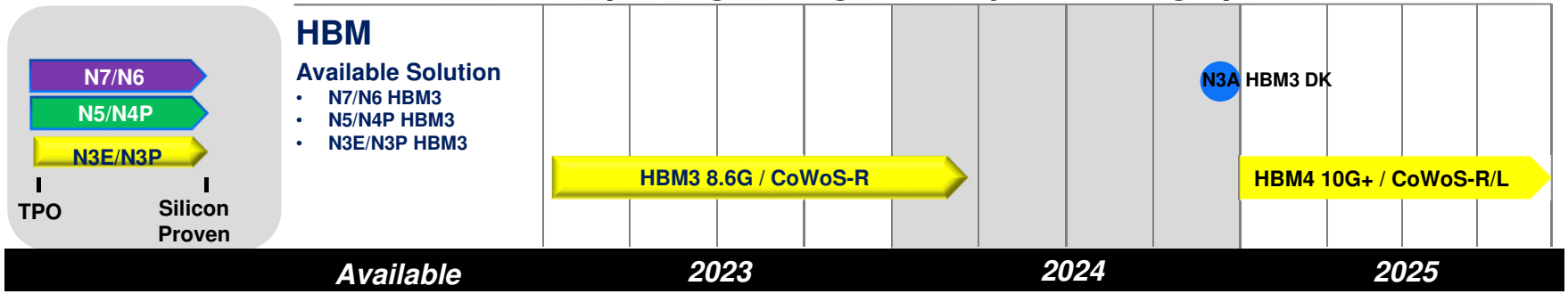
GUC's HBM IP and CoWoS Production Experience

- **GUC's HBM/CoWoS production experience**
  - 6 AI/HPC products in production, 6 AI/Networking products at design stage
- **The most power and area efficient HBM3 PHY IP**
  - In all nodes from 7nm to 3nm including N5A automotive
- **Best-in-class HBM3 Controller : ~90% bus utilization rate at random access**
- **GUC's proprietary interposer routing for best SI/PI/Xtalk, silicon-correlated on CoWoS-S/R**
- **In-mission mode signal performance and health monitoring by proteanTecs**
- **"Total Service Package", including sub-system design, SoC integration, interposer design, electrical and thermal simulations, package design, sub-system bring up**



GUC GLink-2.5D/UCIe IP Value Proposition & Roadmap

- **Leading AI & HPC customers adopted GLink 1.0/2.0/2.3**
- **GLink-2.5D (GUC multi-die interLink), the most optimized die to die connection solution for TSMC CoWoS and InFO, with 3-generation silicon proven**
  - Lowest Power : 0.3 pJ/bit ; Lowest Latency : 5ns end-to-end
  - Highest Beachfront efficiency (full-duplex) up to 2.5 Tbps/mm
- **Reliable Solution**
  - Raw BER < 1E-20, after CRC/Retry << 1FIT
  - DFT for separate dies testing and InFO_oS/CoWoS assembly testing
  - Redundant lanes embedded to achieve better yield
  - Performance monitoring agent (proteanTecs) for GLink signal quality monitor and repair
- **GLink add-on IP (AXI/CXS Bus Bridges, …) enable seamless system integration**
- **UCIe: N3P and N5 (LP) 32G /36G for AI/HPC/NW**
- **“Total Service Package” including sub-system built, SoC integration, interposer/InFO_RDL design, SI/PI/THM co-sim, package design, subsystem bring up**