# Ciena WaveServer AI Network Design – DC BLOX Proposal

DC BLOX — Sales Engineering Competition

# AJS Network Requirements

- **Goal:** Connect 4 sites to Marietta Data Center
- **Constraints:**
  - Limited fiber (1–2 lines per site)
  - Support current + 15% YoY traffic growth
  - Budget-sensitive, future-proof, resilient
- **Solution:** Ciena WaveServer AI with CMD aggregation

# Site Design Summary (Part 1)

**Microsoft DC**

- 4 Tbps, 2 fiber lines
- 5 Dual Modem Modules + CMD-10
- CMD aggregates 10x400G over 1 fiber pair
- Future plan: add second CMD-10 for scaling

**Dallas**

- 1.6 Tbps, 1 fiber line
- 2 Dual + 1 Single Modem Module + CMD-4
- CMD aggregates 3x400G over single fiber pair

# Site Design Summary (Part 2)

**Dobbins AFB**

- 1 Tbps, 1 fiber line
- 3 Single Modem Modules + CMD-4
- Optional Encryption Module for secure traffic

**Stone Mountain**

- 600 Gbps, 2 fiber lines
- 2 Single Modem Modules (no CMD needed now)
- Optional CMD-4 to consolidate future traffic

# Marietta Hub Design

- **3 WaveServer Ai chassis**
- CMD-10s for Microsoft and Dallas
- CMD-4s for Dobbins and Stone (future optional)
- 7.2+ Tbps aggregated

**Management Recommendation:**

- Enable MCP (Manage, Control, Plan) GUI
- Visual alerts, faster onboarding, lower error rates

# Summary Value Points

- **Fiber Optimization:** CMD modules aggregate up to 10 line ports on one fiber
- **Modular Growth:** Fill WaveServer slots over time
- **Secure-Ready:** Encryption modules available for Dobbins
- **Efficient Mgmt:** MCP simplifies monitoring, reduces churn
- **Future-Proof:** Design supports scalable growth for 3–5 years