

TTU Telecom Review Process for WiFi System Design & Installation

The following information and requirements apply to any WiFi design carried out for a Texas Tech University location:

Device Density & Capacity Planning

1. Design shall assume 2 WiFi devices per occupant.
2. Access point model shall be specified to provide best performance for the expected device density.
3. All classrooms shall be considered a high device density environment.

Coverage

1. All areas within the building shall be covered with WiFi service.
2. All outdoor areas with an expectation of stationary users (benches, tables, bus stops, artwork, etc.) shall be covered with WiFi service.
3. Mounting options for outdoor WiFi service shall be appropriate to the environment (e.g., bollards, poles, wall-mounts, etc.), and shall minimize signal attenuation due to landscaping.

Signal

1. 5GHz
2. -62 dB or greater in all areas
3. 2.4GHz will be available for backward compatibility but shall not be the basis of the design.
4. 20 MHz channel width (more channels are prioritized over more channel width).

Platform

1. Manufacturer: Aruba Networks
2. Access Point Series: Aruba Instant APs, 5xx Series or better
3. Management Model: Cloud managed
4. AP specification shall take device density and environmental application into consideration.
5. Indoor: Aruba Indoor IAP-5xx
6. Outdoor: Aruba Outdoor IAP-5xx

Deliverable

1. Documentation for the placement of access points meeting the above specified requirements, shown on architectural floor plans with clearly marked positions and orientation.
2. Documentation shall include all components required to accomplish the installation of the designed WiFi system.
3. Documentation shall provide colored heat maps specifying the expected signal strength.
4. Documentation shall specify which outdoor areas are designed with WiFi service coverage.
5. TTU Telecommunications will procure all WiFi system access points, mounts, and power injectors for contractor installation.

Review & Approval

1. Proposed WiFi design (deliverable) shall be provided to TTU Telecommunications prior to 100% DD for review and approval.
2. Upon any changes that affect AP placement, signal strength or other performance characteristics, the proposed design shall be updated and resubmitted to TTU Telecommunications for subsequent review and approval.
3. Any proposed deviations from these requirements shall be requested in writing to the Director of TTU Telecommunications Network Services for review and approval.