Brenham ISD Classroom
Network Equipment Upgrades

Campus Locations

Brenham Junior High
Brenham Early Childhood Learning Center
Pride Academy

Equipment Descriptions

There is no installation or configuration services needed for the following equipment.

Wireless Access Points (WAPs)

- 1.1. Multigigabit Ethernet Port
- 1.2. 1x1000/2.5G
- 1.3. 1x1000/2.5/5G
- 1.4. 802.11ax support
- 1.5. Coverage for both the 2.4Ghz and 5Ghz spectrum
- 1.6. Minimum 4 radios per access point
- 1.7. Ceiling and Wall Mounting
- 1.8. Power over Ethernet 802.3at
- 1.9. Support Maximal Ratio Combining (MRC) and Beamforming
- 1.10. Support for 4x4 or 8x8 MIMO or SU-MIMO and MU-MIMO
- 1.11. LACP (Link Aggregation) if WAP has multiple ports
- 1.12. WAPs to be Cisco Merkai Cloud Controller compatible
- 1.13. Support Mac Address radius authentication
- 1.14. Medium Density WAP is mainly used in the classroom to support up to 90 devices in a 900 sf room with 30 students. Example: Meraki MR46 or equivalent
- 1.15. High Density WAP used in gathering areas (Gym, Cafeteria, Auditorium) to support 300 devices per WAP. Example: Meraki MR56 or equivalent
- 1.16. If required 5 Year Cloud controller license

Example make/models are: medium density --Cisco Meraki MR 46
High density –Cisco MR56

Quantities
1. Medium Density AP - 90

2. High Density AP- 25

Access Level Network Switches
3.1 All switches should be 48 Port.
3.2 All switches should have 4x10gb uplinks.
3.3 All switches should have multi-gig ports.
3.4. All switches should be POE+ or POE++ with a minimum of 740w available.
3.5 All switches should have physical stacking cards and cables
3.6 Switches need to be cloud monitored through Cisco Meraki Cloud
3.7 All switches should include SFP+ models see below for quantities.
3.8 No extended warranty required
3.9 If required 5 Year license
3.10 Make and model: Example: Cisco C9200L-48PXG-4X
3.11 Interconnecting modules for stacking: Example: Cisco C9200L-STACK-KIT=

Quantities
1. 23 --48Port Multi-Gig POE+ or POE++ with 4x 10gb Uplinks 740w minimum power for POE with stacking cables and modules.

Uninterruptible Power Supply (UPS)
4.1 All UPS to have networking monitoring capabilities
4.2 All UPS must be 120v single phase
4.3 No extended warranty required
4.4 Example: APC SRT2200RMXLA-NC or Tripp Lite SMART2200RM2UN or equivalent

Quantities
1. 12- 2000 VA UPS with network management cards

Purchase contingent upon:

- Equipment will only be purchased if eRate funding is approved by USAC.
- Discounted Billing: Service providers must be willing to file FCC Form 474 (Service Provider Invoice) for discounted portions of equipment. Brenham ISD will only be invoiced for the remaining portion.