

Installation Standards

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Pole attachment standards

FIELD INSTALLATION, BACKBONE, AND CONFIGURATION STANDARDS

1. Backbone Cable Laying and Fixing (Feeder/Distribution)

- Tension and Bending Radius: Maintain a minimum bending radius of 20 times the cable diameter during installation to prevent internal fiber damage. Do not exceed the maximum pulling tension specified by the manufacturer.
- Pole Attachment and Sagging: Secure the backbone messenger wire tightly using tension clamps and suspension clamps. Maintain standard sag clearances to protect against environmental strain.
- Slack Management: Leave a minimum of 10 to 15 meters of slack cable at designated storage points (loops) every 500 meters and near all splice enclosures for future maintenance or emergency repair.
- Conduit and Underground Route: For underground backbone paths, ensure innerducts are cleaned before pulling. Use proper lubricants and install underground warning tapes 30cm above the conduit network.

2. Drop Cable Deployment & Premises Installation

- Span Limits & Clearance: Maximum span distance from the pole to the house must not exceed 50 meters. Maintain a vertical clearance of 4.5 meters over driveways.
- Drip Loop & Entry Hole: Form a proper drip loop before entry. Drill holes at a downward angle from the inside out and seal completely with silicone after routing.
- ONT/Modem Placement: Mount the Optical Network Terminal (ONT)/Modem in a centralized, well-ventilated area away from direct sunlight, moisture, and heat.

3. Client ONT/Modem Configuration Guidelines

- Accessing the Gateway: Connect to the ONT via LAN cable or default Wi-Fi. Access the management page using the official technician IP address (e.g., 192.168.1.1) and secure credentials.
- WAN Profile Setup: Configure the WAN interface using the correct provisioning protocol (PPPoE or DHCP) and assign the specific VLAN ID provided by the network operations center (NOC).
- Wi-Fi Optimization: Set up the customer's preferred Wi-Fi Name (SSID) and a strong WPA2/WPA3 password. Enable dual-band (2.4GHz for range, 5GHz for speed) with auto-channel selection to avoid local interference.
- Admin Security: Change the default admin login password of the modem to prevent unauthorized access by the client or third parties.

4. Signal Validation & Turn-over

- Optical Power Target: The acceptable optical power level at the customer premises must be strictly between -16 dBm and -24 dBm.
- Speed Test Verification: Run an official speed test using a wired LAN connection to ensure the client receives 100% of their subscribed bandwidth.
- Test Documentation: Capture a screenshot of both the OPM reading and the successful speed test page for final deployment clearance.

Site acceptance

SITE ACCEPTANCE & SERVICE TURN-OVER CRITERIA

1. Physical Workmanship Inspection

- Outside Plant (OSP) Integrity: Verify that all overhead drop cables or backbone fibers are securely clamped, tensioned properly, and clear of tree branches or hazards.
- Inside Plant (ISP) Neatness: Ensure all indoor fiber pathing, moldings, and conduits are mounted straight, cleanly clipped, and completely sealed at the building entry hole.
- Equipment Mounting: Confirm the ONT/Modem is placed firmly in its designated location with all power cables neatly managed and free from strain.

2. Technical Performance Acceptance

- Optical Signal Threshold: Re-verify that the final optical power meter (OPM) reading is within the optimal range of -16 dBm to -24 dBm.
- Ping and Latency Test: Perform a continuous ping test to the primary gateway to ensure stable connectivity with zero packet loss.
- Throughput Verification: Execute a speed test on a wired connection to confirm that actual upload and download speeds match the client's subscribed tier.

3. Customer Sign-off & Handover

- Demonstration of Service: Briefly demonstrate working internet connectivity to the client by opening standard web pages or streaming video on their device.
- Default Wi-Fi Orientation: Provide the client with their custom Wi-Fi Name (SSID) and security password, along with basic troubleshooting tips (e.g., power cycling).
- Acceptance Form Signing: Secure the customer's signature on the physical or digital Service Acceptance Form to formally close the service order.