

GENERAL GUIDELINES: RESIDENTIAL INSTALLATIONS



Choosing the correct fiber optic cable configuration is one of the most common difficulties in fiber installations. This white paper provides general guidelines for fiber type and strand count in residential installations.

The following recommendations are general guidelines only. At a minimum, most residential installations require two strands of fiber, although adding additional strands is highly recommended.

	0 - 1000 ft: MULTIMODE OM3 / OM4	1000 ft +: SINGLE MODE OS2
 EQUIPMENT TO DISPLAYS/ PROJECTORS	Minimum: 2 strands Preferred: 2 - 4 strands	Minimum: 2 strands Preferred: 2 - 4 strands
 NETWORK SWITCH TO NETWORK SWITCH	Minimum: 2 strands Preferred: 4 - 12 strands	Minimum: 2 strands Preferred: 4 - 12 strands
 NETWORK SWITCH TO ACCESS POINT	Minimum: 2 strands	Minimum: 2 strands
 A/V RACK TO A/V RACK	Minimum: 2 strands Preferred: 4 - 12 strands	Minimum: 2 strands Preferred: 4 - 12 strands
 SECURITY CAMERAS & MEDIA CONVERTERS	Minimum: 2 strands Preferred: 2 - 4 strands	Minimum: 2 strands Preferred: 2 - 4 strands
 SERVICE DEMARC OR SATELLITE DISH TO CABLE DISTRIBUTION	Minimum: 2 strands Multimode + 2 strands Single Mode	

Multimode or Single Mode Fiber?

Multimode fibers (OM3 or OM4) have a distance limitation of approximately 1,000 ft. Above this, single mode (OS2) should be considered. Devices may also specify fiber type.

Connector Type

The equipment in use determines connectors. LC or SC connectors are most common. Connectors must match fiber type, i.e. single mode connectors must be used with single mode fiber.



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