Structured Wiring for Optical Network Equipment in MDUs

Evolution of Structured Wiring at a Major Service Provider

For decades, Suttle has provided solutions featuring simple, easy installation that are conveniently bundled for service providers, builders and developers of single family (SFU) and multiple-dwelling units (MDU).

This case study illustrates an evolving solution to meet changing customer needs and shows how our products are designed not only for endurance, but also meet footprint limits and are scalable to future requirements. Suttle worked with a service provider in the North East to engage in a just-in-time delivery to meet construction requirements of multifamily units.

Challenge
Suttle was approached by a communications service provider in the northeast United States to develop a cabinet for the greenfield (new construction) MDU market to enable the deployment of single family unit optical network terminal architecture.

The cabinet would be placed in close proximity to the consolidated structured wiring cabinet (CSWC) for each living unit. It needed to house premise distribution equipment such as the ONT power supply, battery backup, and a router.

The cabinet would be installed by the builder/developer and the equipment would be installed inside the cabinet after the end user moved in and needed service. However, our customer’s technicians struggled to find space near the CSWC as the space for telecommunications equipment was often already occupied by other service providers.

Solutions
Three outcomes were required by the customer:

1. A solution that would reserve space for installation of service provider equipment.
2. A dedicated cabinet to organize premise distribution equipment. The cabinet needed to be UL compliant, which is the industry recognized standard designation for enclosures in a communications application.
3. Elimination of installers’ need to locate and transport multiple pieces of equipment to each installation.
A Solution Evolution

28” SOHO Access™ S-One Cabinet (Metal)
Suttle developed the SOHO media cabinet to house structured network equipment. This enclosure was to be installed between studs by the builder/developer during early construction. The cabinet size provided ample space for the premise distribution equipment.

UL 1863 Communications-Circuit Accessories

Backboard
An aluminum backboard that fits inside the cabinet was created to mount the ONT, OPSU, BBU and router equipment. After the customer’s integrator attached the equipment to the backboard, it was shipped to the field for technicians to place inside the media cabinet. This simplified their process reducing installation time and costs.

Just-in-Time Inventory
Initially the media cabinet with cover was shipped to the installation site in the same box. The cabinet would get installed soon after it arrived while the cover had to wait until the drywall was up and by that time the cover was often damaged or lost. A cardboard shield was included to protect the inside cabinet from construction site dust and painting activity. A popular shipment process in stages (just-in-time) was established to ship the cover at a later, more convenient date.

SOHO Access™ 14” CPE Wire Cabinet (Metal)
Suttle developed the SOHO media cabinet to house structured network equipment. This enclosure was to be installed between studs by the builder/developer during early construction. The cabinet size provided ample space for the premise distribution equipment.

UL 1863 Communications-Circuit Accessories

SOHO Access™ Depth Extender (Metal)
Suttle developed the SOHO media cabinet to house structured network equipment. This enclosure was to be installed between studs by the builder/developer during early construction. The cabinet size provided ample space for the premise distribution equipment.

SOHO Access™ Enclosures (Metal)
The demand for triple play services created the need for additional enclosure sizes to house the different configurations of CPE equipment while complementing the S-ONE cabinet. The SOHO Access enclosure was created to be a media panel for fast, flexible, and clean distribution management solution for voice, data, video, and audio connections needed to support triple play services.

UL 985 Household Fire Warning System Units
UL 1023 Household Burglar-Alarm System Units

MediaMAX™ Panels (Plastic)
As the use of wireless devices became more popular, Suttle saw the need to replace standard metal enclosures with wireless device friendly solutions. MediaMAX panels’ plastic components minimize wireless interference. MediaMAX Panels are designed to meet today’s needs for enhanced CAT6 and wireless connectivity as well as house ONT and wireless gateways. Housing of actives and premise equipment is secure as the MediaMAX panels improved ventilation and airflow allows for superior heat dissipation.

UL 2416, Issue 2, Section 12.5, Communications Racks, Cabinets and Enclosures

SOHO Access & MediaMAX Panels DO NOT comply with (UL 1479) and should not be installed within a fire rated wall.