Converged MDU/MTU Solutions White Paper

OnSite™ OS-10 Multi-Service over SDH Provisioning

PATTON Electronics Co.

Network Access & Connectivity

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Printed in the USA.

Building Connectivity Using the Patton OnSite Series

Over the years, the number of buildings with fiber connectivity is increasing at a very fast pace. Fiber-to-the building opens new and exciting possibilities for carriers and services providers that wish to address the growing multi-tenant unit (MTU) market.

With the basic fiber optic infrastructure in place, you can use the Patton OnSite Series of µMSPP platforms to provide reliable connectivity and profitable delivery of basic telecommunications and broadband services to business and residential building tenants.

The ultra-compact design and superior cost-performance of the Patton OnSite Series allows easy and cost-effective deployment in space-constrained building environments, while enabling service diversity and flexible expansion options.

Intra-building connectivity

Depending on customer needs and available fiber, you can place the OnSite in strategic locations within a building, as shown in Figure 1.

- **Option 1:** The OnSite is located directly on the floor where the customer resides. This option provides direct fiber access to the customer from the carrier or service providers' point-of-presence (PO) or central office (CO). Customer E1 or Ethernet traffic is directly connected to the OS-10 for reliable transport over the dedicated fiber optic SDH link. Government and financial institutions with strict security requirements would benefit from this configuration. For this application, the OS1052 platform meets the required port density and price point for cost- effective deployment of E1 and Ethernet services over high-performance SDH links.
- **Option 2:** A single OnSite serves as an in-building POP and provides access to the entire building. Customer traffic from each floor connects to the OS-10 through the building riser using intra-building copper cabling. For this application, the modular OS1052 and OS1063 platforms are ideal for access to up to 63 E1 or 18 Ethernet client ports.

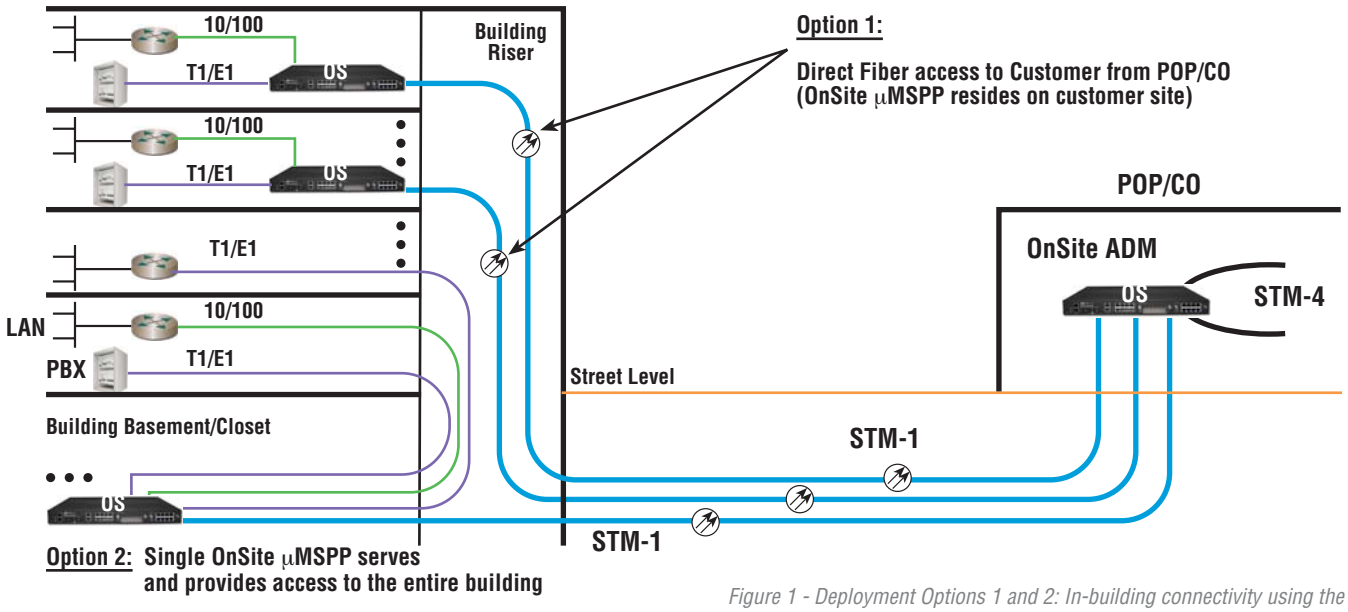

Figure 1 - Deployment Options 1 and 2: In-building connectivity using the OnSite

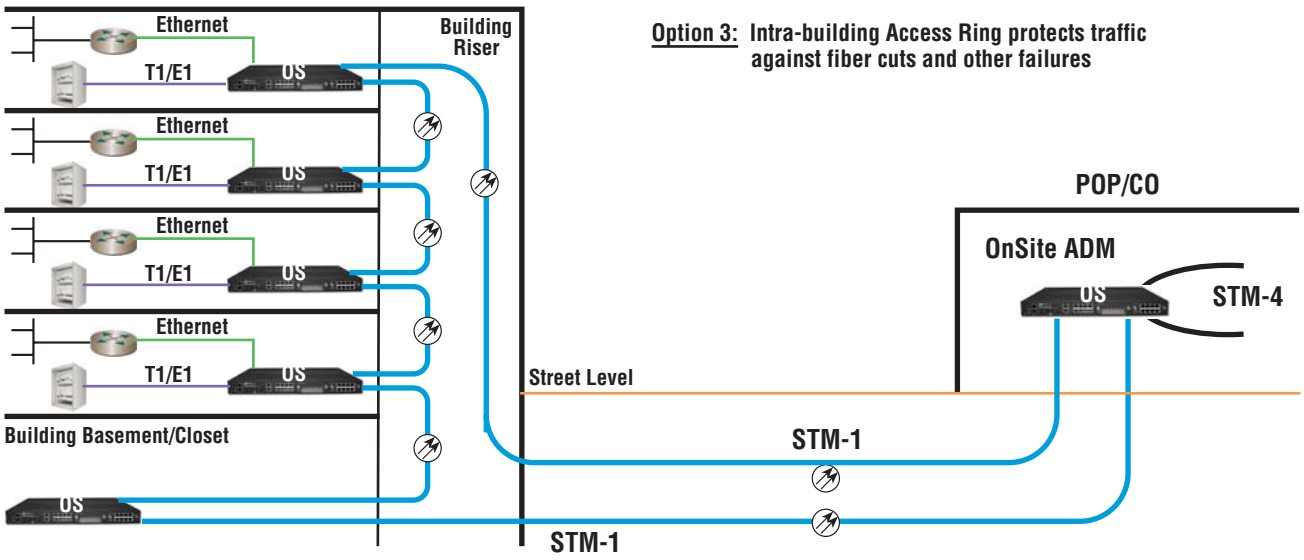

Figure 2 - Deployment Option 3: Intra-building ring using the OnSite

- **Option 3:** All OnSites within the building are interconnected to form an intra-building ring, as shown in Figure 2. For maximum reliability and protection, you can connect the OnSite ring elements using fiber routes along different riser conduits, if the building structure permits. All platforms in the Patton OnSite Series support interconnection using ring, linear and point-to-point topologies.

Inter-building connectivity

The OnSite also allows the interconnection of multiple buildings into a ring access network. For buildings where fiber access is not yet available, it is still possible to interconnect the OnSite elements in a ring topology.

Figure 3 shows an example where one of the buildings without fiber access is connected to the OnSite ring with a wireless link using SDH radio.

You can use an OnSite ring, linear or point-to-point network to interconnect buildings in the following applications:

- Central business districts
- Business parks
- Campus networks

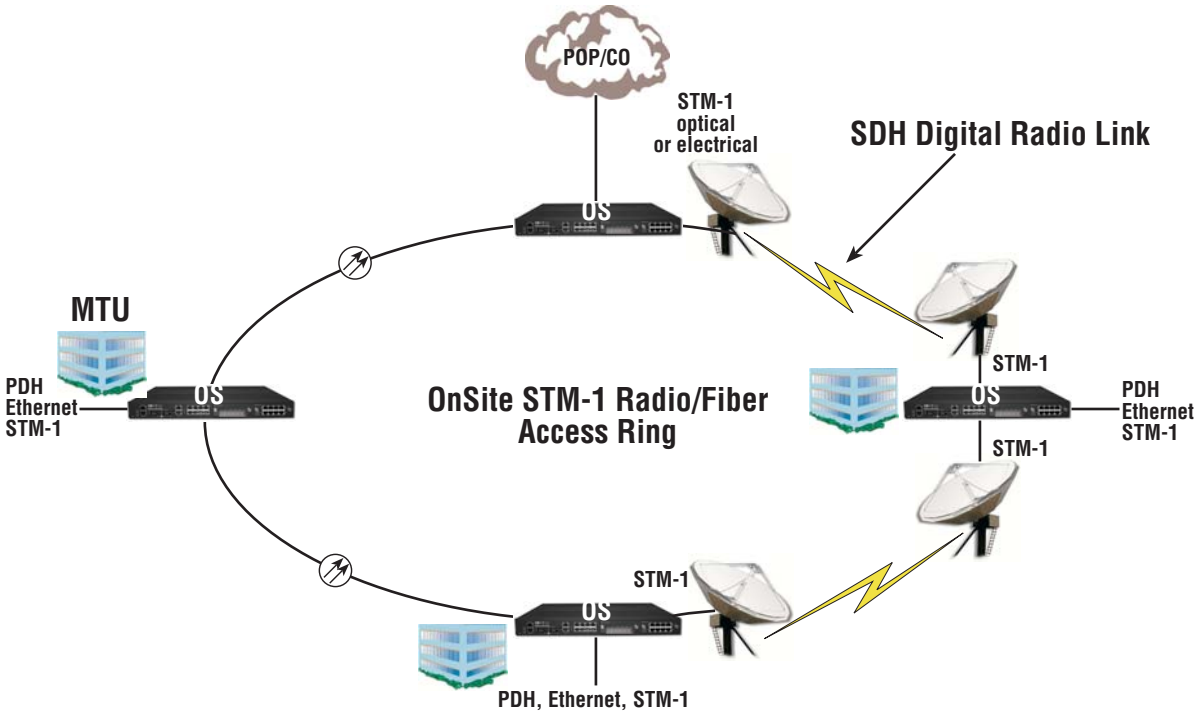

Figure 3 - Inter-building Interconnection Using the OnSite

OnSite Benefits for MTU Application

- Survivability
- Native Ethernet interfaces and connectivity
- Legacy TDM connectivity
- Secure SDH transport with packet intelligence

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Document 07MD-OSMULTI-TENANT-WP