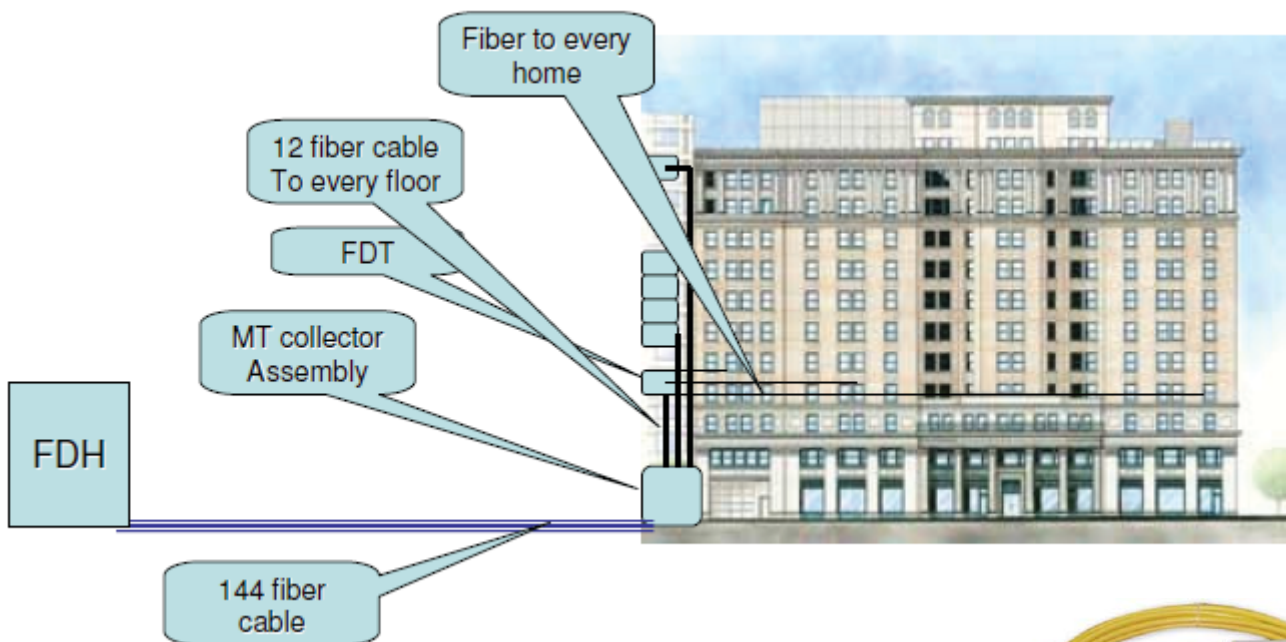


FTTx Project Reference

Case 1: Verizon - USA Fiber Management Systems

Opterna edged out historically strong companies in the telecom business the order for MT Collector Assembly and FDT (Fiber Distribution Terminal) are installed in multi Dwelling Units for FTTx Solutions.

- MT Collector Assembly
- Fiber Distribution Terminal
- Integrated Fiber Distribution Terminal Plate Based Assembly for Enclosure-based Installations.
- Collector Plate for Enclosure-based Installations
- Integrated Collector Terminal Plate for Enclosure-based Installations



Building Access Terminal (MT Collector Assembly) :

- Compact Building Access terminal to distribute fibers to different floors of a building
- Used 12 fiber MT connector technology
- Supplied with 100 feet of cable (72 fiber)
- One MT collector assembly can serve up to 6# of FDTs of a medium rise MDU



FTTx Project Reference

Fiber Distribution Terminal (FDT) :

- Distribution of fibers within one floor of a building.
- Can distribute fibers up to 24 apartments.
- Uses compact MT connectors for its interconnections to the MT collector assembly.
- Complies to Telcordia GR-3123 and third party FOC qualified.
- Patented rotating slack storage mechanism.
- Patent pending Grommet Designs to prevent bug and water entry



Integrated Fiber Distribution Terminal Plate Based Assembly for Enclosure-based Installations :

- Designed for MDU applications
- Pipe and box compatible
- One or Two 12-fiber MT connector tails
- Supports 12 or 24 drops
- 50', 100', 200' and 350' tail lengths
- Supports upto 4.8mm diameter cable



FTTx Project Reference

Collector Plate for Enclosure-based Installations :

- Designed for MDU applications
- Six or twelve preterminated 12-fiber MT connections
- 50', 100', 200' and 350' tail lengths.
- Optimized design to securing to approved enclosures



Integrated Collector Terminal Plate for Enclosure-based Installations :

- Designed for low/mid rise MDU with limited space
- Innovative integration of VATS terminal and collector functions
- Supports 12 or 24 drops
- 50', 100', 200' and 350' tail lengths
- Supports upto 4.8mm diameter cables
- Optimized design to securing to approved enclosures

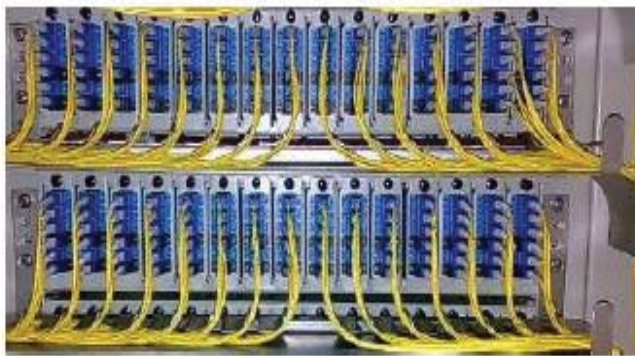
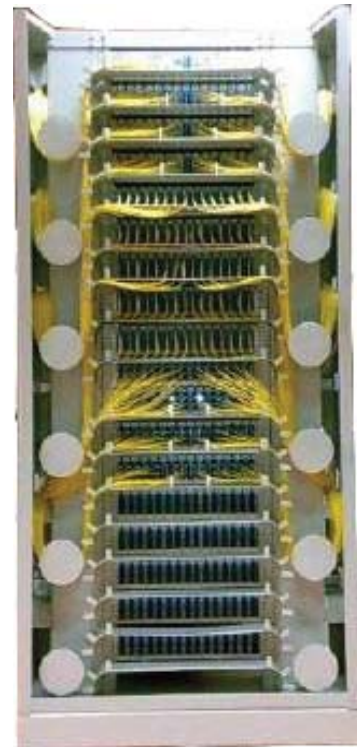


FTTx Project Reference

Case 2 : Telcel, Mexico

Opterna High Density Fiber Distribution Frame - (HD-FDF)

- Used in central office premises
- Easy distribution of fibers from equipments to the network through cross connect
- Includes high density rack and fiber routing systems
- Highly managed fiber routing enables up to 1890 ports density.

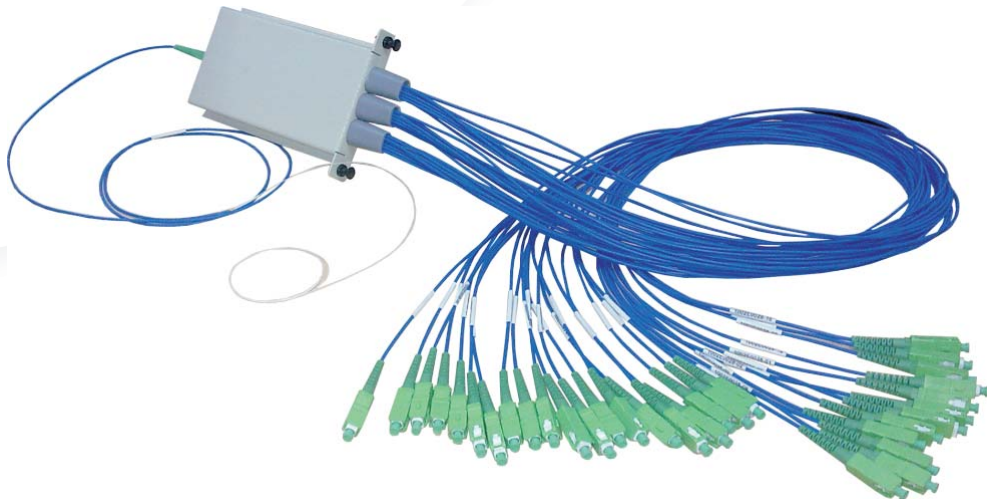


FTTx Project Reference

Case 3: France Telecom, France

TurnOpt Series FDH:

- Unique Single Door Design.
- Patent-pending $+180^{\circ}/-180^{\circ}$ Turning Frame design.
- Designed for plug-n-play installation in FTTx networks for outdoor applications.
- The hub houses splitters as well distribution assembly.
- Installed nearly 90 TurnOpt-FDH in France.
- SC/APC Distribution Panel, fully accessible from frontside.
- Splitter Chassis to house 18 splitter cassettes.
- Supports both Fiber to the Home (FTTH) networks and Point-to-Point Fiber Networks in one cabinet.
- Easy access to feeder and distribution cables.



FTTx Project Reference

Case 4: : Merge Optics, Germany – Active Cable Assembly

- Largest OEM to German Telecom in Germany
- Our Active & Passive Cable assemblies are tested & approved by Merge Optics.
- Various MT-MT & MT-MPO Connector Assemblies.



Case 5: : Zarlink Semi-Conductors, Sweden

MT-MT Cable Assemblies and Active Cables :

- Largest OEM to British telecom in England.
- Our Active & Passive products are tested & approved by Zarlink.
- Various MT-MT & Active cable assemblies.



FTTx Project Reference

Case 6: Nippon Telephone & Telegraph (NTT)

- Largest Telecom Provider in Japan
- Our Splitters & Custom design Cable assemblies are tested & approved by NTT.
- 1x4 & 1x8 Splitters in Modules.
- Custom designed cable Assembly.
- 4 FO & 8FO cable assemblies.
- 1x2, 1x4 & 1x8 Soft Bank Modules.

