



Azmoon-DLC ULC-1000AN MSAN

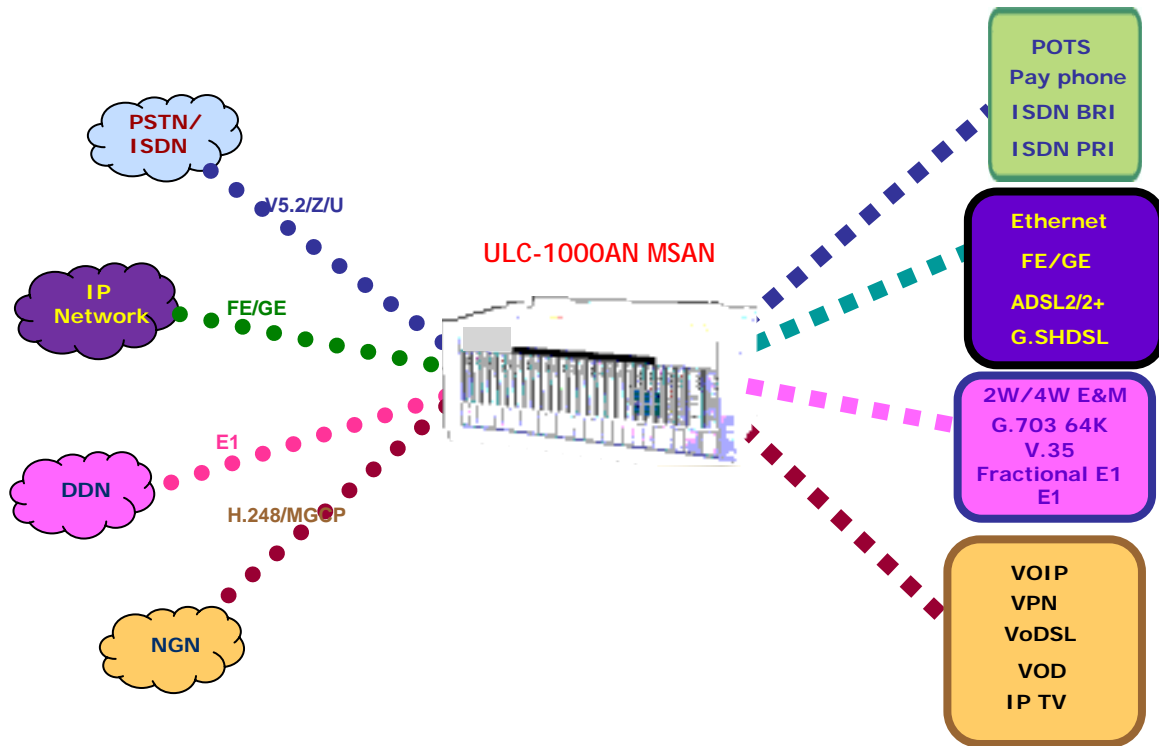
(Summary Introduction)

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Overview

ULC-1000AN MSAN (Multi-Service Access Network) System provides narrowband switch services, leased line services, broadband and VoIP services in a single platform.

This system is a carrier class multi-service access platform that bridges the gap between the existing TDM-based network and the next generation IP-based networks. The flexible architecture design has evolved to accommodate customers' increasing demand for high-speed video, data and voice (triple play) services.



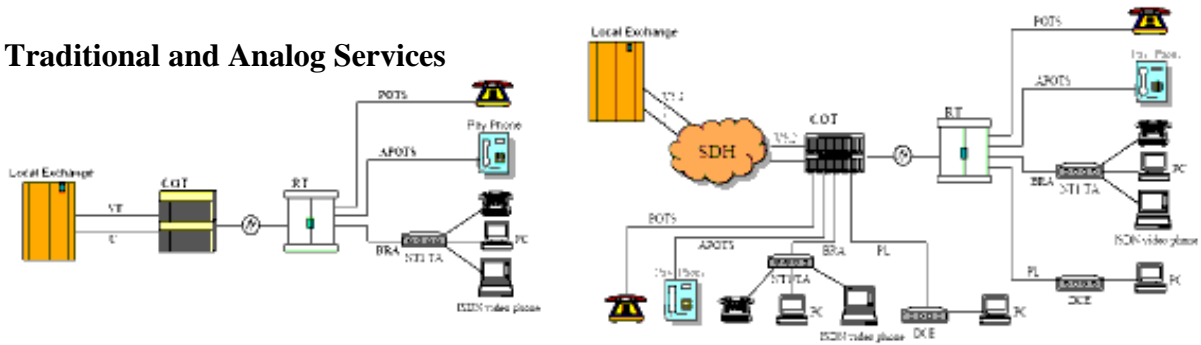
System Features and Benefits

- Broadband services, narrowband service & transmission system in a universal shelf.
- Flexible system configuration to different NE, such as DLC, E1 Channel bank, DAC, DSLAM, VoIP Access Gateway, STM-1/4 transmission, etc.
- Supports variety interfaces cards for POTS, ISDN, Asyn/Sync. Data, xDSL, and SHDSL from a single system.
- Integrated high performance Layer 2 data switching unit for easy manipulate data package.
- Easy upgrade to advanced IP-based Next Generation Network.
- Architectural flexibility by a modular structure.
- Configurations for indoor or outdoor applications.
- Built-in transmission for fiber (SDH, PDH, GE/FE optical), or use external transmission system.
- Craft Interface (CIT): The CIT is used to provision narrowband and broadband services and to monitor alarms and events on a single NE.
- Network Maintenance Manager: The Network Maintenance Manager is used to monitor alarms over multiple NEs.
- Supports duplex mode operation for the CPU, PSU, V5P and Transceiver Unit.
- The ULC-1000AN MSAN System supports one COT up to 31 remote Terminal (RT).
- Scalable system capacity from small to large (6 ~ 1920 lines).

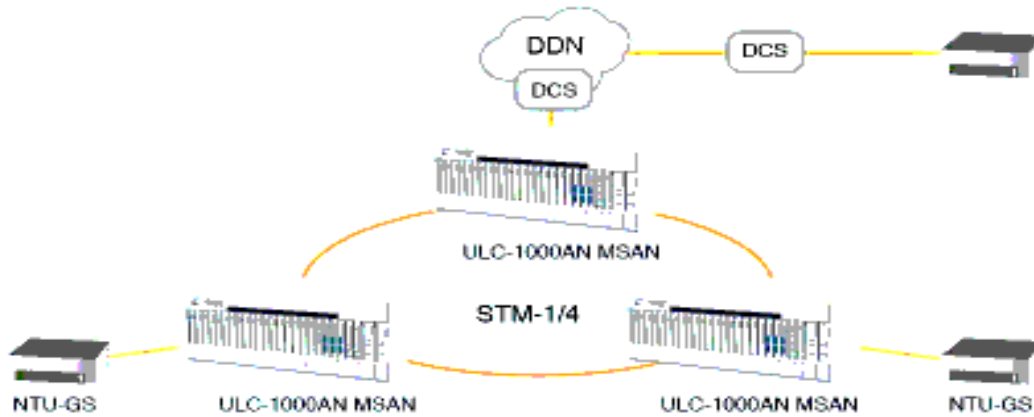
Applications and services

Narrowband Services

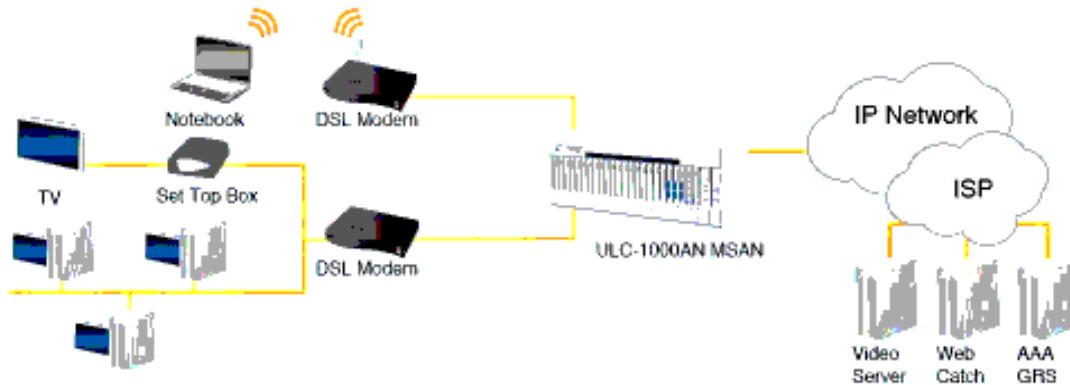
Traditional and Analog Services



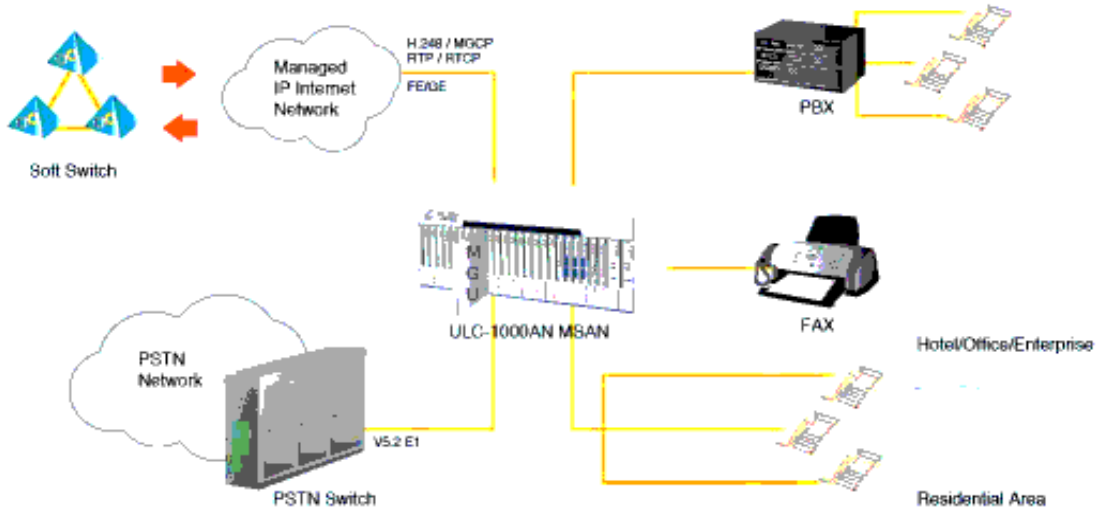
Analog and Data Leased Line



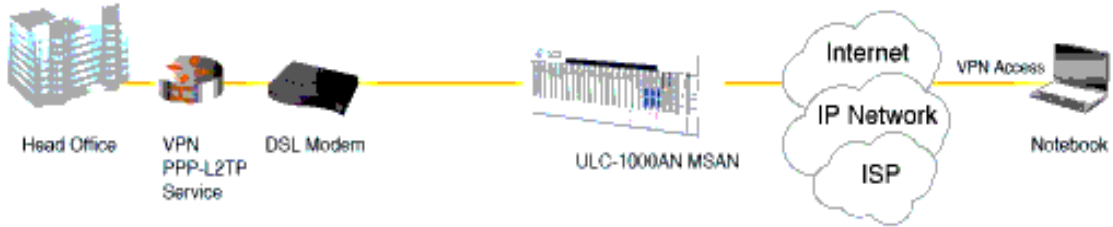
Broadband xDSL services



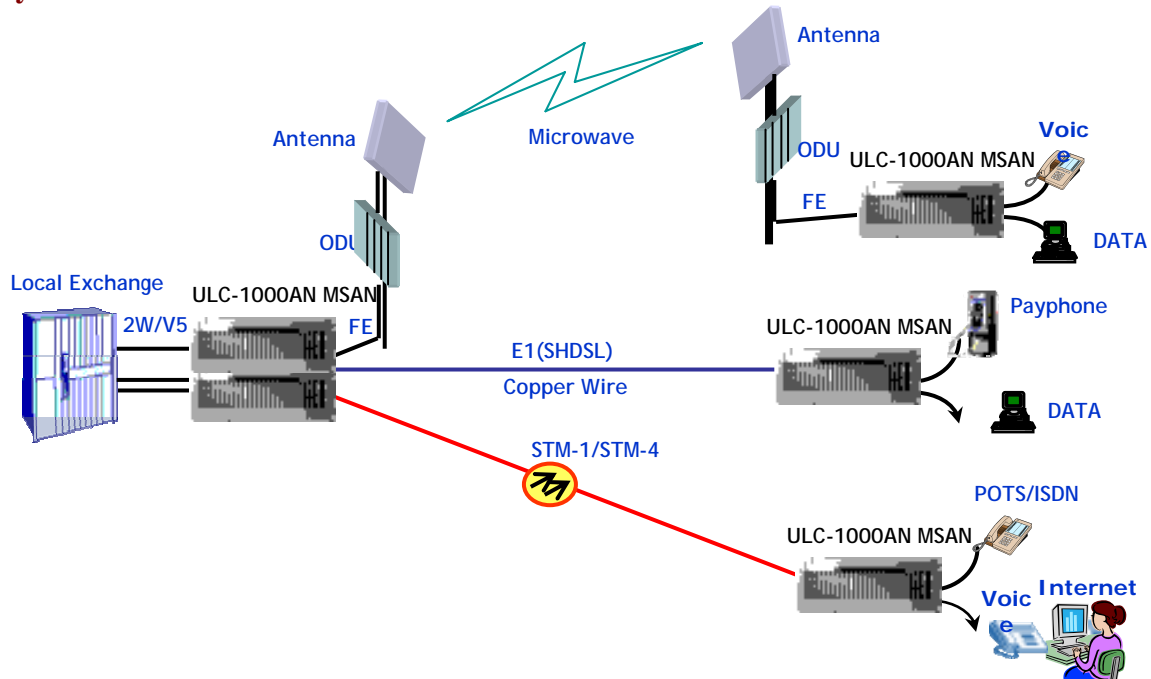
Services in Next Generation Network VoIP Services



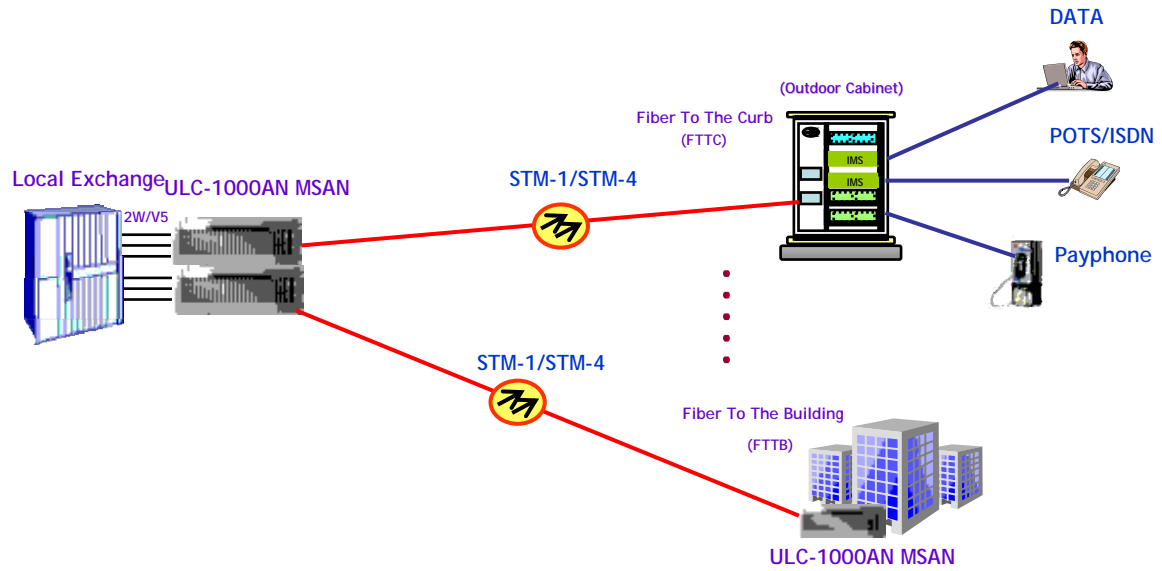
Layer 2 Data Switch Function



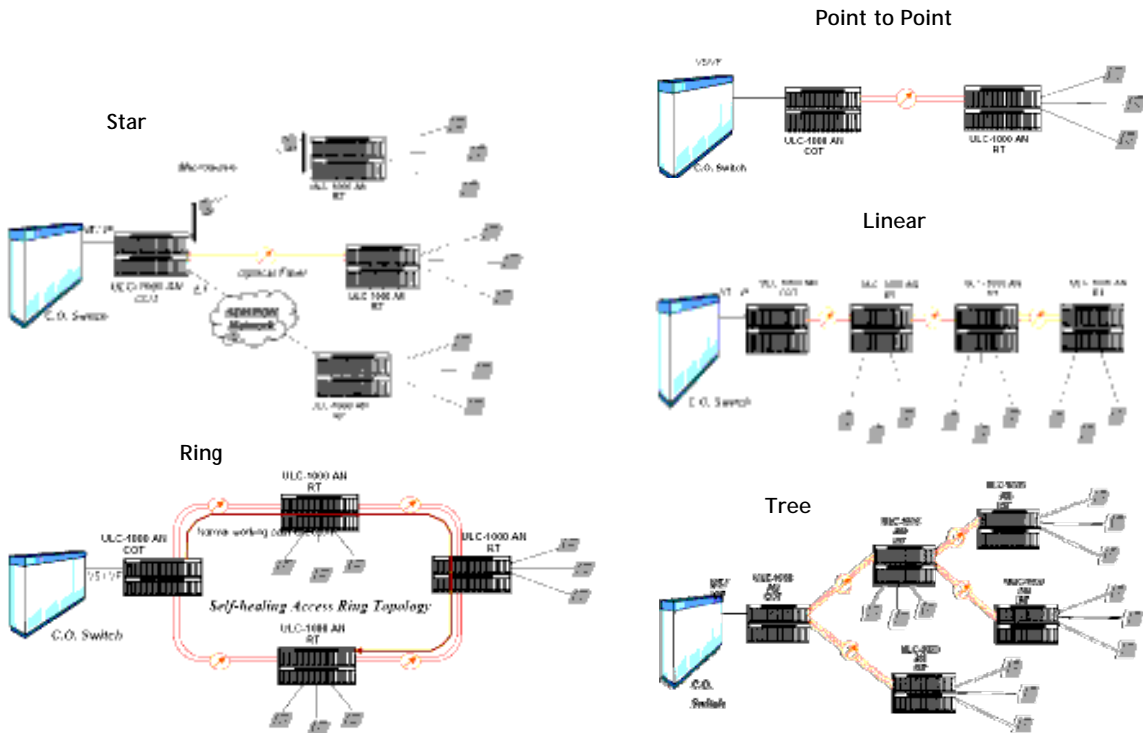
System Trunk Media



FTTB & FTTC Application



System Topology

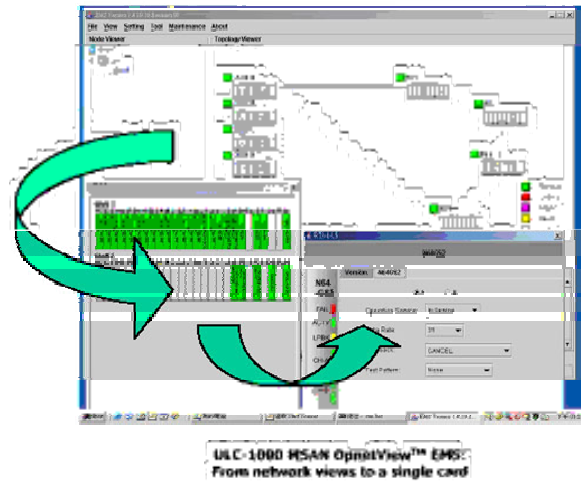


Network Element Management Tools

The following software tools are used for Operations, Administration, Maintenance, and Provisioning (OAM&P) actions and tasks of the ULC-1000AN MSAN System:

➤ **Craft Interface Terminal (CIT)**, it could manage one access network element that means one COT with the connected RTs at a time.

➤ **OpnetView EMS**, it could be used to monitor the whole access network over multiple NEs. The EMS can manage hundreds of network elements (NE) at a time.

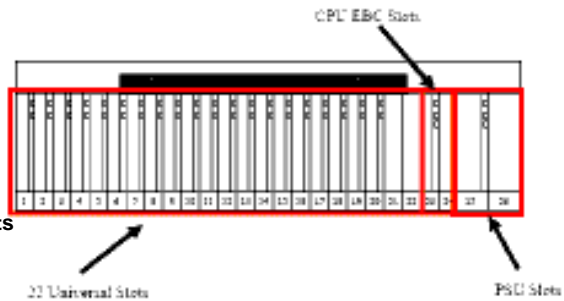


System Mechanical Parts

1- Channel Bank Assembly (Shelf)

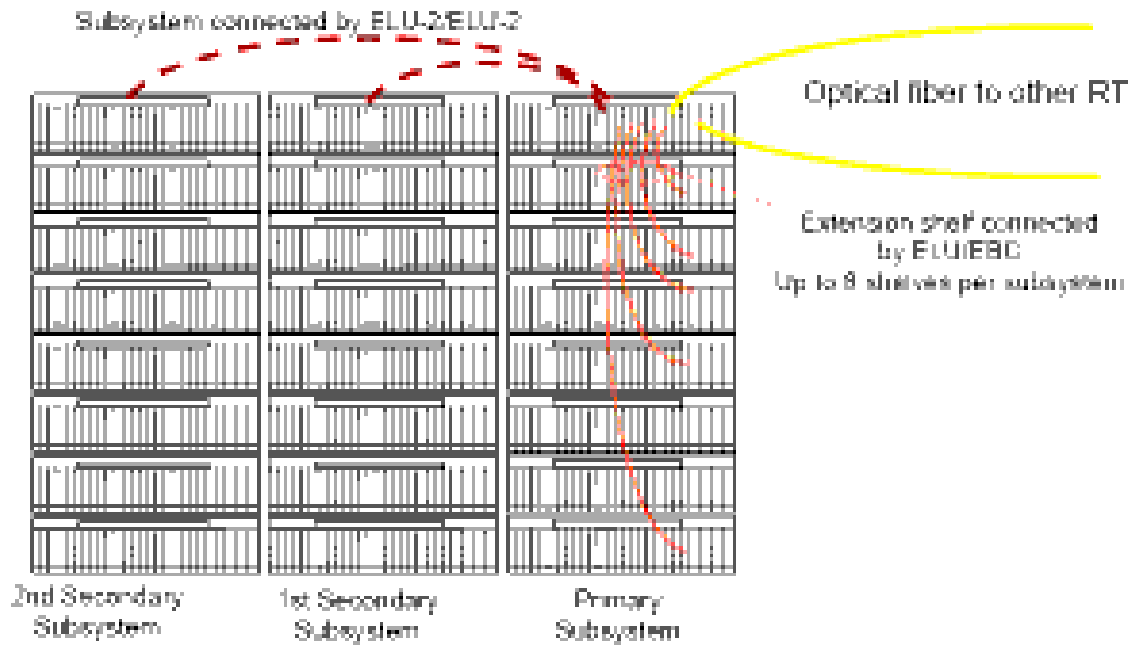
- ❖ Capacity 26 Slots
- ❖ Slots No. 1~22 for Service/Function/Transceiver Units
- ❖ Slots No. 23~24 for Central Processor Unit
- ❖ Slots No. 25~26 for Power Supply Unit

Shelf Dimensions (H x D x W):
176 mm x 385 mm x 435 mm



System Capacity

- Each Shelf: 120 Lines
- Each Rack: About 960 Lines
- Three Racks: About 2000 Lines



2- Indoor Cabinet

28U



42U



3- Outdoor Cabinet



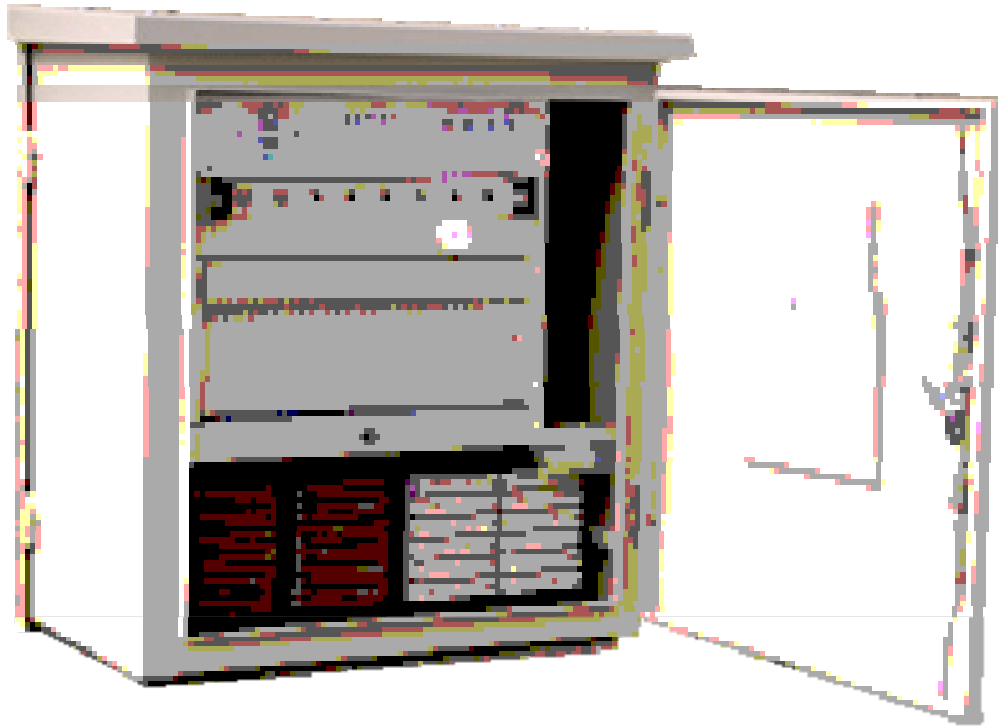
Azmoon Keyfiat outdoor cabinets have various dimensions and different capacities and its components are as follows:

- Metallic cabinet frame with dimensions proportional to its capacity.
- MDF unit equipped to two kinds of terminal NC and NO with extended to 1:2 or more
- Place of battery (4x12v)
- Rectifier charger 48v that it feeds from single phase and it's switching type.
- 19 inch rack that it's used to fix sub rack systems
- ODF-OCDF for fusion place of fiber optic and for setup fiber optic.
- Air conditioner system proportional different capacity cabinet (active cooling for high capacity ONUs and passive cooling for small size ONUs).

Mechanical specifications for ONUs :

- 1- Material: Iron
- 2- Coloration : head sealed paint
- 3- Color number :7032
- 4- For high capacity outdoors : protection class of the inner shell is IP65
- 5- For small size outdoors : protection class of the inner shell is IP55
- 6- Designed with Anti-earthquake safety function and compliant with FCC68.302 and ETSI300019 ;
- 7- Relative humidity 5% ~ 95% ;
- 8- Operating temperature : -30c ~ +55c
- 9- In High capacity Outdoor cabinets are Active cooling box with Rotary compressor 1200 BTU.
In Small capacity Outdoor cabinets are passive cooling box with Heat exchanger units or fan units.
- 10- Power Input: 220 v/ 50 Hz ~ 60 Hz
- 11- Ac counter place
- 11- 12 core ODF-OCDF
- 12- 1 to 2 central to subscriber MDF

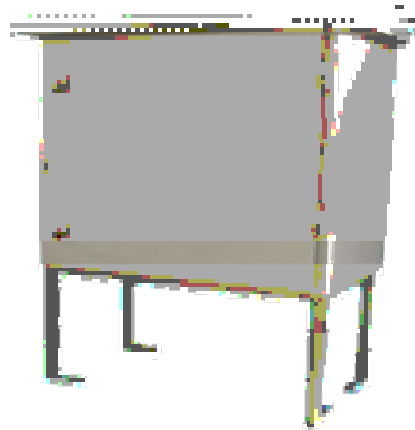
ONU-120



- **Using Type:** Indoor or Outdoor cabinet (wall-mounted or Concrete Pedestal)
- **Trunk Media:** Copper (G.SHDSL) or Fiber (PDH/SDH) or Radio (E1/Ethernet)
- **Dimension:** LxHxW :240 mm x 735mm x 450mm
- **Rectifier/Charger:** 10A
- **Battery:** 4x18AH



ONU-120 on the Wall-mounted



ONU-120 on the Concrete Pedestal

- **Capacity:** 120 POTS/ 80 ADSL2+

