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Zvyšování přenosové kapacity a hustoty portů ethernetu v poslední míli

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Agenda

- Allied Telesis a řešení pro operátory
- Nová platforma pro přístupové sítě s vysokou hustotou portů
  - » SwitchBlade x3112 – přehled
  - » Hardware
  - » Software a vybavení
  - » Aplikace Triple play v FTTx
- Shrnutí

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Resilient, cost effective end-to-end solutions

Data center

Core, distribution, aggregation, access

User side

DMTF
DASH

Link aggregation   VCStack   EPSRing

IPv6 READY

AlliedView management

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SBx3112 Access Edge Chassis

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SBx3112 Overview

High Availability access edge chassis:
  » 12 slot chassis with Layer 2+ features

Resilient
  » Dual redundant fabrics that provides sub 50ms failover for uninterrupted network service

Port Flexibility
  » Copper, fiber and 10GE connectivity enables users to scale the network

High-performing
  » Non-blocking architecture and superior QoS ensure wire-speed delivery of all your critical traffic

Power over Ethernet (PoE)
  » Supports 802.3at PoE+ (30W) on 24PoE line card

Environmentally friendly ecoSwitch
  » Low power consumption, eco-Friendly green switch

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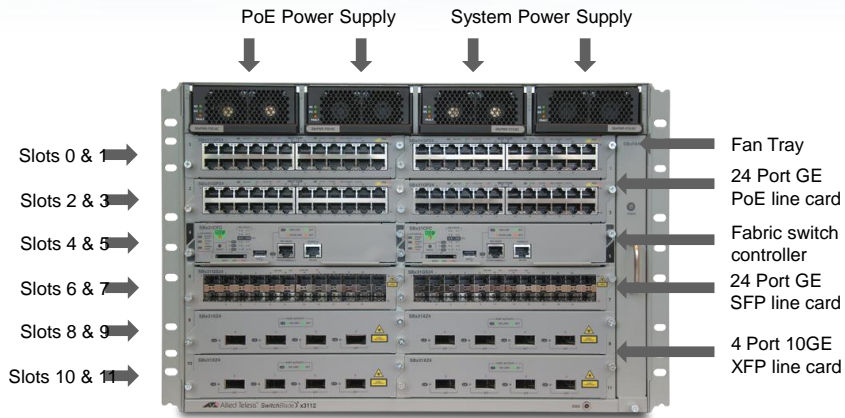

SBx3112 Multi-Purpose Design

- **Built on proven enterprise switching fabric and hardware designs.**

- **Operating on highly reliable and feature-rich carrier grade iMAP software.**
  » Same software used in Allied Telesis iMAP (integrated Multiservice Access Platform) in carrier networks for years

- **Hardware redundancy to eliminates critical points of failure.**

- **Designed for use in service provider applications for FTTx services, or as an enterprise switch for PoE and fiber networking.**

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SBx3112 Chassis

PoE Power Supply   System Power Supply

Slots 0 & 1
Slots 2 & 3
Slots 4 & 5
Slots 6 & 7
Slots 8 & 9
Slots 10 & 11

Fan Tray
24 Port GE PoE line card
Fabric switch controller
24 Port GE SFP line card
4 Port 10GE XFP line card

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SB-x3112 Capacity
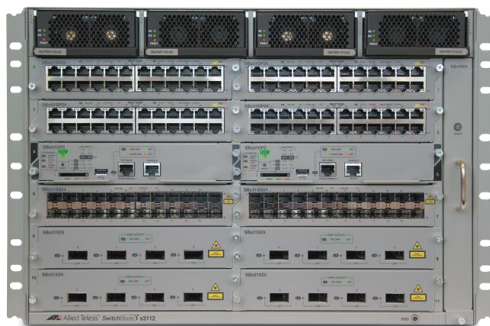
2 x 200 GBE switch fabric
400 GBE total

40 GBE wire speed per card slot
400 GBE total

Passive Backplane

True Non-blocking Architecture

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SBx3112 Line Cards

AT-SBx31CFC
  » Fabric switch controller

AT-SBx31XZ4
  » 4-port 10GE XFP Ethernet line card

AT-SBx31GP24
  » 24 port 10/100/1000Base-T PoE Ethernet line card

### AT-SBx31GS24
  » 24 port Gigabit Ethernet SFP line card

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Triple Play Solutions

IGMP v2 multicast

RTSP unicast

Low latency

Jitter control

VoIP: MGCP and SIP
  » Genband, Metaswtich and most major softswitch vendors

HSIA
  » Rate limiting
  » QoS
  » CoS
  » VLAN controls
 » VLAN Q-in-Q
  » Jumbo frames

Supports iMG fiber gateways

SBx3112
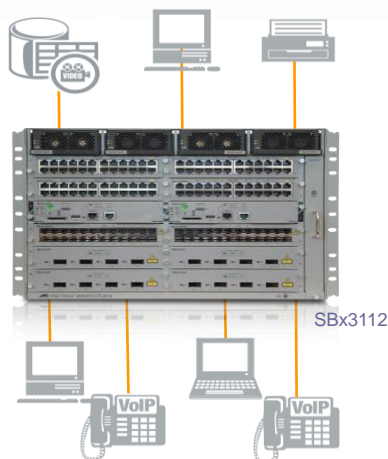
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FTTx Support

10 GE Uplink with EPSR
- » **Sub-50 ms failover switching**
- » **Redundant fiber protection**
- » **802.3ah support**

100 M P2P Active Ethernet
- » **Bi-directional single mode fiber**
- » **802.3 ah**
- » **SFP based card**

1 GE P2P Active Ethernet
- » **Bi-directional single mode fiber**
- » **802.3 ah**
- » **SFP based card**

24 port 100/1000 fiber line cards
- » **SFP provisioned**

40 G per slot
- » **Non-blocking**

Supports outdoor and indoor iMG family of fiber gateways

10 GE
Single mode
Multimode

EPSRing™

100 M
1 GE
Single mode

100 M
Single mode
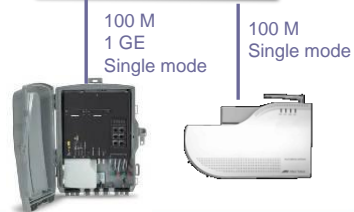
iMG 7x6 MOD (outdoor)   iMG 616x (indoor)

Eco friendly

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Our multimedia history

Easy setup
Easy maintenance
High flexibility
Affordable cost

Enterprise

NSP / Carrier

multimedia support
High resiliency
High security
High performance

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Shrnutí

- Allied Telesis nadále vyvíjí platformy pro přístupovou vrstvu Ethernetu
  - » EPSR technologie v kruhovém zapojení – vysoká rychlost konvergence při přerušení kruhu zapojených switchů
  - » 10GB Ethernet uplinky – vysokorychlostní napojení na páteř
  - » 1GB Ethernet uživatelské porty – připraveno pro další navšování rychlostí v přístupové síti
  - » Neblokovaná architektura – plná rychlost na všech portech a slotech karet
  - » Připraveno pro AlliedWare Plus a IPv6
  - » Redundantní zdroje a switch fabric – odolná architektura snižující riziko kompletního výpadku systému

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