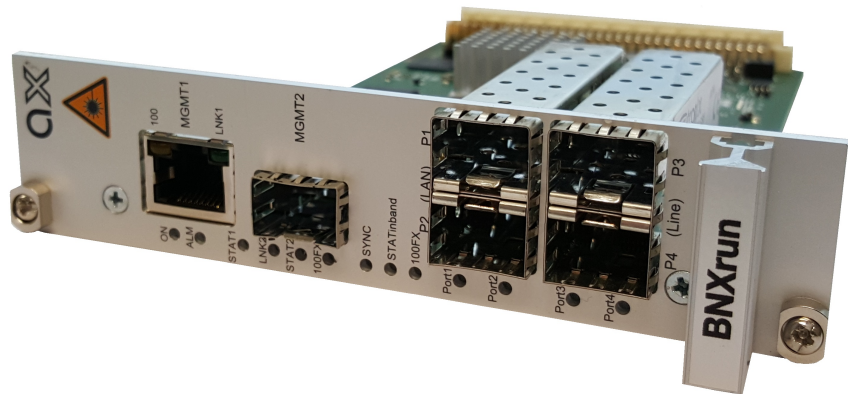




BNXrun

Broad Network Transport Device

- ✘ 4x Fibre Optic (SFP) Ethernet ports up to 1Gbps
- ✘ 1:3 or 2:2-scenarios can be configured
- ✘ Jumbo Frames (16k) supported
- ✘ L2 packet processing in wire-speed
- ✘ Fan less desktop unit with low power consumption <15W
- ✘ Flexible design due to Networking Processor



The BNXrun is a carrier-grade CPE device designed to match in a wide area of different applications. The BNXrun fits for the requirements of a Customer Premise Equipment (CPE) in a FTTH-scenario as well as a Network Interface Device (NID) for other FTTx-scenarios. The BNXrun is designed to enable Layer2 and Layer3 business services, including an outstanding support for clock distribution and time synchronisation to the provider's edge.

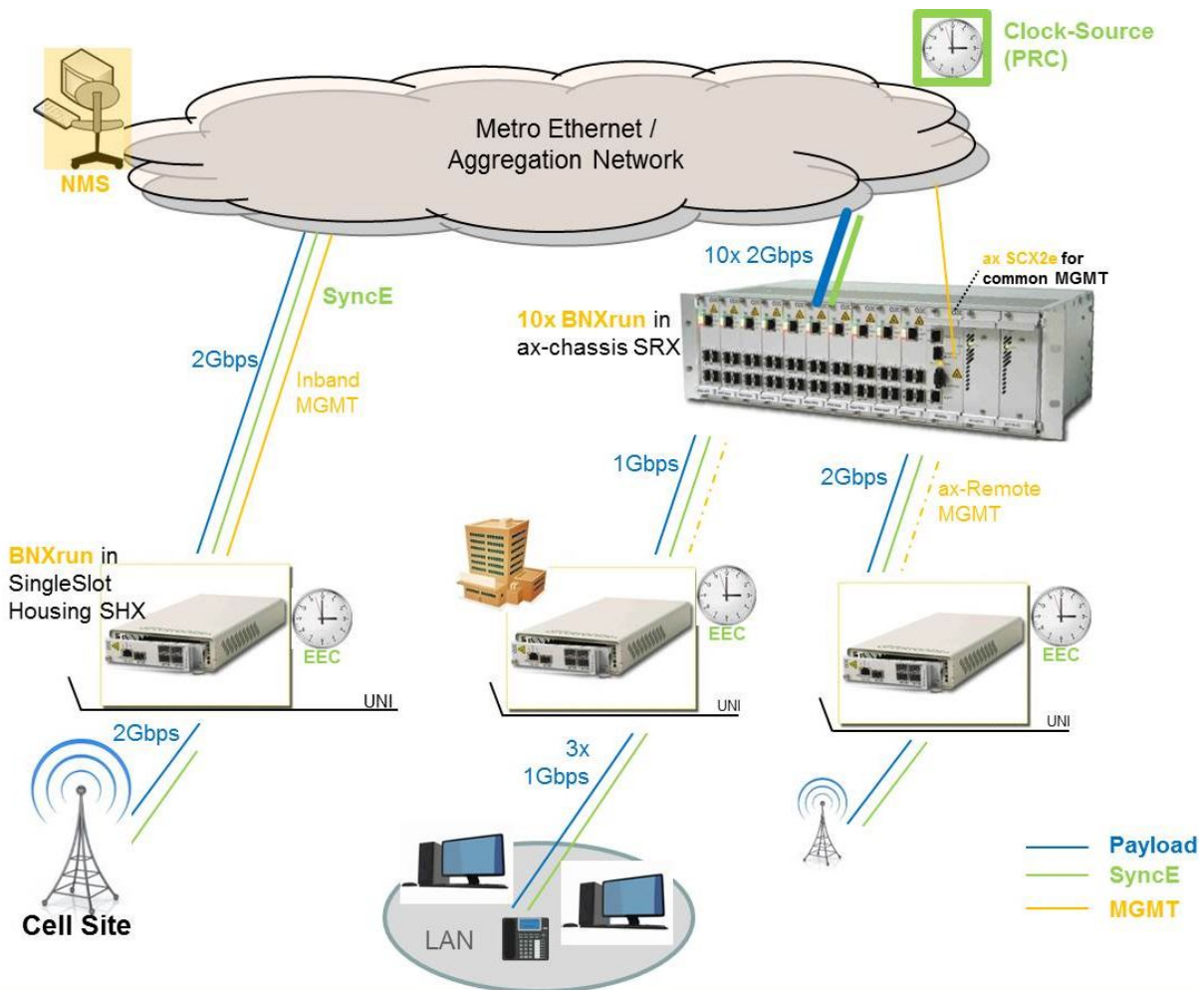
Introduction

The BNXrun assists network operators to reduce operating expenses, introducing new types of SLA and all together to improve the margin. It is designed to be operated as a UNI Type device.

The BNXrun offers independent interface and service control. It incorporates Ethernet operations management according to Y.1731 and IEEE802.1ag (OAM functions), IEEE802.3ah (EFM), configuration management via HTML browser, SNMP and SSH. Main focus is on the security of management application to assure safe and non-sniffed communication between the device and the NOC.

Features

- 2x Ethernet ports for local/remote management access
 - 1x 10/100BaseT
 - 1x 100FX
- Synchronicity to the edge of provider's network
 - ITU-T G.8261 etc.
- Implements a fully managed demarcation function between customer network and service provider network
- Offers built-in independent interface and service supervision
- Network management to monitor and manage
 - HTML based WEB-OPI,
 - Built-in SNMP-agent,
 - SSH (CLI)
 - In-band management capability
- Compact design



Application Example

The realisation of MEF2 functionality to versatile applications, e.g. mobile backhaul or service provisioning for companies and MTUs is very easy with the BNXrun.

The 4x 1GigE ports can be aggregated to achieve a full 2x2G demarcation device. This fits perfect to back-haul mobile antennas like eNode-B.

The BNXrun can also be configured to operate as real CPE device, using 1x GigE as uplink and 3x GigE into the customer's LAN.

The BNXrun can be placed in a single-slot housing, a 3-slot or a 10-slot chassis.

SyncE functionality is provided to allow end-to-end clock-provisioning for various applications. The BNXrun can be either managed via inband management directly, or via the central blade offering access to local as well as remote devices.



Technical Specifications

Ports

Network I/Fs (WAN) & Service I/Fs (LAN/Customer)

- 4x GigE Fibre Ports
 - ⤵ 1000BaseSX/LX/ZX/BX (SFP)
 - ⤵ All SFPs supported (SGMII, CWDM, BI-DI, TripleSpeed)
 - ⤵ Digital Diagnostic Monitor
 - ⤵ I/F #3 can be used as 3rd LAN-port or 2nd WAN-port
 - ⤵ I/F #1 can be operated with 100FX mode
- 2x 2GigE bundles possible (LACP)

Management I/Fs

- 1x 10/100BaseT (RJ45)
 - ⤵ Local MGMT
 - ⤵ DHCP-server
 - ⤵ Auto-negotiation
 - ⤵ Auto-MDIO
- 1x 100Fx (SFP)
 - ⤵ Remote MGMT
 - ⤵ DHCP-client
- Console Port
 - ⤵ RS-232 (DSUB9)
 - ⤵ Available only with SHX3 Housing

Packet-Processing

- Wire speed, non-blocking
- L2-L3 packet processing
- Jumbo frames: 16kBytes
- L2CP tunneling/discard/peer
- IEEE 802.1D Mac Bridging
- IEEE 802.1 Q VLAN Bridging
- IEEE 802.1ax LACP (link aggregation)
- Flow Control
- Multicast/Broadcast storm protection
- 8k MAC-addresses
 - ⤵ MAC aging enable/disable; aging time configurable
 - ⤵ Static MAC entries possible
- 4096 active VLANs
 - ⤵ single tag
 - ⤵ add / remove / forward
- Granular rate limiting
 - ⤵ CIR, CBS, EIR, EBS
- Bandwidth policing
 - ⤵ RFC2697, RFC2698, RFC3290
 - ⤵ Metering according to RFC 2697, 2698 with single or two rate three colour marking
 - ⤵ MEF10.2
- LPT/RFD
- MIB2 RMON Performance Counter
- Port Isolation

SyncE

- ITU-T G.8261 – G.8264
- All Ports can be operated in either master or slave mode
 - ⤵ Device operates completely in synchronous mode
- LED to show sync status
- ESMC messages
- Holdover
 - ⤵ TCXO optional assembly

Management

Local Craft Terminal (LCT)

- RS232
 - ⤵ Only available with SHX housing
- Command Line Interface

Local/Remote MGMT

- 2 extra ports
 - ⤵ 10/100BaseT (RJ45)
 - ⤵ 100FX (SFP)
- IPv4, IPv6
- SNMPv2c, SNMPv3
 - ⤵ Get, set, bulk, traps
 - ⤵ Up to 16 trap receiver
- SSHv2 & CLI
- TACACS+
- 16 different users possible:
 - ⤵ 3 authorization levels
 - ⤵ username / password or SSH-key protection for each account.
- Configuration save/recall (local and/or TFTP/SFTP)



Technical Specifications

Inband MGMT

- Inband Management via all WAN-Ports possible
- Separate VLAN used
- Same features as for Local/Remote MGMT

Rack & Remote MGMT

- Rack MGMT via SRX10 backplane
- SCX2e as common MGMT blade
- Remote BNXrun can be managed by local SCX2e
 - ⤿ MGMT traffic is routed via local BNXrun in rack
 - ⤿ Separate VLAN used

Indicators

- 14 LEDs to show operational status

Environmental

- Operation
 - ⤿ ETS 300019-1-3, class 3.1
 - ⤿ Temperature -5...+55°C
 - ⤿ Humidity: 10...90%, non-condensing
- Transportation
 - ⤿ ETS 300019-1-2, class 2.3
 - ⤿ Temperature: -40 ...+70°C
 - ⤿ Humidity: 10...95%, non-condensing

Power

- Supply Voltage: +5 VDC (via backplane)
- Power Consumption: < 15 VA, overcurrent protected
 - ⤿ Total power consumption depends on used SFPs
- Power supply via system rack SRX or housing SHX

Housing

- Weight: 350g
- Dimensions (h x w x d)
 - ⤿ 130 x 30 x 190 mm
 - ⤿ 45 x 145 x 260 mm (in SHX3)
- 19" rack available
 - ⤿ 10 slots in 3HU rack
 - ⤿ 3 slots in 1HU rack

