

## CORIANT IS NOW PART OF INFINERA

# Coriant Vibe™ X90 Programmable Packet Platform

## Carrier-Class White Box

The Coriant Vibe™ Series is a portfolio of carrier-class white box variants to meet L2/L3 networking needs from access to core. Vibe white boxes are programmable packet switches containing a merchant silicon network processor, standard Intel processor module as a CPU environment, power supplies, fans, and mechanics. The Vibe switches are loaded with Open Network Install Environment (ONIE), which enables the installation of a compatible Network Operating System (NOS).

The compact 2RU Coriant Vibe™ X90 is ideal at sites where a mix of 10/25 Gbps and 100 Gbps interfaces are required for service aggregation. The Vibe X90 scales from a 900 Gbps single node configuration to 2.7 Tbps in a stacked node configuration, which also provides hardware redundancy for control and data planes. Further scaling can be achieved with a spine and leaf architecture where Vibe nodes are used as leaves.

The Vibe X90 white box provides an optimal solution for emerging 5G anyhaul where flexible scaling and accurate packet synchronization is a mandate and network availability is critical for business continuity. While 5G is the driving force for network evolution, the Vibe X90 platform enables the convergence of all service backhaul to the same controlled network.

### BENEFITS OF THE CORIANT VIBE™ X90

- **Provides** a carrier-class L2/L3 white box platform for aggregation, including support for large tables and packet buffering sizes
- **Enables** full resilience for control and data planes using the multi-unit stacking concept
- **Leverages** modularity to support the flexibility and evolution of configurations including optional DWDM interfaces
- **Enables** open networking and eliminates vendor lock-in by supporting multiple types of Network Operating Systems
- **Offers** the ideal design for telco environments including ETSI racks/cabinets, accurate synchronization, and AC or DC power



## TECHNICAL SPECIFICATIONS

### Fixed Traffic Ports

- 4 x 100G QSFP28
- 4 x 1/10/25G SFP+
- 20 x 1/10G SFP+

### Hot Pluggable Module Variants

- 1 x 100/200G (CFP2)
- 2 x 100G (QSFP28)
- 8 x 1/10/25G (SFP+)

### Stacking Interfaces

- 12 x 100G QSFP28
- 2 x 10GbE from CPU
- 2 x RJ45 for sync signals

### Management Interfaces

- 1 x RJ45 serial console
- 1 x RJ45 100/1000BASE-T management

### Timing/Synchronization Interfaces

- GNSS antenna input
- SCI/SCO
- PPS/TOD

### Other Ports

- Alarm I/O
- USB

### Main Components

- Switch silicon: Broadcom BCM8868X Jericho +, 6 Gbytes of DDR4 memory
- Embedded knowledge based processor TCAM (BCM52311)
- CPU module: COM Express module type 7, Intel ATOM C3858 12 core @ 2.0 GHz x86 processor, 2 x 16G RAM DDR4-2400

- Stratum 3E compliant oscillator (OCXO)
- SSD M.2, 128 Gbytes

### Software

- Loaded with Open Network Install Environment (ONIE) software installer
- Compatible with the following NOS options:
  - Open Network Linux (ONL)
  - Coriant NOS

### Forwarding Capacity in Packets Per Second

- 900 Gbps bidirectional switching capacity
- 835 Mpps packet processing rate
- Scales to 2.7 Tbps per node in stacked configuration (3 x Vibe X90)

## TECHNICAL SPECIFICATIONS CONTINUED

### Resiliency

- Full hardware resiliency for control and data planes in stacked configuration
- Power redundancy with 1+1 hot swappable, load balanced modules
- 4+1 fan module redundancy with hot swappable fan modules

### Physical Dimensions

- 440 mm (17.32 in) x 89 mm (3.50 in) x 450 mm (17.72 in) (W x H x D)
- Installations to standard 19 in, 21 in, 23 in, and ETSI 600 mm racks or cabinets as well as OCP 21 inch open racks

### Power and Cooling

- Common Redundant Power Supply (CRPS) x 2 with load sharing, hot swappable power modules
- Power input option: AC (100 to 240 VAC) and DC (-40 to -75 VDC)
- Max power consumption: 650 W (including optics)
- 5 hot swappable fan modules
- Front to back airflow

### Configuration

- 28 x fixed interfaces
- Two power modules and five fan modules

- Two slots for hot pluggable interface modules
- Can operate as single node and stacked node configurations (up to 3 Vibe X90 nodes can be stacked)

### Synchronization

- Synchronous Ethernet ITU-T [G.8262]
- SSM over Ethernet [G.8264]
- Station Clock Input and Output ports
- PRTC: ITU-T G.8272
- Pulse-per-Second (PPS) input and output
- Time-of-Day (TOD) input
- Integrated GNSS receiver (GPS, Galileo, Glonass, Beidou)
- IEEE 1588v2 Boundary Clock for phase synchronization (G.8275.1, G.8273.2)
- IEEE 1588v2 L3 Frequency Sync Slave (G.8265.1)

### Regulatory Compliance

- Safety compatibility:
  - EN60950-1:2006 + A2:2013
  - IEC60950-1:2005 + A2:2013
- Electromagnetic compatibility:
  - EN 300 386 V1.6.1 (2012–09)
- Installation environment:
  - telecommunication center

- ITU-T K.80:07/2009
- FCC 47 CFR Part 15, Subpart B, Class A
- EN 301 489-1 V2.1.1
- EN 301 489-19 V2.1.0
- EN 303 413 V1.1.1
- Radio Equipment Directive 2014/53/EU

### Climatic/Mechanical Compatibility

- Storage:
  - ETSI EN 300 019-1-1 Class 1.1
  - Temperature: -5°C to +45°C (+23°F to +113°F)
- Transportation:
  - ETSI EN 300 019-1-2 Class 2.3
  - Temperature: -40°C to +70°C (-40°F to +158°F)
- Operating conditions:
  - [ETSI EN 300 019-1-3] Class 3.2
  - Temperature range: 0°C to +50°C (+32°F to +122°F)
  - Relative humidity: 5% to 95%
  - Usage altitude 60 m below sea level (106 kPa air pressure) to 3000 m (70 kPa)

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