

PBC 2000

Path Border Controller

TALK TO AN EXPERT



Programmable Ethernet, anywhere.

The MaiaEdge PBC 2000 is carrier-grade, cloud-managed hardware that automates private Ethernet path provisioning across any network and any transport. Built for service providers, data center operators, and AI infrastructure operators.

Product Description

The dual 100G, 1RU appliance deploys at service provider points of presence (PoPs), aggregation points, data centers, meet-me rooms, and other strategic interconnection points, and extends encrypted Ethernet connectivity over dedicated fiber, DIA, satellite, or any other IP transit, automatically. Operators provision paths through an intuitive UI, while the Path Computation Engine (PCE) creates the Layer 2 connection underneath, eliminating manual configuration and routing complexity.

Combined, the PBC and PCE also act as a carrier-neutral interconnection engine, letting separate operators build Layer 2 virtual cross-connects across any transport and across geographically separate locations, with hop-by-hop visibility across partner networks.

For deployments needing additional port density, the PBC pairs with the [MaiaEdge Port Extender](#), an integrated switch that adds 48 tenant ports per appliance.

Path Computation Engine (PCE)

The PCE is the cloud-native intelligence engine enabling programmable Ethernet across multiple transports, owned and partner connections alike. Operators get point-and-click provisioning, and the PCE automatically selects the best path based on real-time latency, utilization, and policy metrics.

Features & Capabilities

Automated Provisioning

Encrypted private Ethernet paths activate in minutes, over dedicated fiber, DIA, or satellite. Layer 2 service extends over whatever transport is already available, speeding time to service and customer onboarding.

On-Demand NNIs

One network-to-network interface builds to service multiple partners. Virtual cross-connects are created on demand.

Deterministic Path Engineering

Real-time route calculation based on latency, utilization, and policy metrics, with bandwidth allocation control and SLA proof. SRLG-aware path selection ensures true physical redundancy by automatically avoiding shared risk link groups.

Cloud-Native Orchestration

No manual, box-by-box provisioning or complex routing configuration. Unified management from one cloud portal.

Secure by Default

Every path is secured automatically with line-rate AES-256-GCM IPsec encryption.

End-to-End Visibility

Hop-by-hop telemetry, including jitter, packet loss, and latency, across internal networks, partner networks, and cloud on-ramps.

White-Label Customer Portal

An optional operator-branded portal gives customers self-service circuit provisioning and real-time visibility into their own paths. Q-in-Q tagging ensures complete tenant isolation on shared infrastructure. If a customer path crosses multiple providers, the partner network is abstracted from the customer's view.

Direct Cloud On-Ramp

Native API integrations with Equinix enable direct multi-cloud access, with site-to-cloud telemetry. Operators without cloud infrastructure of their own can partner with a MaiaEdge-enabled wholesale provider to start delivering cloud connectivity to customers.

Open Ecosystem & BSS/OSS Integration

API-first design enables direct integrations with billing and operations systems. Built for industry-standard Mplify LSO Sonata interoperability and ecosystem extensibility.

Turnkey Data Center Fabric

Instant, software-defined interconnection fabric, out of the box. Colocation and data center operators deliver a premium fabric experience without years of development, and expand reach without building new infrastructure.

PBC 2000 Technical Specifications

Category	Specification
PERFORMANCE	
Throughput	Dual 100GbE
Encryption Throughput	Line-rate AES-256-GCM IPsec
Latency	<2 μ s overhead
INTERFACES	
Port Configurations	Dual 100GbE Ethernet (QSFP28)
Management Ports	2x 1GB RJ45
External USB	1x USB 2.0
Console Port	RJ45 115.2 kbps
PHYSICAL	
Form Factor	1RU Rackmount
Chassis (H $\times$ W $\times$ D)	1.625 $\times$ 17.24 $\times$ 11.46 in
Total (With Ears and Tabs)	1.625 $\times$ 19.02 $\times$ 12.13 in
Weight	9.5 lbs (with power supplies installed)
POWER & ENVIRONMENTAL	
Power Supply	Internal: AC, DC
Redundant Power Supply	Yes
Operating Temperature	0°C to 50°C (32°F to 104°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
COOLING	
Airflow	Internal fan-based forced-air cooling. Front-to-Back (F2B) — intake at front bezel / port side, exhaust at rear (fan/PSU side).
Data Center Airflow	Standard hot-aisle/cold-aisle layouts: cold aisle at front (bezel/port side) intake, hot aisle at rear exhaust.

Subscription Licenses

The PBC 2000 hardware and cloud-based orchestration software are sold as a combined subscription. Available in 1, 3, or 5-year terms at 1G, 10G, or 100G throughput tiers.

Ready to see it in action?

TALK TO AN EXPERT