

# BIFRÖST DATA DIODE

WHEN FIREWALLS AREN'T ENOUGH  
HARDWARE ENFORCED UNIDIRECTIONAL DATA FLOW



Cyber assaults are increasingly becoming the means of sabotage for enterprises and government agencies. While software based security mechanisms do offer reasonable protection, it is just a matter of time before the vulnerabilities of such solutions are discovered and exploited, causing considerable and often unrecoverable damage.

Bifröst Data Diode addresses this challenge by enforcing hardware restraint to data exfiltration. Bifröst achieves this by ensuring the absence of back channels that are usually exploited for data pilferage. The absence of physical communication medium for the sensitive data to flow out of classified networks ensures the safety and security of information assets.

## USE CASES

- Maintaining Air Gap between networks
- Securing Personal and Biometric DBs
- Data transfer to Standalone PCs/NWs
- ICS/SCADA Applications
- IoT Infrastructure ,Sensor Feeds
- Super Secure Backup/ Logs

# BIFRÖST DATA DIODE

## KEY FEATURES

- Out of the box solution, easy-to-set up.
- Unidirectional 100% assured one-way communication.
- Reliable transfer of files and automated routing.
- TCP/UDP Replay and Proxy.
- Optional Bi Directional Appliance
- Fine grained access control
- Administrator Dashboard
- Optional Security Features
- Out of box support for common applications.
- AES Security and CRC file integrity features.
- Comprehensive audit capabilities.
- Gigabit Speeds Throughput.
- Customisation to support your applications.

## TAILORED TO FIT ADVANTAGE

Bifröst Data Diode has been built entirely in India, keeping in consideration the challenges faced by Industrial and Government agencies. We understand that in cyber security ecosystem "One Size Fits All" does not hold well. Bifröst can be customized, in order to achieve perfect fit to any unidirectional data transfer use cases. The data diode encourages custom built functionality for scenarios consisting of proprietary and homegrown systems.

## COMMERCIAL GRADE SUPPORT

Bifröst comes with paid annual support for both hardware components and the software components. The support includes Next Business-Day On-site Service after Remote Diagnosis plus 24/7=access to service engineers.

## HARDWARE SPECIFICATIONS

Sub Units : Tx and Rx Units

Form Factor: 2 x 1U Mini Chassis

Weight : 4.54 Kg Gross each

Dimensions : 655 mm x 155 mm x 465 mm each

Operating Temp: 0°C ~ 60°C

Non Operating Temp: - 40°C ~ 85°C

Operating Humidity : 10%-90% RH NC

Storage Humidity : 10%-95% RH NC

Ports : 2 x Lan, 2 x USB, 2 x SFP+

Opt Intfc: Simplex SC Connector (IEC-61754-4)

Power Supply : 200 Watts

Power Input : 220V/ 50 Hz - 110V/60 Hz

## NimbusParc

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# BIFRÖST

## DATA DIODE

### DETAILED SPECIFICATIONS

S.No	Feature	Specifications
1.	Transfer Protocol Support	TCP, UDP
2.	Type of Diode	Optically Hardware Enforced Unidirectional (Optional Bi Directional Functionality) with Software Data Pump. Two box Solution/ Optionally One Box
3.	Throughput	1Gbps, 5Gbps Versions
4.	Latency	<5ms in transparent proxy mode
5.	Software Features	<u>Unidirectional</u> File Transfer and Automatic Routing Folder Replication Website Mirroring TCP/UDP traffic mirroring E-mail Delivery Custom Applications <u>Bidirectional Features</u> Data Flow: TCP/UDP Proxying, HTTP/HTTP(s) (with TLS) Proxying, Transparent flow Custom Protocols.(Customisation on Demand)
6.	Security Features	Protocol Break for all Connections AES Security and CRC file integrity features Data Separation for each connection Antivirus and Deep Packet Inspection (Add On)
7.	Management Features	Access Controls. Administrator Dashboard. Granular Access Controls. Detailed Admin, User and Device/Transfer Logs. Audit Logs & Syslog.
8.	Type of Traffic Flow	Ethernet Frames encapsulating IP-TCP/UDP and upper layer protocols upto Layer 7* (* Application layer in TCP/IP)
9.	Hardware	1 x 1U or 1 x 2U Racks/ (Optionally 2x1U Rack ) Power, Traffic/Activity and Alarm LEDs
10.	Network Interfaces	Min. 1x1Gbps on each side of Diode. ( Total 2 x 1 Gbps) Opt. 1 x SFP+ Slot (Total 2 x SFP+ Slot)
11.	Weight	3-8Kg (Depending on Model)
12.	Power Supply	2x200w, 230V +/- 20% 50Hz AC. Over and Under Voltage Protection
13.	Environment	<u>Operating</u> Temperature: 0 to 60°C Humidity: 10% to 90% RH <u>Storage</u> Temperature: -40 to 80°C Humidity: 10% to 95% RH
14.	Warranty	1/3 Yrs.