Hardware-Enforced Unidirectional Security Gateway (Data Diode)
DD-100

OVERVIEW

The ARKA™ DD-100 is a dedicated hardware data diode that enforces strictly one-way (unidirectional) UDP data transfer between two networks. By removing the return path at the hardware level, the DD-100 allows operational and monitoring data to leave a protected network while making it impossible for any traffic, command, or malware to travel back in — a guarantee that software firewalls and access rules cannot provide on their own.



KEY FEATURES

- **Hardware-enforced one-way flow.** Isolation is a property of the hardware, not a configurable rule — there is no return path to attack or mis-configure.
- **Purpose-built for UDP.** Ideal for streaming telemetry, syslog, SNMP traps, and other connectionless data feeds out of sensitive networks.
- **Rack-ready appliance.** 19" rack-mountable / installable form factor for standard data centre and control-room racks.
- **Standard Ethernet connectivity.** 2 x 1 GbE RJ-45 interfaces for simple integration with existing network equipment.
- **Long-term assurance.** 5-year licenses and a 5-year OEM warranty covering support, updates and security patches.

TECHNICAL SPECIFICATIONS

Parameter	Specification
Brand / Model	ARKA / DD-100
Product Type	Dedicated hardware appliance (data diode) for UDP
Data Transfer Direction	Unidirectional — one-way data flow, no return path
Supported Protocol	UDP
Throughput	Minimum 70 Mbps
Network Interfaces	Minimum 2 x 1 GbE RJ-45 ports (via 1:4 SFP to RJ-45 switch)
Management	Management port / Console port / V24
Security	Hardware-enforced isolation
Form Factor	19" rack-mountable / installable
Power Supply	230 VAC, 50 Hz
Operating Temperature	0 to +50 °C
Licenses	Minimum 5 years, issued in the name of the end customer
Warranty & Support	5 years warranty, support, updates and security patches from the OEM

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HOW THE DD-100 WORKS

- **Protected side transmits only.** Data from the source network is sent to the DD-100 over standard Ethernet as UDP.
- **One-way hardware link.** Data crosses the diode in a single direction; the hardware provides no return path.
- **Destination side receives only.** The destination network receives the data but cannot send anything back toward the source.

DD-100 VS. A SOFTWARE FIREWALL

	Software firewall	ARKA™ DD-100 data diode
Enforcement	Software rules and configuration	Hardware-enforced, no return path
Reverse traffic	Blocked by policy; can be mis-configured or exploited	Not possible — no physical return path
Attack surface on protected side	Accepts and inspects inbound packets	Does not accept inbound traffic
Best suited for	General two-way network segmentation	One-way export from sensitive networks

TYPICAL APPLICATIONS

- **Critical infrastructure & OT:** export SCADA/ICS monitoring data to corporate or control-centre networks without exposing control systems.
- **Aviation, transport & utilities:** secure one-way feeds from operational systems to monitoring and analytics platforms.
- **Government, defence & PSU networks:** move logs and telemetry from classified or restricted networks to lower-security zones.
- **Security monitoring:** forward syslog and event data from isolated networks to a central SOC / SIEM.

SUPPORT, LICENSING & WARRANTY

- **Licenses:** minimum 5 years, issued in the name of the end customer.
- **Warranty:** 5 years OEM warranty.
- **Support & updates:** 5 years of OEM support, updates and security patches.

ABOUT THE OEM

The ARKA™ DD-100 is designed and supplied by ARKA Corporation as the Original Equipment Manufacturer, which also provides the licenses, warranty, support, updates and security patches for the product.

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