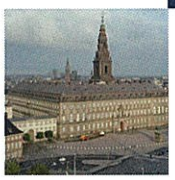
arbit

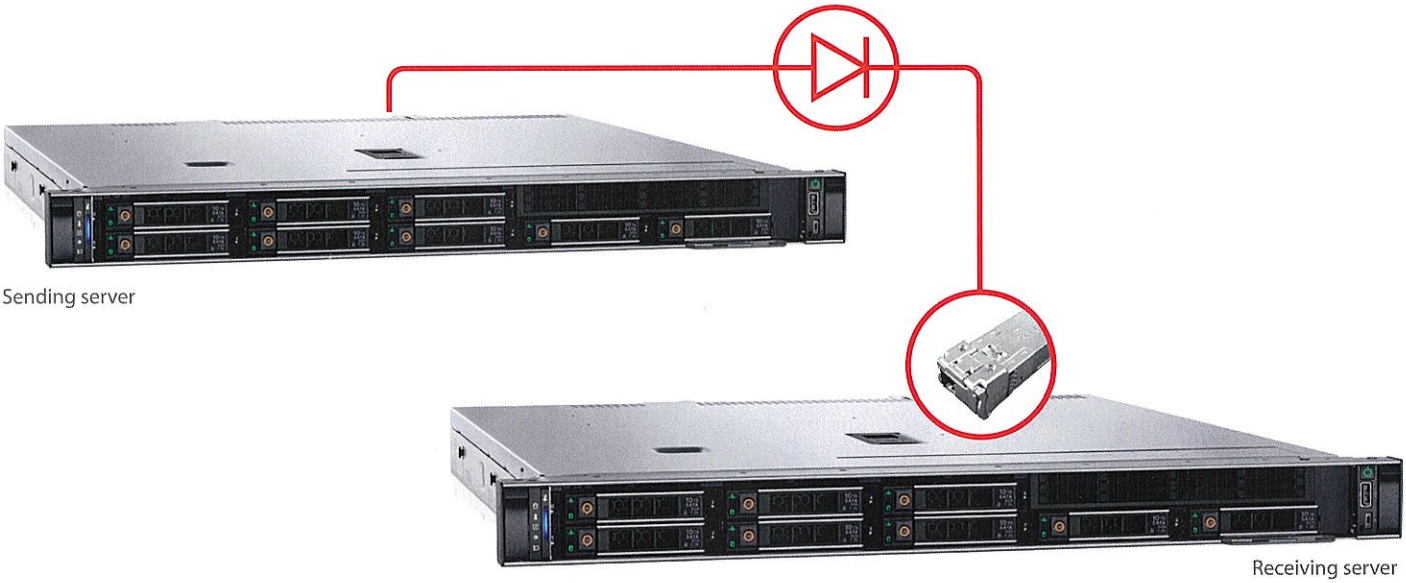


Cross
Domain
Solutions

DATADIODE CORE EAL 7+

Principle of the Arbit Data Diode 10 GbE CORE

Unilateral data transfer between networks eliminating unauthorized remote access.



Sending server

Receiving server

SUPPORTED PROTOCOLS

- Mail (SMTP)
- Simple File Transfer (FTP, SFTP)
- Windows share forwarding (SMB)
- Windows share mirroring (SMB)
- Network File System share forwarding (NFS)
- Network File System share mirroring (NFS)
- Time synchronization (NTP)
- Streaming (TCP, UDP)
- REST API Forwarder (HTTP, HTTPS)
- OPSWAT Integrations

CC EAL7+ By BSI Germany | ACCREDITED NATO COSMIC TOP SECRET AND EU TOP SECRET | Fiber and Copper Connectors

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CYBERSECURITY™
MADE IN EUROPE

Initiated by ECSO. Issued by CenSec

ARBIT REFERENCE CUSTOMERS

The Agency for Governmental IT Services
www.statens-it.dk/english

Danish Ministry of Defence Acquisition and Logistics Organisation
www.fmi.dk/eng

TERMA
www.terma.com

Kongsberg
www.kongsberg.com

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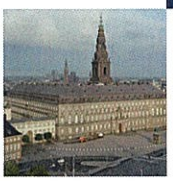
DATADIODE EAL 7+

Fast, hardware-based network security

Unilateral data transfer between networks without the risk of unauthorized remote access.



Cross Domain Solutions

Most two-way communication can be compromised, and even the most well-protected networks can be penetrated.

The fail-safe solution is to physically separate high security networks from low security networks. While this is the most secure solution, this also severely reduces productivity as it prevents data from being transferred directly between the networks.

However, with the data diode technology you can allow one-way data transfer without compromising the confidentiality and integrity of the air-gapped network. Using a single fiber-optic connection with the EAL7+ certified module, the data diode ensures one way data transfer between separated networks of the same or different classification.

While data is only allowed to pass in one direction, it can never be transmitted the opposite way. This means that no intruders can use the connection to remotely access or steal data from your critical network.

Software vs. hardware solution

	FIREWALL	SOFTWARE DATA DIODE	ARBIT DATA DIODE
100% protection against data theft	No	No	Yes
100% protection against hackers	No	No	Yes
Secure one-way connection	No	No	Yes
Protected by laws of physics	No	No	Yes

The Arbit Data Diode is a physical data diode that establishes a secure one-way connection. The transmission is handled by two dedicated servers.

The Arbit Data Diode offers a physical seamless one way data connection, maintaining full galvanic network separation (no covert channel possible). Therefore, the Arbit Data Diode is even safer than manual data transfer yet offers the same convenience as a normal network connection.

The Arbit Data Diode has received the Common Criteria EAL 7+ certification and meets the ISO-15408 requirements.

The Arbit Data Diode is accredited NATO COSMIC TOP SECRET, EU TOP SECRET and YDERST HEMMELIGT by CFCS, DK

CC EAL7+ By BSI Germany · ACCREDITED NATO COSMIC TOP SECRET AND EU TOP SECRET · Fiber and Copper Connectors

arbit

BENEFITS

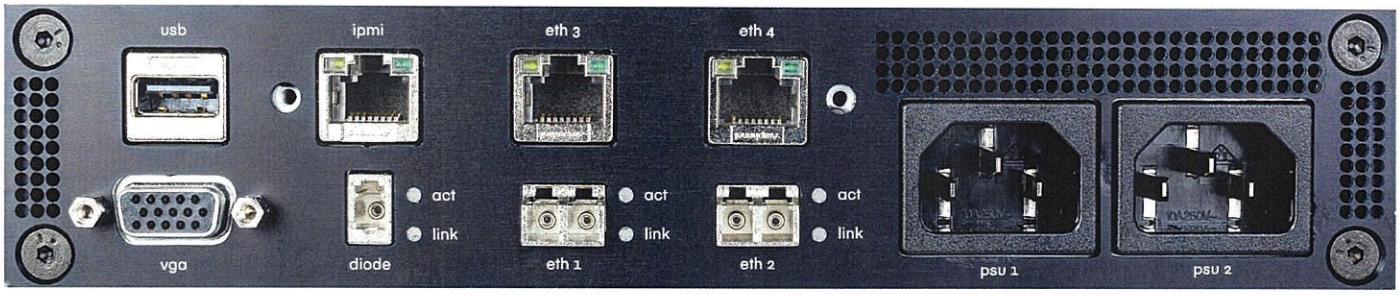
- 100% secure hardware data diode
- Full galvanic separation
- High Throughput and transfer rate
- High stability and low TCO and maintenance
- Proven track record for 15 years
- User-friendly web interface
- Powerful add-ons to control content moving through the data diode
- Full integration with OPSWAT advanced anti-malware platform

FEATURES

- 1 GbE or 10 GbE versions (both Common Criteria EAL7+ certified)
- Accredited NATO COSMIC TOP SECRET and EU TOP SECRET
- No maximum file size (only limited by disk space on proxy servers)
- 64 data channels per diode
- Data channel priority (on transaction basis)
- Supports up to 24 streaming channels (logging, video, radio via UDP)
- High availability with peer-to-peer recovery
- Syslog and notifications by email
- Software runs on hardened Linux

SUPPORTED PROTOCOLS

- Mail (SMTP)
- Simple File Transfer (FTP, SFTP)
- Windows share forwarding (SMB)
- Windows share mirroring (SMB)
- Network File System share forwarding (NFS)
- Network File System share mirroring (NFS)
- Time synchronization (NTP)
- Streaming (TCP, UDP)
- REST API Forwarder (HTTP, HTTPS)
- OPSWAT Integrations



Identical interfaces on the sending side (Pitcher) and receiving side (Catcher) of the data diode.

ARBIT REFERENCE CUSTOMERS

The Agency for Governmental IT Services
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www.fmi.dk/eng

TERMA
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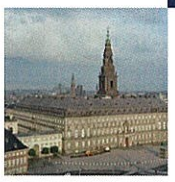
GATEWAY

Data release from secure networks

Safe release of approved data from highly secure or air-gapped networks



CROSS DOMAIN SOLUTIONS

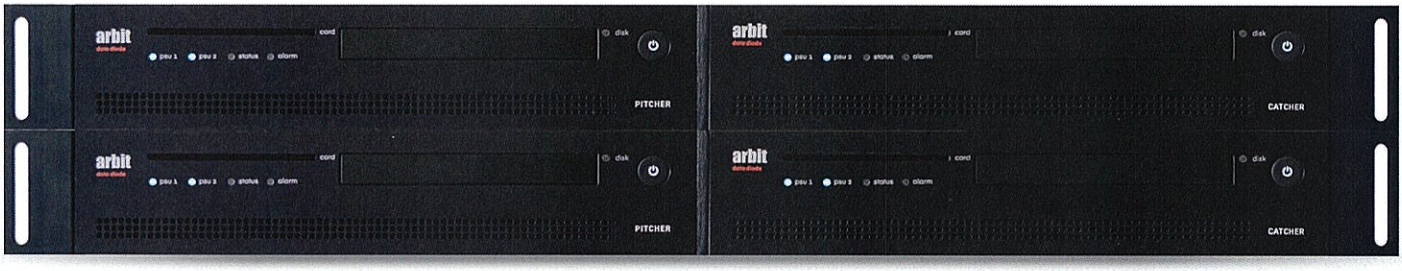
Moving data into a secure network is easily handled by a data diode. However, when data is required to leave a secure network, this is often accomplished using USB-sticks or other portable devices, along with all the inherent security risks.

The Arbit TRUST Gateway (ATG) eliminates the need for manual data transfer and ensures that only approved data is allowed to leave the secure network, making this critical operation as safe as possible. The ATG platform also supports browse down and remote desktop access set up from high to low.

The ATG uses signing technology to identify the source of the released data. Only approved source systems and authorized individuals can sign data, which is then allowed to pass through the gateway. Adding ATIR - the Arbit Trusted Information Release portal, a number of organizational security requirements can be added such as two factor release.

The ATG is based on Common Criteria EAL7+ certified Arbit Data Diode technology. This protects against attacks from the receiving side as well as the transmitting side. In addition, the system is based on hardened Linux.

The ATG can perform several content checks/filtering, including checks/filters developed by Arbit as well as third party checks/ filters like multi scanning products using our Open API.



The Arbit TRUST Gateway (ATG) ensures that data released from a protected network is both source and content checked according to company security policy, and that no rogue process or system can send data through or even piggyback information on approved transactions.

The ATG acts like a secure platform where several COTS or custom checks can be performed. The ATG is based on the robust Arbit Data Diode technology and consists of two Arbit Data Diodes that are connected in serial. This creates an isolated VOID network which is not accessible from neither the high side nor low. Therefore, the isolated VOID is the perfect area for final filtering and checks as it cannot be manipulated.

All configuration and program code are stored read only so that it is impossible for an attacker to change the system in any way. Rebooting the system is guaranteed to restore the approved configuration and the Arbit program code.

Certified CC EAL 7+ | Accredited NATO SECRET and EU SECRET | Built on Data Diode technology | Content Verification

arbit

BENEFITS

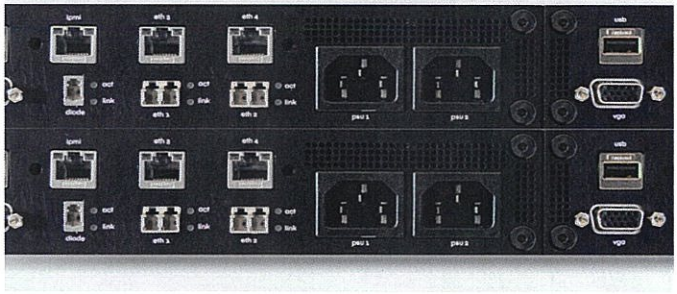
- Replaces non-secure manual data transfer
- Proven transmission stability using Arbit Data Diode technology
- Integrates with existing company infrastructure
- Open API for building custom content verifiers (C++ and Java)
- Supports 'Two Factor Release' function using the Arbit Trusted Information Release portal
- Full integration with OPSWAT advanced anti-malware platform
- Optional external content verifiers and AD-look up verifying sender or content

FEATURES

- Built on Data Diode technology
- Based on 1U rack-mountable units
- All zones with galvanic separation
- Fiber or copper connectors to external networks
- Read-only boot device
- Low power consumption
- Low latency
- Accredited NATO SECRET and EU SECRET

INTEGRATES WITH

- SYSTEMATIC SitaWare (Command and control software)
- Arbit Trusted Information Release platform (Two factor release of data)
- Arbit Desk Top Gateway (Browse down)
- Arbit WEB Gateway (WEB access)



COMPARE WITH OTHER METHODS FOR DATA EXPORT	USB	CD-ROM	ARBIT TRUST GATEWAY
AVOIDS TWO-WAY CONNECTION WHEN RELEASING DATA	NO	YES	YES
VERIFIES SOURCE OF RELEASED DATA	NO	NO	YES
VERIFIES DATA CONTENT ACCORDING TO SECURITY POLICY	NO	NO	YES
ENSURES RELEASE WORK-FLOW POLICY IS UPHELD 24X7	NO	NO	YES
LOW LATENCY IN RELEASE OF DATA	NO	NO	YES
AUTOMATIC THREAT & CONTENT SCANNING USING OPSWAT METADEFENDER.	NO	NO	YES

REFERENCE CUSTOMERS

The Agency for Governmental IT Services
www.statens-it.dk/english

Danish Ministry of Defence Acquisition and Logistics Organisation
www.fmi.dk/eng

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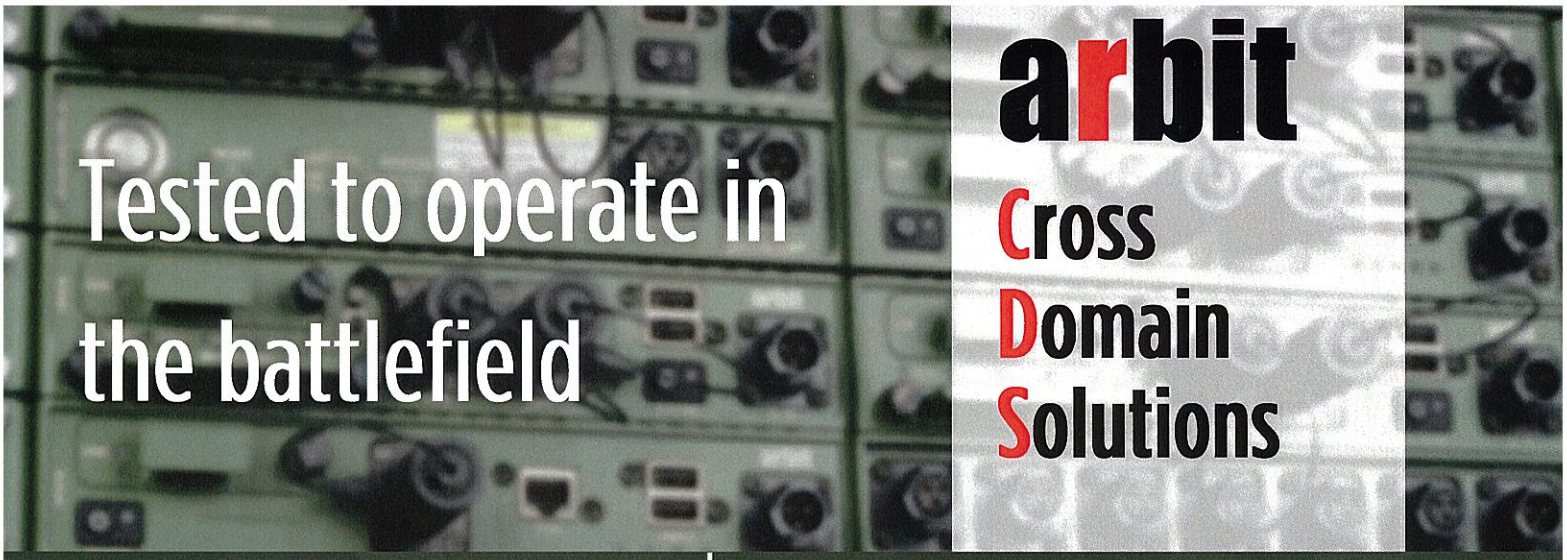
May 2023



Tested to operate in the battlefield

arbit
Cross Domain Solutions

RUGGEDIZED DATA DIODE

Unilateral data transfer between high security networks without the risk of unauthorized remote access or data stealing

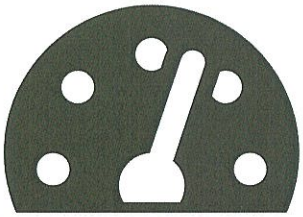
Even the most secure connections can be compromised, and even the most well-protected networks can be penetrated.

The fail-safe solution is to physically separate high security networks from low security networks. While this is the most secure solution, this also severely hampers productivity since it prevents data from being transferred between the networks.

However, with the Arbit Data Diode you can allow one-way data transfer without compromising the integrity of the air-gapped network. By using a single fiber-optic connection which can only send light in one direction, the Arbit Data Diode transports data from less-secure networks, such as the open Internet, to secure networks.

While data is allowed to pass one way, it can never be transmitted the opposite way. This means that no intruders can use the connection to remotely access or steal data from your critical network.

- Common Criteria EAL7+ Certified Hardware
- Accredited NATO COSMIC TOP SECRET and EU TOP SECRET
- The Arbit Data Diode is a 100% secure physical data diode
- Proven stability through 10 years of service
- User-friendly web interface
- Integrates with Microsoft server solutions
- Quick installation and configuration
- Powerful add-ons to control content moving through the diode
- Full integration with OPSWAT multi anti-malware-scanning and CDR
- 700 mbit/s through-put



TEST	GIGABIT (SSD)
Through-put	700 mbit/s
Transactions per second	18,0 (512 KB files)
Transaction failure rate	0 (out of 5 mio. files)

COMPARE SOFTWARE VS. HARDWARE SOLUTION

	Firewall	Software Data Diode	**Arbit Data Diode**
100% protection against data theft	No	No	Yes
100% protection against hackers	No	No	Yes
Secure one-way connection	No	No	Yes
Protected by laws of physics	No	No	Yes

TECHNICAL DESCRIPTION

The Arbit Data Diode is a physical data diode that establishes a physically secure one-way connection with a single fiber-optic cable. The transmission is handled by two dedicated servers.

The sending server is called a pitcher, and the receiving server is called a catcher. No data can be transported from the receiving network to the transmitting network. Therefore, the Arbit Data Diode is just as safe as manual data transfer yet offers the same convenience as a normal network connection.

The Arbit Data Diode has received the Common Criteria EAL 7+ certification, accredited NATO COSMIC TOP SECRET and EU TOP SECRET, listed on NATO IAPC, and meets the ISO-15408

SIZE

- Based on 1U, 19"/2 components
- Data diode 1U 2x19"/2 units

WORKING CLIMATE / TESTED ENVIRONMENTS

- Temperature shock
- Salt/fog
- Vibration
- EMC/EMI Environment

POWER

- Data Diode will run on 12-24 V
- Diode < 170 W

SECURITY CERTIFICATION

The Target of Evaluation (TOE) ensures NO backflow is possible.

Accredited NATO COSMIC TOP SECRET and EU TOP SECRET by CFCS, DK.

FEATURES

- Maximum file size limited only by available disk space
- 64 data channels per diode
- Data channel priority (on transaction basis)
- Supports up to 24 streaming channels (video, radio, etc.)
- Back Pressure in case of critical diskspace
- Notifications by email, syslog, and SNMP
- User-friendly web-interface
- No daily maintenance
- Software runs on hardened Linux

SUPPORTED PROTOCOLS

- Mail (SMTP)
- Simple File Transfer (FTP, SFTP)
- Windows share forwarding (SMB)
- Windows share mirroring (SMB)
- Network File System share forwarding (NFS)
- Network File System share mirroring (NFS)
- Time synchronization (NTP)
- Streaming (TCP, UDP)
- REST API Forwarder (HTTP, HTTPS)

ABOUT

Founded in 2006, Arbit specializes in cybersecurity solutions for organizations requiring the highest security. Arbit's solutions are deployed in top security networks throughout the world, including military organizations, police, and intelligence services.

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RUGGEDIZED C4ISTAR GATEWAY

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Cross
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SECURELY EXCHANGE C2 MILITARY INFORMATION

The Arbit EAL7+ Certified C4ISTAR gateway allows you to securely exchange C2 information between coalition forces on the battlefield, supporting both automated and manual release as well as import of data.

- Common Criteria EAL7+ Certified Hardware
- NATO SECRET and EU SECRET
- Tested to operate in the battlefield
- Verification of Data Signatures
- Two factor authentications
- Open API for custom content filters

SECURE AND TIMELY DATA EXCHANGE

Smaller or larger military formations that have deployed cross domain solutions to obtain the highest security, still have the essential need to exchange timely C2 information between subordinate units and/or coalition forces. The Arbit C4ISTAR gateway supports safe and fast data exchange, supporting both automated and manual release and import of data. The Gateway is accredited NATO SECRET and EU SECRET.

Since the import and export of data is subject to many security procedures and regulations, the Gateway supports a full set of security procedures that can be required for data exchanges.

Typically, classifications, markings, release ability, formats, and origin of data must always be verified and checked before data can be released or exchanged. In addition, some types of information exchanges are extremely time sensitive, such as blue force tracking and cross domain call for fire.

The Arbit C4ISTAR gateway allows you to set validations and checks to meet your security profile, including release procedures (two-factor release), data content validation, validation of signing, classification, and other filters such as multiple virus scanning.

Arbit C4ISTAR Gateway is built on Arbit's hardware-based Data Diode technology and therefore offers a continued network separation with no backflow possible.

The Arbit C4ISTAR gateway can be delivered in two variants – a server room version and a rugged version (only hardware is different). The rugged C4ISTAR getaway is designed and built to operate in the battlefield under the most challenging conditions. All units are 1U 19"/2 and a full gateway is only 3U (UPS and power supply excluded) equipped with NATO standard connectors and designed for vehicle mount.

FEATURES

The Arbit EAL7+ Certified C4ISTAR Gateway platform allows implementation of different security profiles and offers a range of filters and add-ons. The most important feature is that the robust and open API of the Gateway allows you to program and build your own national security profile independent from any contractor support. This is the highest level of security you can get - you own the data as well as the processes.

INTEGRATES WITH

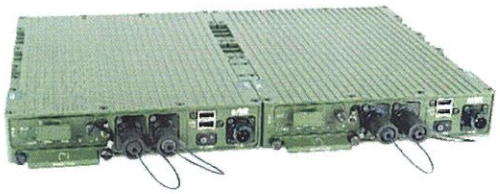
- SYSTEMATIC SitaWare (Command and control software)
- Arbit Trusted Information Release platform (Two factor release of data)
- Arbit Desk Top Gateway (Browse down)
- Arbit WEB Gateway (WEB access)

Logging

Provides full audit log and syslog.

API

Offers open API for building custom content filters (C++ and Java).



Malware Protection

As an OPSWAT partner, the C4ISTAR Gateway integrates with OPSWAT MetaDefender multi anti-malware scanning and CDR.

Verification of Data Signatures

Uses signing technology to securely identify the source of released data. Only approved source systems or individuals can sign data which is then allowed to pass through the gateway.

Two-factor Authentication

Supports signing as standard and NATO Clearing house functions such as Releasing and Clearing officer.

SIZE

- Based on 1U, 19"/2 components
- Data diode 1U 2x19"/2 units
- Server 1U 1x19"/2
- Full gateway 3U 19"

POWER

- Both Gateway and Data Diode will run on 12-24 V
- Server < 200 W
- Diode < 170 W
- Full Gateway less than 800 W

WORKING CLIMATE / TESTED ENVIRONMENTS

- Temperature shock
- Salt/fog
- Vibration
- EMC/EMI Environment

SECURITY CERTIFICATION

The Target of Evaluation (TOE) ensures NO backflow is possible.

Accredited NATO SECRET and EU SECRET by CFCS, DK

ABOUT

Founded in 2006, Arbit specializes in cybersecurity solutions for organizations requiring the highest security. Arbit's solutions are deployed in top security networks throughout the world, including military organizations, police, and intelligence services.

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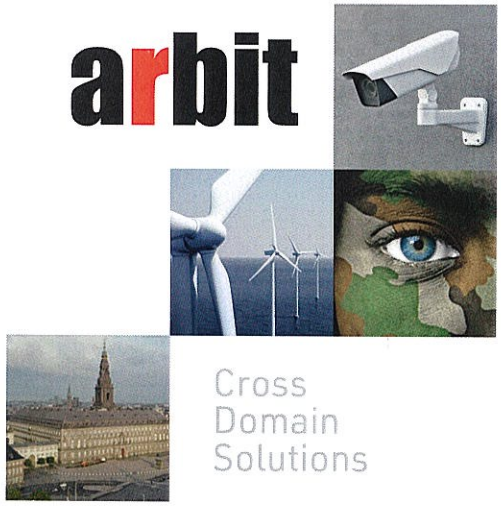


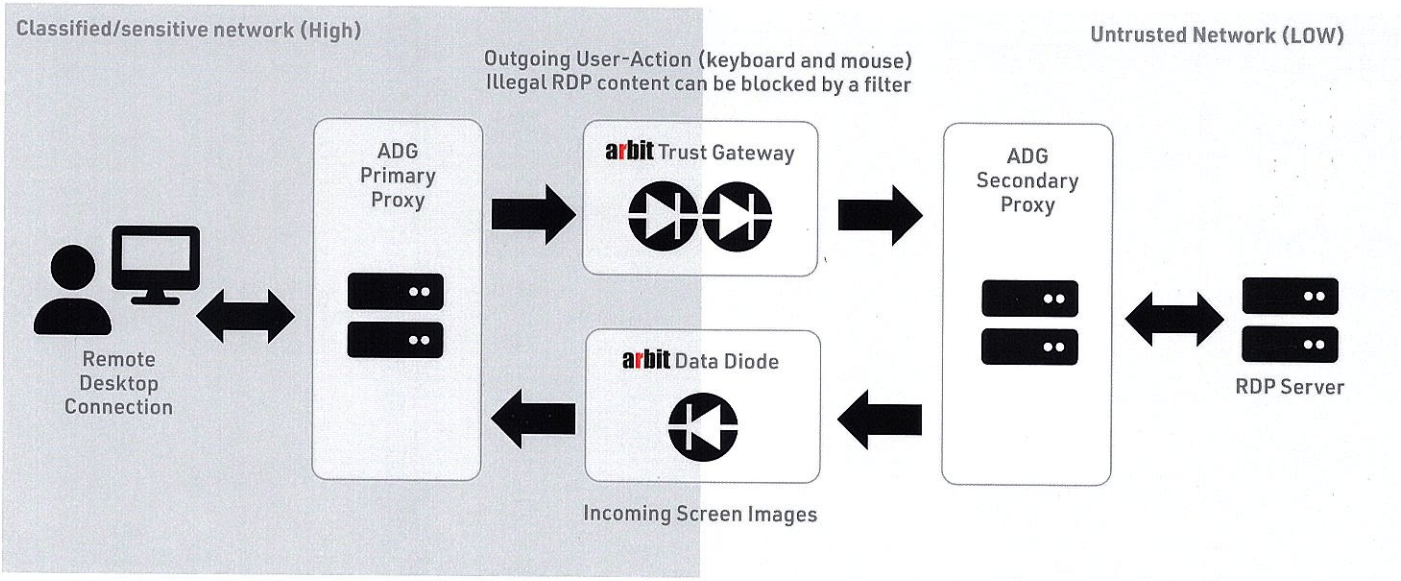
Cross Domain Solutions

Advanced Cross Domain use cases

With Data Diode and Gateway for Armed Forces, Intel, Police and Government, eliminating unauthorized remote access.

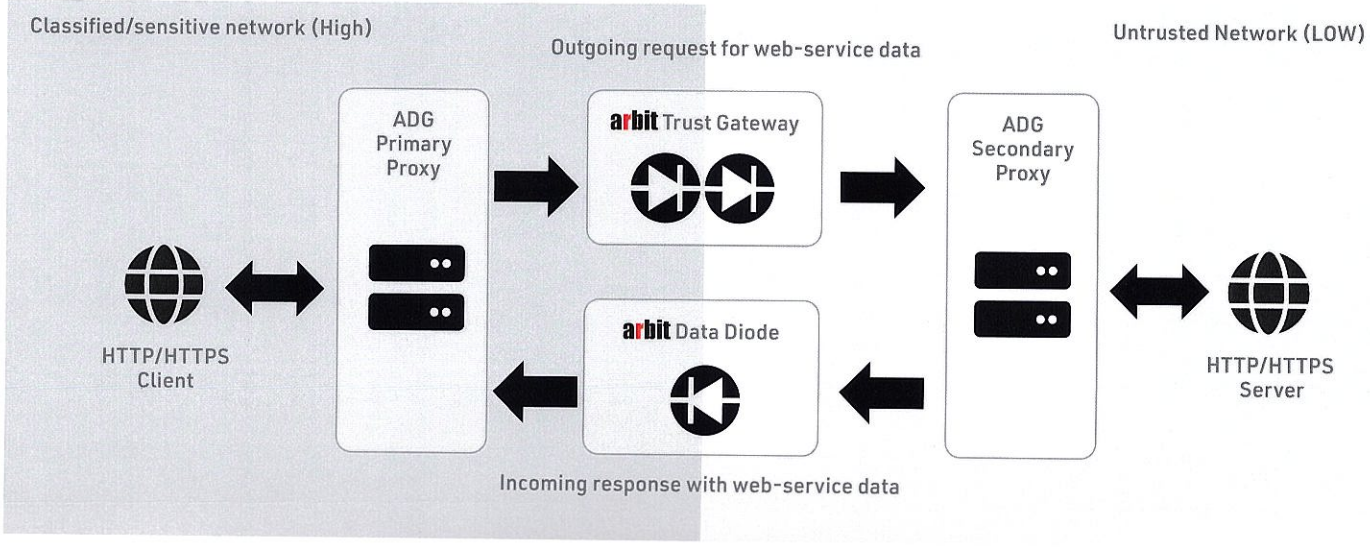
ADG – Arbit Desktop Gateway

Secure remote desktop access from high security networks. Access desktops on other networks from the safety on HIGH side, thus reducing the number of network cables and KVMs required to operate multiple air-gapped networks.



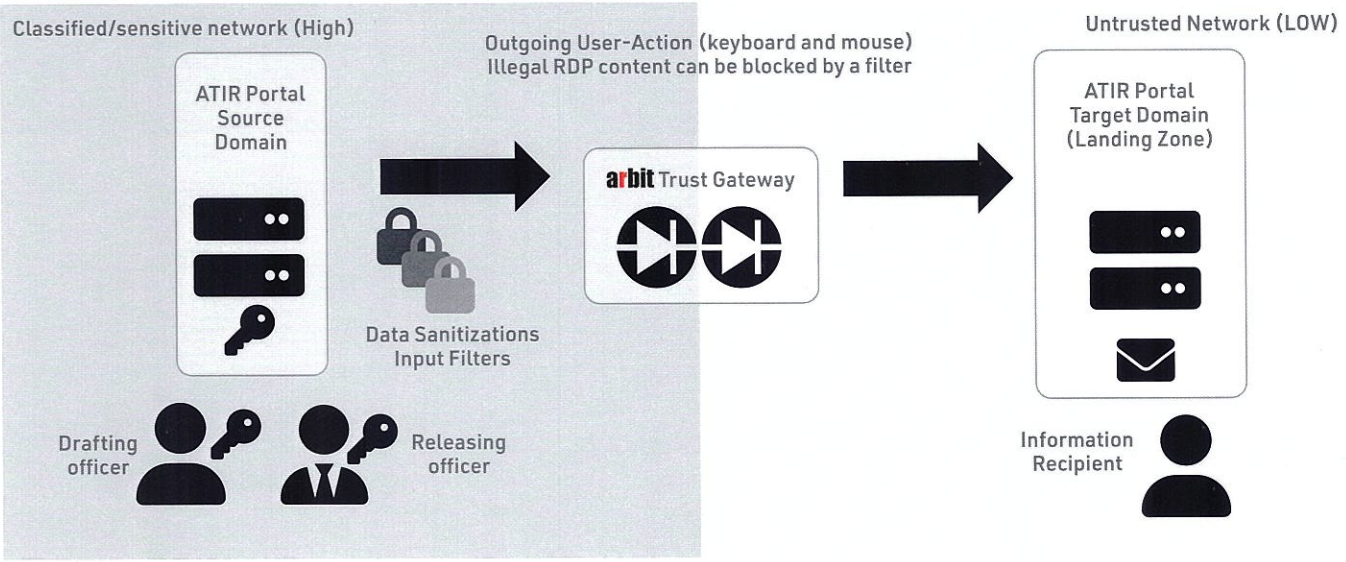
AWG – Arbit Web Gateway

Secure HTTP/HTTPS access from high security networks to web-services hosted on lower classified networks. E.g. access a Web Services Web Map Service (WMS) and get map updates securely transferred from LOW to HIGH.



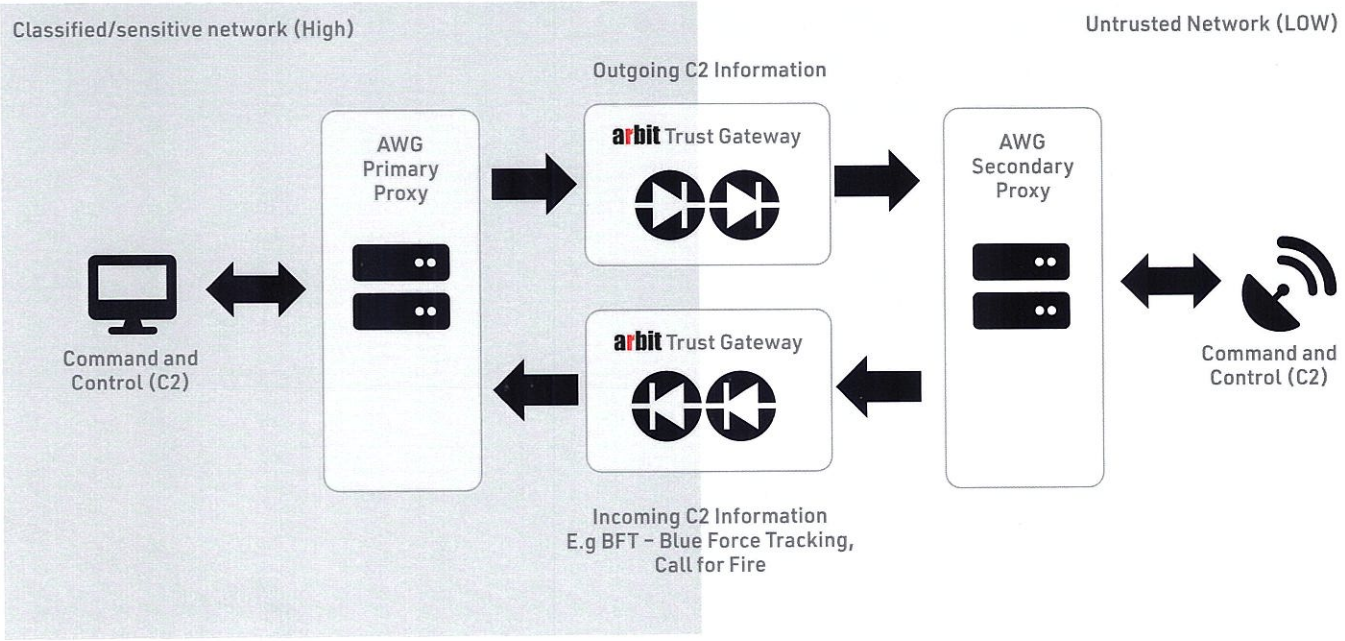
ATIR – Arbit Trusted Information Release

Four-eye release of data from secure networks. Governance, Sanitation and Filters designed to so you can trust the information you release from HIGH to LOW one-way though the gateway.



ARBIT RUGGEDIZED CDS for mobile forces

Enable Command and Control (C2) information securely transferred from LOW to HIGH and HIGH to LOW.



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