

# SPACE ARMOUR



## **ZERO TRUST CYBERSECURITY FOR THE SPACE AGE**

Powered by SDP architecture and Blockchain technology

## The Dawn of the Space Age

The inception of the Space Age in the mid-20th century ushered in a new era of discovery, exploration, and technological advancement. Over the years, the focus shifted from simple exploration to the development of robust space-based systems and technologies, marking an evolution that has fundamentally transformed our way of life. Today, space systems and satellites have become an integral part of everyday life. Their applications are diverse, deeply embedded in our societal fabric, and range from mundane tasks to critical functions.



## Cybersecurity and Space Systems

As our reliance on space-based assets grows, so does the need to protect these systems from cyber threats. Cybersecurity for space systems has become an increasingly important area of focus, given the strategic and societal implications of potential security breaches. The interconnected nature of space and ground systems, combined with the vast and sensitive data they handle, makes them attractive targets for hackers and state-sponsored cyber attacks. Consequently, protecting these assets is of paramount importance to ensure data integrity, service continuity, and national security.

## Zero Trust Security: A Paradigm Shift

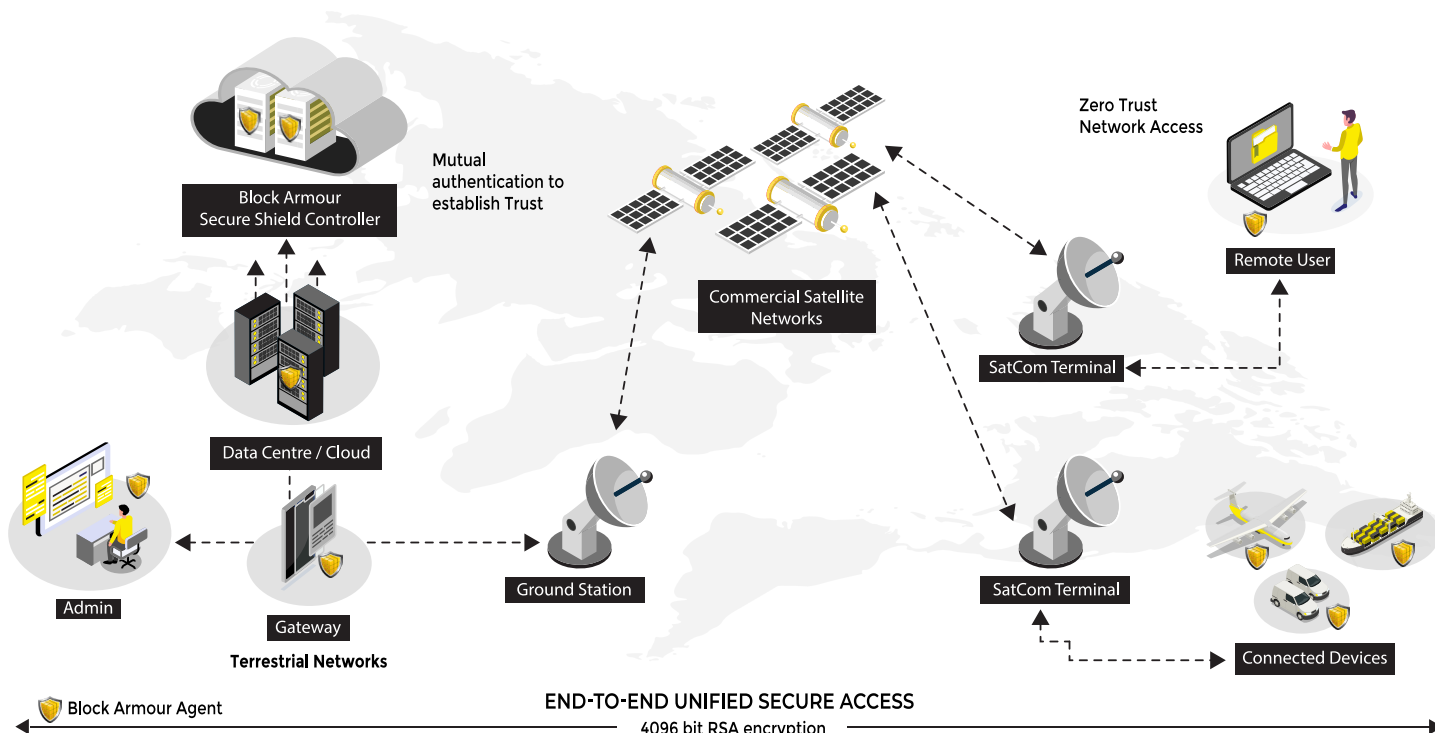
One concept that has emerged as a potent framework to enhance cybersecurity for space systems is Zero Trust security. Unlike conventional security models that inherently trust internal network traffic, the Zero Trust model operates on the principle of "never trust, always verify." This model assumes potential threats can exist both outside and inside the network, therefore requiring continuous validation. In the context of space systems, this means every command or data transmission sent to a satellite, irrespective of its source, must be verified for authenticity before being processed. This includes stringent checks on user credentials, device health, and network connections, ensuring that only legitimate and necessary access is granted, thereby minimizing the attack surface.

# Blockchain-Enabled Zero Trust Security

Integrating blockchain technology into the Zero Trust framework can further enhance its effectiveness. The decentralization, immutability, and transparency offered by blockchain can safeguard against data tampering and single points of failure. Furthermore, Blockchain based digital signatures can be used to effectively identify, authenticate, and authorize all devices. Smart contracts on a blockchain can automate the verification processes, thereby speeding up operations while maintaining high security levels.

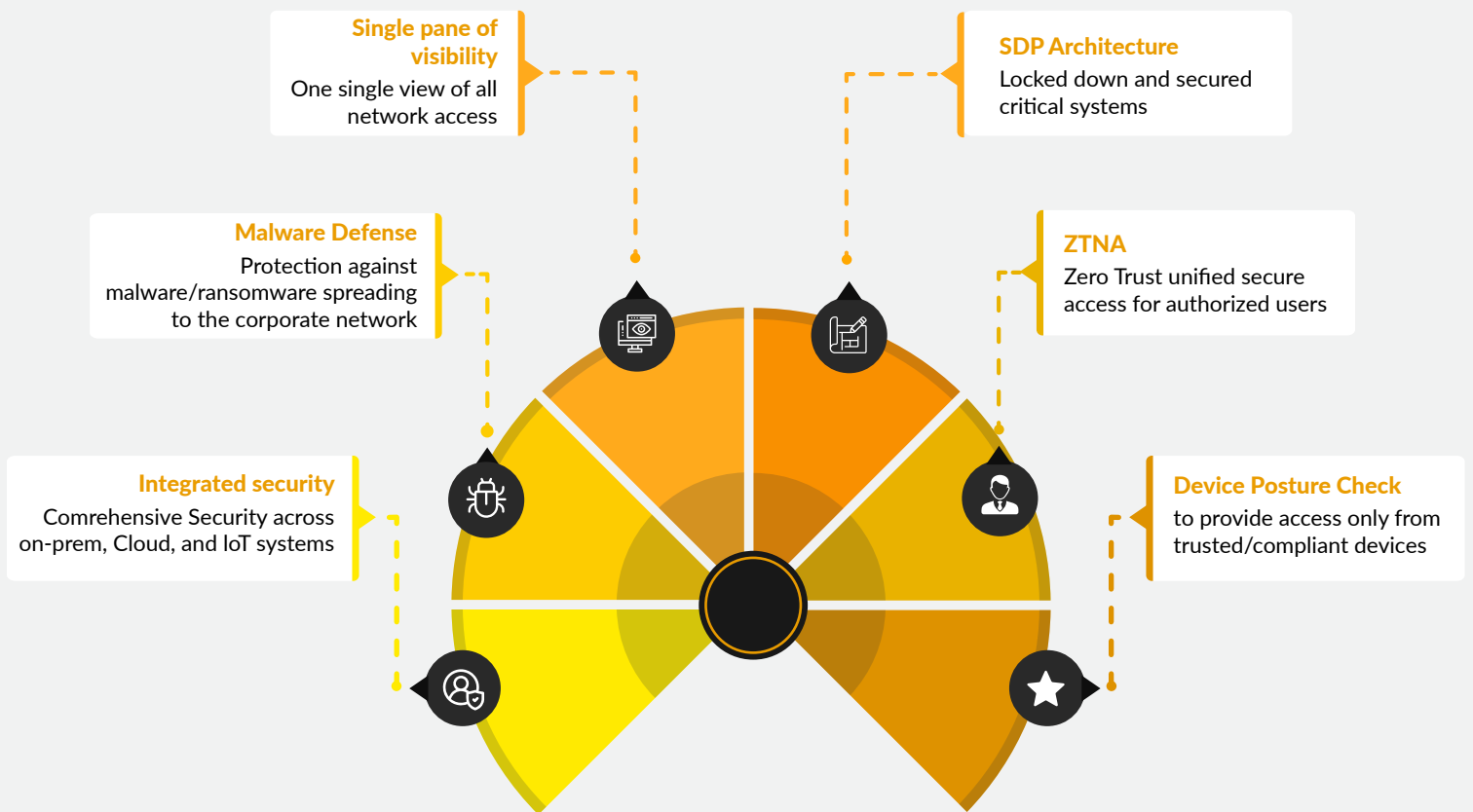
## Space Armour Blockchain Enabled Zero Trust Security For The Space Age

Block Armour extends its award-winning cybersecurity platform to deliver Space Armour – an end-to-end Zero Trust based cybersecurity solution for Satellite Communication Networks and Space Systems. The solution is powered by Software Defined Perimeter (SDP) architecture and private Blockchain technology and is aligned with the NIST Zero Trust Framework. It secures space/ground assets and systems and rides on top of existing SatCom infrastructure to deliver end-to-end ultra-secure satellite-based networks.



The solution uses Blockchain based digital signatures – not just IP addresses – to identify, authenticate and authorize all devices, thus making it well suited for space security use cases. All communication is secured using 4096-bit RSA encryption.

Today, security for space infrastructure is piecemeal - delivered part-by-part (inter-satellite, uplink, downlink, and last mile at both ends) - by the respective segment operators, with exploitable gaps in-between. Space Armour address the challenge by comprehensively securing assets, enabling Zero Trust based unified secure access, and delivering end-to-end ultra-secure government, enterprise, and IoT mesh networks over SatCom.



## Get The Space Armour Advantage

The evolution of space systems has indeed made them indispensable for our daily lives. With the increasing cyber threats, adopting a Zero Trust security model, particularly one enhanced by Blockchain technology, is a promising way forward in securing these critical assets. Space Armour does just that. It represents a new frontier in the cybersecurity of space systems and reinforces the safety of our expanding activities in the cosmos.

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