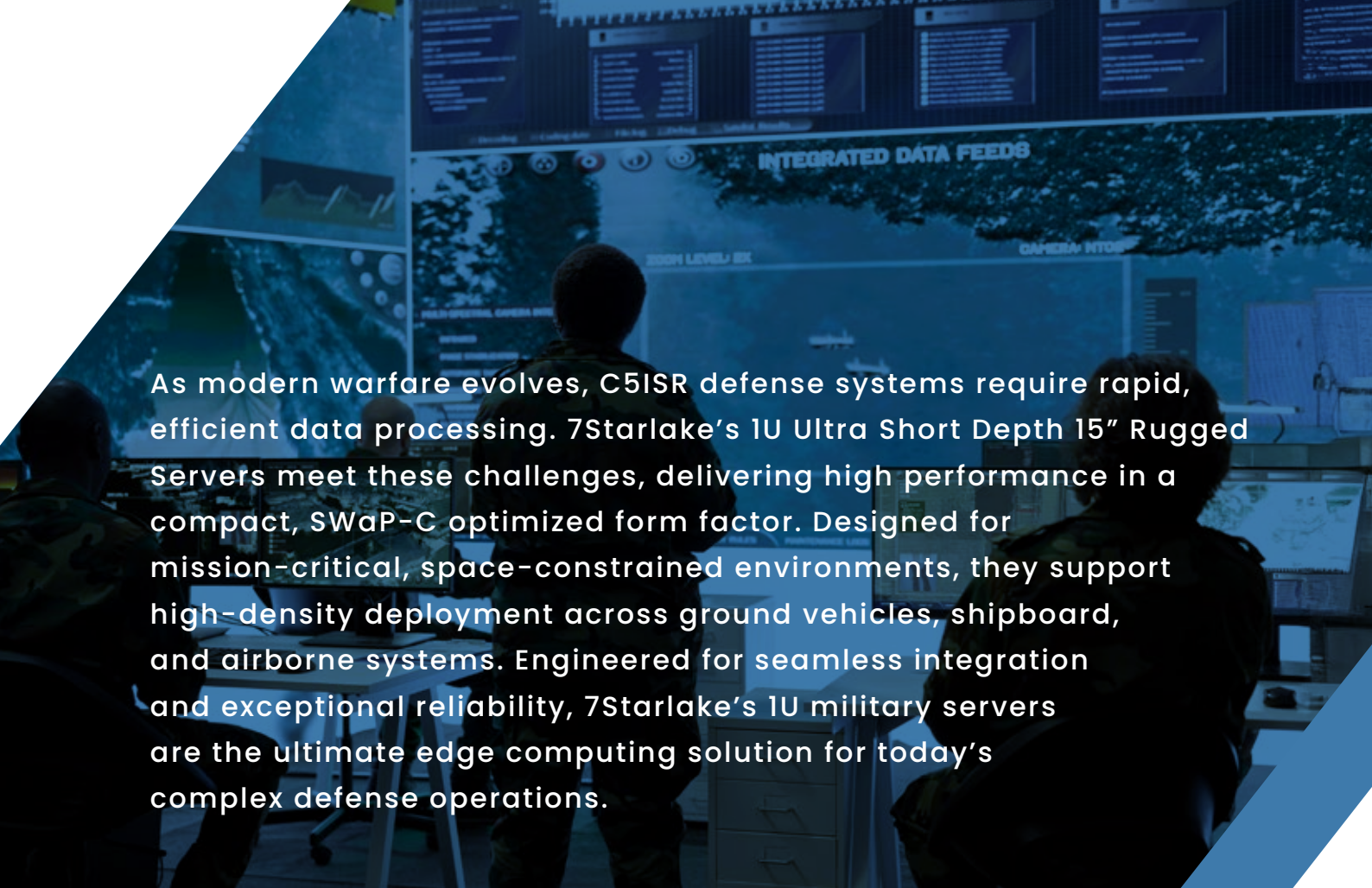# 7STARLAKE

STAR LAKE

ROC280 SERIES

1U ULTRA SHORT DEPTH
MILITARY FANLESS SERVERS

- Intel® 13/14th Core™ i7-13700TE
- Removable Rugged SSD
- Hardware Secure Erase
- Extended Temperature -20ºC to 60ºC
- MIL-STD-461/810
- TEMPEST LEVEL A
- FIPS 140-3 Security

MIL-STD 810

MIL-STD 461

intel partner Gold IoT Solutions

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As modern warfare evolves, C5ISR defense systems require rapid, efficient data processing. 7Starlake's 1U Ultra Short Depth 15" Rugged Servers meet these challenges, delivering high performance in a compact, SWaP-C optimized form factor. Designed for mission-critical, space-constrained environments, they support high-density deployment across ground vehicles, shipboard, and airborne systems. Engineered for seamless integration and exceptional reliability, 7Starlake's 1U military servers are the ultimate edge computing solution for today's complex defense operations.

TEMPEST Level A for Emission Security
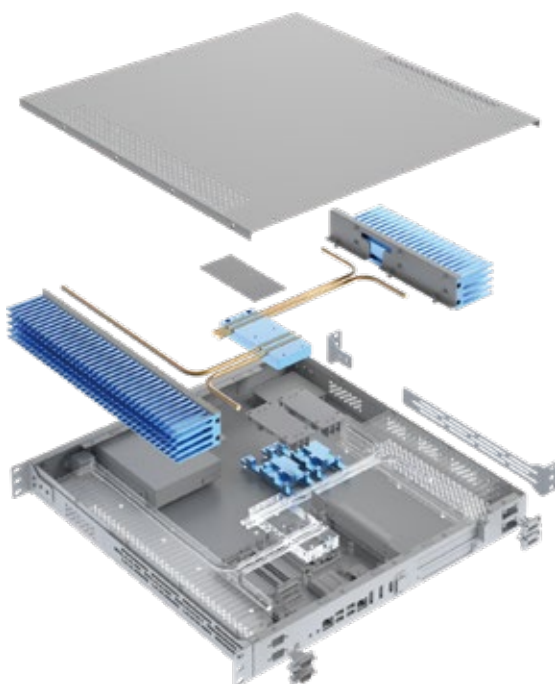
In cybersecurity-focused projects, seamless integration of cyber diode solutions into proprietary systems is essential. 7Starlake's 1U Military ROC280 Servers, built on a robust architecture, support this integration while meeting TEMPEST SDIP-27 NATO Level A requirements. Leveraging advanced expertise in electromagnetic compatibility (EMC), the ROC280 servers deliver secure and reliable performance in harsh environments.

MIL-STD-461 EMI Filter | 18V–36V Input

The ROC280 Ultra Short Depth Servers offer robust protection against voltage surges, spikes, transients, and electromagnetic interference. Engineered for high-stakes military and naval applications, they deliver exceptional durability and reliable performance in demanding environments.

MIL-STD-461 CE102 basic curve, 10kHz - 30 MHz
MIL-STD-461 RE102-4, (1.5 MHz) -30 MHz - 5 GHz
MIL-STD-461 RS103, 1.5 MHz - 5 GHz, 50 V/m equal for all frequencies

MIL-STD-810 | Extreme Environment Ready

The rugged design of the ROC280 ensures exceptional performance in the most challenging environments, withstanding unpredictable terrain, vibration, sudden shocks, and extreme temperatures, guaranteeing outstanding stability and reliability under harsh conditions.

Method 501.5, Procedure I (Storage/High Temperature)
Method 501.5, Procedure II (Operation/High Temperature)
Method 502.5, Procedure I (Storage/Low Temperature)
Method 502.5, Procedure II (Operation/Low Temperature)
Method 503.5, Procedure I (Temperature shock)
Method 507.5, Procedure II (Temperature & Humidity)
Method 514.6, Vibration Category 24/Non-Operating (Category 20 & 24,Vibration)
Method 514.6, Vibration Category 20/Operating (Category 20 & 24,Vibration)
Method 516.6, Shock-Procedure V Non-Operating (Mechanical Shock)
Method 516.6, Shock-Procedure I Operating (Mechanical Shock)

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Hardware Security Erase

AES Encryption

Controller

!@#$% ← Ciphertext → **Key** AES Engine ← Plaintext → Ready to Read

Flash Memory | Hardware AES encryption / decryption | Host

▸▸ **INSTANT ERASE**

Controller

!@#$% → Ciphertext → **New Key** AES Engine → Ciphertext → !@#$%

Flash Memory | Hardware AES encryption / decryption | Host

In emergencies that require immediate data erasure, the Secure Erase Button offers Instant Erase for Self-Encrypting Drives (SEDs), delivering superior speed and security compared to traditional Quick Erase methods.

FIPS 140-3 Standards

FIPS 140-3

The ROC280 rugged servers meet the stringent requirements of FIPS 140-3 for cryptographic modules, aligned with ISO/IEC 19790:2012. They provide robust hardware-based cryptographic protection to support secure handling of sensitive data. Built for resilience against security threats, the ROC280 is suitable for deployment in federal systems, critical infrastructure, and other high-assurance environments.

Exclusive Protection Cap

❶ Open the Protection cap
❷ Press button to destroy the SSD AES key
❸ Data/partition becomes unrecognizable

Dual Removable SSD with Anti-drop Protection

The dual removable SSD enables quick and easy swapping for maintenance and replacement. This compact, self-contained storage solution ensures reliable data storage and retrieval. To further enhance operational safety, 7STARLAKE has developed a unique anti-drop protection feature that prevents the SSD from falling out during training or machine operation.

Swappable CMOS Battery

To exchange the battery from a rugged computer could be complicated and might affect the water and dust resistance function. The easy swappable battery tray in ROC280 allows users to directly replace the new battery. Simply pull out the tray, change the battery, push the tray back, and lock the screw.

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Specifications

		ROC280-MG	ROC280-MA
		Intel 14th/13th Raptor Lake-S/R	Intel 14th/13th Raptor Lake-S/R
	CPU	i7-14701TE/ i9-13900TE	i7-14701TE/ i9-13900TE
	Memory	DDR5- 64GB	DDR5- 64GB
	Chipset	Q670E	Q670E
Security	TPM	TPM 2.0	TPM 2.0
Storage	SATA 3.0	Easy swap tray	Easy swap tray
	NVMe (M.2 2280)	SATA 3.0, PCIe3.0 x 4	SATA 3.0, PCIe3.0 x 4
PSU	Power input	18~36 DC	12V~36V Redundant DC
	D38999	1	1
Expansions	Hardware Secure Erase	1	N/A
	1 x M.2 2230 (E)	1	1
	1 x M.2 3042 (B)	1	1
I/O	LAN	3 x 2.5GbE RJ45	3 x 2.5GbE RJ45
	Display Port	2	2
	HDMI	2	2
	Audio	1 x MIC, 1 x Line-Out	1 x MIC, 1 x Line-Out
	USB 3.1	6 x USB 3.1	6 x USB 3.1
	USB 2.0	2 x USB 3.0	2 x USB 2.0
	Thermal Type	Fanless Conduction Cooled	Rugged Air Cooled
	Dimension(WxDxH)	430 x 380 x 44 mm	430 x 380 x 44 mm

This datasheet is for marketing purposes only and does not constitute a warranty. All specifications, dimensions, and data are subject to change without notice. For the latest specifications and updates, please contact your 7STARLAKE representative.

Contact us

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More Information

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