- Military-Grade Personal Compute Device with Jetson Orin NX SOM
- Nett Warrior Ecosystem Compatible
- Industry-Leading Passive Cooling
- Rapid Development Ready with Latest NVIDIA JetPack OS Support
- Dedicated Gigabit Network and Video Display Ports
- IP68 Ingress Protection
- Best-In-Class Form Factor
- Field Ready with Optional Enhanced Security Through Carnegie Robotics' Secure OS

CARNEGIE ROBOTICS

PHYSICAL

DIMENSIONS	5.1 in. x 4.1 in. x 1.4 in. (12.9 cm x 10.5 cm x 3.6 cm)
WEIGHT	1.3 lbs. (0.6 kg)
MATERIAL	ALUMINUM
COLOR & FINISH	DARK EARTH ANODIZED

ENVIRONMENTAL

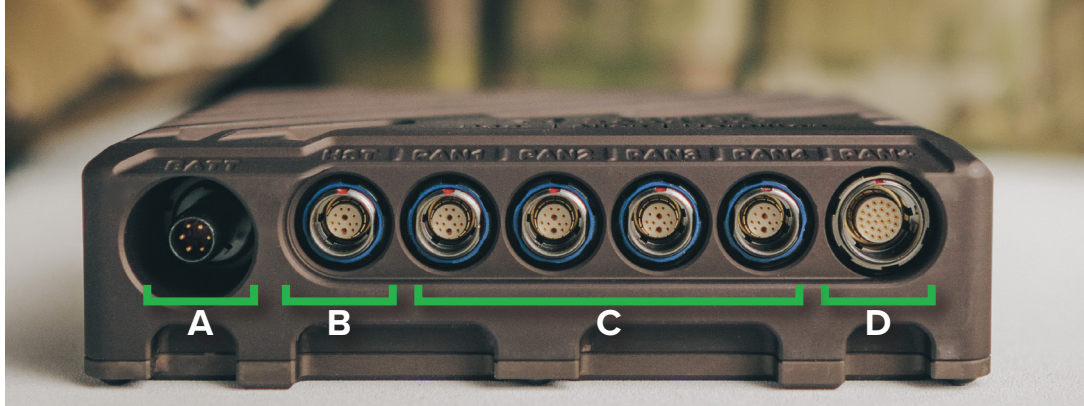|		
OPERATING TEMPERATURE	-4° F to 122° F (-20° C to 50° C)	
STORAGE TEMPERATURE	-40° F to 159° F (-40° C to 71° C)	
INGRESS PROTECTION	30 mins. / 1.5m	IP68
SHOCK	MIL-STD-810H METHOD 516.8, PROCEDURE I	
DROP	MIL-STD-810H 516.8, PROCEDURE IV (LOGISTIC TRANSIT DROP TEST)	
VIBRATION	MIL-STD-810H TABLE 514.8C-VIII, CATEGORY 4	
SAND AND DUST	MIL-STD-810H 510.7	
SALT FOG	MIL-STD-810H 509.7	
RAIN	MIL-STD-810H 506.6	
ELECTROMAGNETIC INTERFERENCE (EMI)	MIL-STD-461G CE102, CS101, CS114, CS115, CS116, CS118, RE102, RS103, MIL-STD-464C 5.3 (GROUND)	
ELECTROSTATIC DISCHARGE (ESD)	MIL-STD-461G CS118	
COMPLIANCE	RoHS, FCC CFR PART 15 SUBPART B	

COMPUTE

SYSTEM ON MODULE	NVIDIA JETSON ORIN NX 16 GB
AI PERFORMANCE	100 TOPS
GPU	1024 CORE AMPERE, 32 TENSOR CORES
CPU	8-CORE ARM® CORTEX-A78AE
MEMORY	16 GB 128-BIT LPDDR5 102.4 GB/s
DL ACCELERATOR	NVDLA v2.0 (2x)
VISION ACCELERATOR	PVA v2.0 (1x)
STORAGE	2 TB INTEGRATED SSD, PCIe GEN. 4
REAL-TIME CLOCK	INTEGRAL BATTERY BACKUP

Want to Learn More?

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CARNEGIE ROBOTICS

INPUTS / OUTPUTS

A. BATTERY PORT

- 10 - 18 VDC via Nett Warrior compatible 6-pin connector
- Overvoltage and overcurrent protection (6A)
- Integrated SMBus connection for use with conformable, wearable batteries

B. HOST PORT

- 12-pin ODU AMC® HD connector
- USB 3.0 (up to 5Gbps) and USB 2.0 data
- USB Power Delivery, supports Fast Charging connected host devices, 25W maximum
- Unregulated 10 - 18 VDC battery power, 4.5A maximum, current-limited and reverse-polarity protected

C. PAN PORTS (x4)

- 12-pin ODU AMC® HD connector
- USB 3.0 (up to 5Gbps) and USB 2.0 data
- Regulated 5v USB power, 2A maximum, current-limited and reverse-polarity protected
- Unregulated 10 - 18 VDC battery power, 4.5A maximum, current-limited and reverse-polarity protected

D. PAN+ PORT

- 27-pin ODU AMC® HD connector with dual functionality (Gigabit Ethernet and Displayport v1.4)

www.carnegierobotics.com
Cardshark™ Datasheet, Rev. C
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CARDSHARK™

MILITARY-GRADE, BODY WORN COMPUTE DEVICE

CARNEGIE ROBOTICS

[1.41in]
35.84mm

[5.09in]
129.25mm

[4.14in]
105.11mm

[3.00in]
76.20mm

4X M3X0.5 -
(FOR MOLLE OR FIXED MOUNTING)

[3.78in]
96.11mm

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