ACE-**AR**

ADVANCED AR HELMET TECHNOLOGY

IIIL

RHEINMETALL

ADVANCED COMBAT ENVIRONMENT – AUGMENTED REALITY

Delivering immediate situational awareness and mission critical data inside confined, space-limited environments.

Designed with the user in mind, experience full HD resolution dual-eye display and best-in-class eye relief, eliminating eye fatigue and nausea.

ENGAGE WITH THE SITUATION

- Full HD resolution, Dual eye display, Low latency video display

ALL TOGETHER, ONE MISSION

- Glass armour visualization, Augmented tactical view, Shared context, Operator reticle, Markers

INTEGRAL TO THE PLATFORM

- GVA compliant platform connectivity, Follow and anchor (replacement displays)

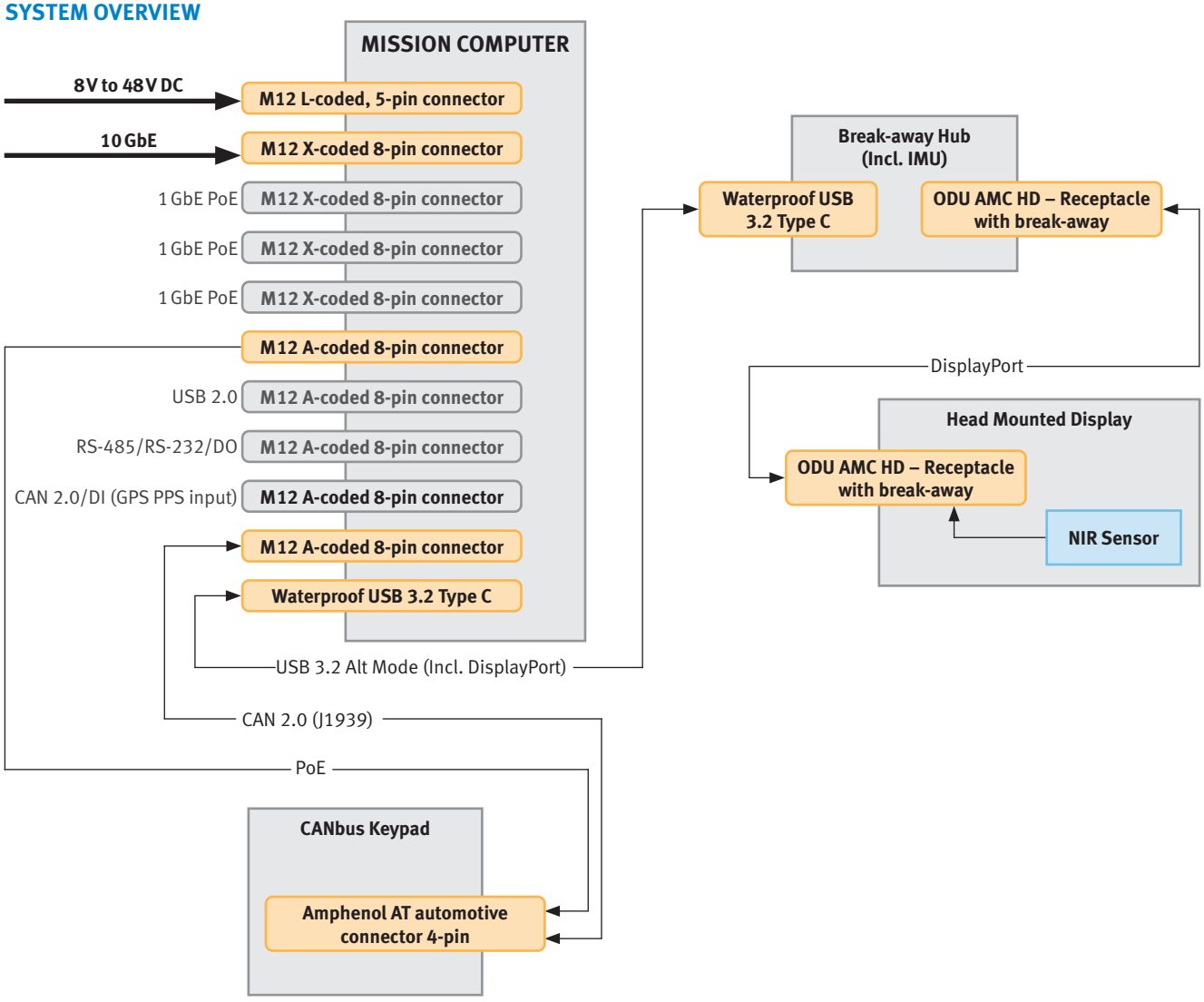
SUSTAINED USER OPERATION

- Ultra-low motion latency, Best-in-class eye relief, SWaP optimized, High optical transmissivity

CONNECTED KIT

- Accessory options: ARC rail & NVG mount compatible, Break-away helmet link, Ballistic glass visor

SYSTEM OVERVIEW



HEAD MOUNTED DISPLAY

Size	Approx. 193 mm x 92 mm x 62 mm (with ballistic visor attached)
Weight	Approx. 380 g (with ballistic visor attached)
Display	Dual-eye display/Single focal plane/1920 p x 1080 p resolution/VRR up to 60 Hz
FoV	42° x 24°
Effective brightness	Up to 120 nits
Head tracking	High frequency IMU up to 500 Hz
Sensors	Custom no distortion NIR sensor/800 nm bandpass filter
Operating environment	Temperature –15°C to 50°C/Humidity: 20 – 80%
Ingress protection rating	IP66
Power consumption	Approx. 10 W (≈1.1 A @ 9 V)
Accessories	Ballistic visor (clear/shaded)/Custom ARC rail mount/Wilcox BNVD shoe mount/Rugged HMD Case

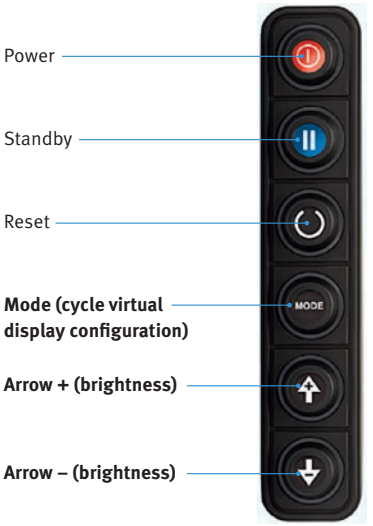
MISSION COMPUTER

ACE AR 02-20-01 Mission Computer

AI-generated image. Product image for illustrative purposes only.

Size	Approx. 225 mm x 195 mm x 89 mm
Weight	Approx. 4.4 kg (excluding wall-mounted bracket)
CPU/GPU	NVIDIA® Jetson AGX Orin™ system-on-module (SOM), comprising NVIDIA® Ampere GPU and Arm Cortex-A78AE CPU
Buttons	POWER button
Ethernet port	1x 10 Gigabit Ethernet port via M12 X-coded 8-pin connector
	4x Gigabit Ethernet ports by Intel® I350 via M12 X-coded 8-pin connector
USB 2.0	2x USB 2.0 ports via M12 A-coded 8-pin connector
USB 3.2 + Video port	1x Waterproof USB Type C (USB 3.2 Gen1 and 1x DisplayPort, supporting 3840 x 2160 at 60 Hz)
Serial port + DO	1x isolated RS-485, 1x RS-232, and 1x isolated DO via M12 A-coded 8-pin connector
CAN bus + DI	2x isolated CAN 2.0, and 1x isolated DI (GPS PPS input) via M12 A-coded 8-pin connector
System monitoring	1x isolated CAN 2.0 port and 1x isolated DO via M12 A-coded 8-pin connector by automotive-grade MCU
Power supply	DC Input 8 V to 48 V DC input and ignition power control via M12 L-coded, 5-pin connector
Operating environment	
Temperature	–15 °C to 50 °C
Humidity	20 – 80%
Vibration	MIL-STD-810H, Method 514.8, Category 4/
Shock	MIL-STD-810H, Method 516.8, Procedure I
Ingress Protection Rating	IP66
Power consumption	Active mode: 20 W (not including HMD power consumption)

CAN BUS KEYPAD



ACE AR 30-01-01 CAN bus keypad

Size	Approx. 36 mm x 182 mm x 20 mm
Weight	Approx. 130 g
CAN bus (J1939)	Automotive connector 4-pin
Operating Environment	
Temperature	–15°C to 50°C
Humidity	20 – 80%
Vibration	IEC 60068 2-6 3-axis X,Y,Z 10-150 Hz 0.15 mm
Shock	IEC 60068 2-27 3-axis X,Y,Z 50 Gs 11 ms
Ingress Protection Rating	IP67

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