

# Allegro AX

- **Increase Operational Efficiency** — Android OS and the quad-core processor deliver fast performance. The CartoPac Cathodic Protection software for indirect surveys has been thoughtfully designed to streamline workflow, and features like maps help users quickly see what has been surveyed and what needs to be surveyed next.
- **Powerful Integrated Package** — Integrated alphanumeric keyboard is ideal for rapid data entry, the high visibility screen is viewable in sunny environments, and the DVM slots into the back of the Allegro AX so you do not need to keep track of multiple components when you go out to the field.
- **Ultra-Rugged** — Meeting IP68 and MIL-STD-810G ratings, the Allegro AX is designed to work in the most extreme conditions. Rain, extreme temperatures, or dust will not get in the way of your productivity.
- **DVM For The Cathodic Protection Industry** — The integrated Digital Voltmeter, DVM1110, is built upon our patented technology to ensure highly accurate measurements in less than optimal environments.





#### PROCESSOR

- 1.2GHz quad-core ARM Cortex A9 i.MX6

#### OPERATING SYSTEM AND SOFTWARE

- Android 7.1 (AOSP)

#### MEMORY

- 2 GB RAM
- 16 GB flash storage
- User-accessible micro SD/SDXC slot

#### WIRELESS CONNECTIVITY

- Bluetooth® wireless technology, 4.2 BR/BDR/BLE "Smart Ready", Class 1.5, range greater than 100 feet (30 m)
- Wi-Fi® 802.11b/g/n

#### DISPLAY

- Active viewing area: 4.2 inch (107 mm)
- VGA LCD TFT (640 x 480) landscape display
- High-visibility backlit LCD

#### TOUCHSCREEN

- Projected capacitive touch interface
- Chemically-strengthened glass
- Scratch-resistant screen

#### ENVIRONMENTAL

- IP68 waterproof & dustproof  
- Water: 1.4 m for 30 minutes
  - Operating temperature: -22° F to 140° F (-30° C to 60° C)
  - Storage temperature: -22° F to 158° F (-30° C to 70° C)
  - Shockproof: multiple drops from 4' (1.22 m) onto concrete
- Designed to meet MIL-STD-810G test procedures: Method 500.5 Low Pressure (Altitude); Method 501.5 High Temperature; Method 502.5 Low Temperature; Method 503.5 Temperature Shock; Method 506.5 Rain; Method 507.5 Humidity; Method 510.5 Sand and Dust; Method 512.5 Immersion; Method 514.6 Vibration; Method 516.6 Shock

#### PORTS

- 12V DC power input jack
- USB-C, USB 3.1OTG no battery charging x 1
- Optional RS-232 9-Pin D-Sub connector with 5V DC or 12V DC power output
- Dock connector (Pwr, USB 2.0, & HDMI)

#### BATTERY

- Intelligent Li-Ion battery 3.6VDC @ 12000 mAh, 43.2 Whr
- Operates up to 20 hours on one charge
- Charges in 5.5 hours typical
- Battery easily changeable in field
- Optimized for performance in cold temperatures

#### PHYSICAL

- Size, Standard models: 5.4" w x 10.2" l x 1.6" d (138 mm x 256 mm x 40 mm)
- Weight: 2 lbs (908 g), with battery
- Durable hardened plastic in a shear-proof and shock-resistant design
- Strong chemical resistance
- Comfortable, wide hand strap
- Easy-to-grip, impact-absorbing bumpers

#### CAMERA

- MP resolution with autofocus and LED illuminator + video capture

#### GPS/GNSS

- High-sensitivity GPS, GLONASS, Galileo, BeiDou, QZSS, SBAS receiver
- Accuracy: SBAS 2 meters; autonomous 5 meters
- Concurrent GNSS constellation resolution
- NMEA-0183 ver. 4.0 out
- 72-channel u-blox M8 engine

#### CERTIFICATIONS AND STANDARDS

- FCC Class B, CE Marking, Industry Canada
- EN60950/EN62368 Safety

#### Accuracy by Range:

	Range	Accuracy**	Temp Coefficient
DC	500 mV	$\pm 0.1\% + 0.025 \text{ mV}^*$	0.007% / °C
	5 V	$\pm 0.1\% + 0.001 \text{ V}^*$	0.007% / °C
	250 V	$\pm 0.1\% + 0.05 \text{ V}^*$	0.007% / °C
AC	350 mV	$\pm 1\% + 0.105 \text{ mV}$	N/A
	3.5 V	$\pm 1\% + 0.00105 \text{ V}$	N/A
	175 V	$\pm 1\% + 0.0525 \text{ V}$	N/A

#### Accuracy Examples:

	Signal	Accuracy:
DC	100 mV	$\pm 0.13 \text{ mV}$
	850 mV	$\pm 1.9 \text{ mV}$
	50 V	$\pm 0.1 \text{ V}$
AC	100 mV	$\pm 1.1 \text{ mV}$
	850 mV	$\pm 9.5 \text{ mV}$
	50 V	$\pm 0.55 \text{ V}$

\*This input has a range and impedance specially designed for measuring shunts more accurately.

\*\*Accuracy shown is for operation in temperatures from 15°C to 35°C. Annual calibration is required to maintain DVM accuracy.

†DC voltage error increases by 0.1% in the presence of 35 to 100 volts of AC interference.

††AC voltage accuracy applies to input frequencies of 50 or 60 Hz.