



FEILD PROVEN TECHNOLOGY
TAILORED FOR YOU BY TRUSTED
CONSERVATIONISTS

PRODUCT BROCHURE

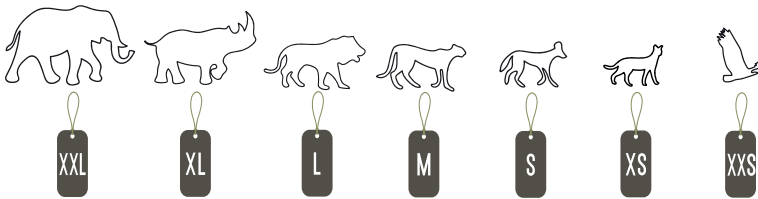
TAILORED TO SUIT YOUR NEEDS





Tried and trusted basic animal tracking

VHF Collars



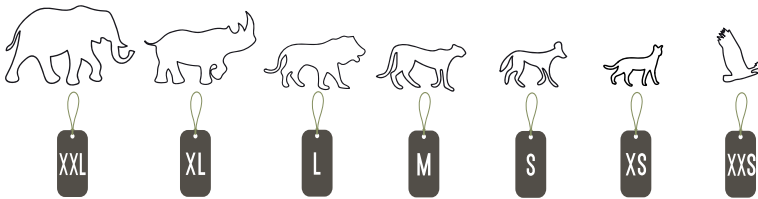
VHF transmitters have been around for decades, and for good reason. Transmitters are available in small sizes with good battery life. The technology offers the operator an immersive experience in locating animals in the wild. VHF transmitters are best used when animals are to be found and visually monitored very regularly. The total cost per location acquisition from a VHF transmitter is very high due to the manual nature of tracking using VHF technology. Previously, Wildlife Act Innovations has outsourced VHF transmitters but we have recently developed a digitally programmable VHF transmitter that is comparable to our overseas competitor's. Our VHF transmitters can be used with all other collar variations and run off their own battery.





The first automated tracking

GNSS (GPS) Cellular



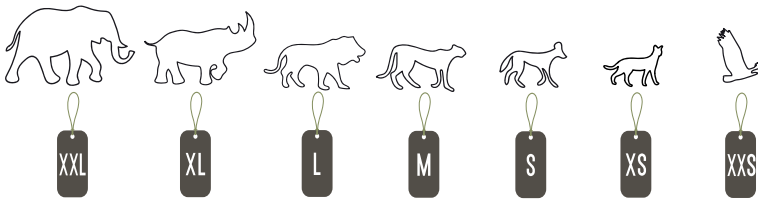
GNSS Cellular collars, also known as GPS GSM or GPS Cellular collars, offer fully remote automated data collection and delivery. Location data is autonomously collected by the tracking device and delivered to the user via cellular networks and the Internet. The technologies involved have been around for a very long time and the physical size of the tracking devices are getting ever smaller. One of the greatest challenges with this technology option remains the poor reach of cellular networks into rural areas. It is a cost-effective option for the collection of location data over time as it requires no manual effort from the user.





Automated tracking without terrestrial infrastructure

GNSS (GPS) Satellite



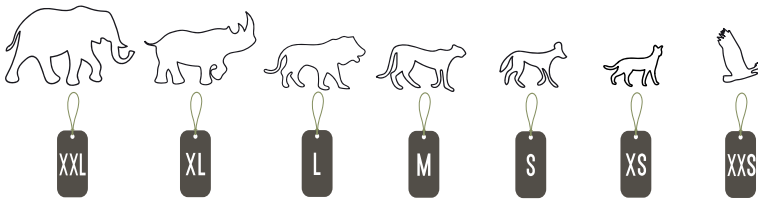
GNSS Satellite collars, also known as GPS Satellite collars, offer fully remote automated data collection and delivery. Location data is autonomously collected by the tracking device and delivered to the user via a satellite network and the Internet. The technologies involved have been around for a very long time but the physical size of the tracking devices have only been small enough to track medium sized animals since around 2011. The greatest challenges with this technology option are the need of good sky view for data communication, the cost of satellite data services and the amount of power required to communicate to a satellite. It can be a cost-effective option for the collection of location data over time as it requires no manual effort from the user. Wildlife Act Innovations prefers using Iridium as our satellite service provider, but also offers Globalstar solutions.



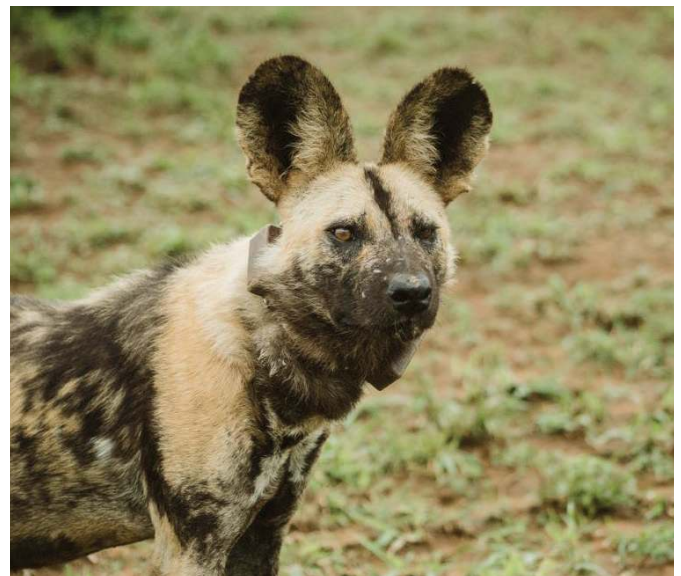


Logging with local radio delivery *(including LoRa & SigFox)*

GNSS (GPS) UHF



GNSS UHF collars, also known as UHF download collars, offer fully remote automated data collection. Depending on the system deployed, the delivery of the data could be automatic to a network of 'base stations' or data could be manually downloaded wirelessly from the collar by field personnel. Location data is autonomously collected by the tracking device and stored in memory on the tracking device or immediately sent to a base station. GNSS UHF tracking devices have been around for a long time and are small and low power enough to be used on small animals. The greatest challenges with this technology option are the need of line-of-sight between the tracking device and base station or download receiver, the practical range and of the radio link and the download speed that is achievable via the radio link. It can be a cost-effective option for the collection of location data over time as it requires no manual effort from the user for data collection but if there is no base station infrastructure in place, the data needs to be manually downloaded in the field by the user. Wildlife Act Innovations has proprietary point-to-point radio technology, but utilises the LoRa and SigFox network services where they are available. We also deploy our own gateways and networks and offer managed services and maintenance contracts on these LoRaWAN systems.





How they stack against each other

Technology comparison tables

This is an at-a-glance summary of the technologies we have to offer, their pros and cons. Often the best solution is a combination of technologies deployed in the same area. For example, in our extensive work with wild dogs (*Lycaon pictus*) we have found that collaring the pack with UHF (LoRa) collars and putting a single Iridium Satellite collar on an individual gives the best results. Please contact our experts for a discussion on your needs, project outline and goals achievable and we will help you with the best selection of products.

Table 1: Comparison chart of each technology in isolation

Technology	Physically finding the animal	Ease of Data Collection	Data Richness	Cost per Location	Cost of operating	Rank for use in vast areas	Rank for use in small areas	Battery Life	Rank Size
VHF Transmitter	Good	Very poor	Very poor	Very high	High	Third Best	Worst	Excellent	Smallest
GNSS Cellular*	Poor	Excellent	Excellent	Very low	Low	Second Best	Second Best	Very Good	Third Smallest
GNSS Satellite	Poor	Excellent	Very good	Low	Medium	Best	Second Best	Good	Biggest
GNSS UHF	Poor	Very good	Excellent	Low	Low to High	Worst	Best	Excellent	Second Smallest



How they stack against each other

Technology comparison tables

Table 2: Comparison chart of each technology in conjunction with VHF

Technology	Physically finding the animal	Ease of Data Collection	Data Richness	Cost per Location	Cost of operating	Rank for use in vast areas	Rank for use in small areas	Battery Life	Rank Size
VHF Transmitter	Good	Very poor	Very poor	Very high	High	Worst	Worst	Excellent	Smallest
GNSS Cellular*	Very Good	Excellent	Excellent	Very low	Low	Second Best	Second Best	Good	Third Smallest
GNSS Satellite	Very Good	Excellent	Very good	Low	Medium	Best	Second Best	Medium	Biggest
GNSS UHF	Very Good	Very good	Excellent	Very Low	Low to High	Third Best	Best	Very Good	Second Smallest



Species Specific Gallery

Wildlife ACT Innovations tracking products are field proven, trusted by experienced conservationists and built to withstand harsh and impactful environments. Each product is built to your specific requirements with the most appropriate technology used.

Please contact our experts for a discussion on your needs, project outline and goals achievable and we will help you with the best selection of products.

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Pangolin Tag



Rhino Horn Pod



Rhino Ankle Collar



Solar Vulture Backpack



Standard GPS Collar



Standard VHF Collar