



GROUND · CS-230

THE PRODUCT IS THE PACK — NOT THE UNIT

Eight coordinated carriers. One fibre trunk. One operator. Nothing to jam.

DISTRIBUTED CARGO · RECON PODS · RELAY NODES · ROUTE SURVEY

- PATENT PENDING
- EXPORT-CONTROLLED — INTERNATIONAL TRANSFER SUBJECT TO CANADIAN GOVERNMENT PERMITS
- COORDINATED CARRIERS — NEVER A STRIKE PLATFORM

×8 COORDINATED UNITS IN THE PACK — ONE OPERATOR	20 KG PER-UNIT BAY PAYLOAD — ~160 KG DISTRIBUTED PER PACK	96.2 % 6-OF-8 PACK AVAILABILITY AT 0.90 PER UNIT — BINOMIAL UPPER BOUND	0 RADIO OR GPS EMITTERS — ON ANY UNIT, IN ANY TIER
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OVERVIEW

A PACK THAT DEGRADES GRACEFULLY WHERE A SINGLE VEHICLE FAILS ABSOLUTELY.

Part of the **6-system Ground line** — shares its envelope and doctrine with Grizzly, Moose, Lynx.

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Wolf CS-230 is the ground family's coordination tier: a pack of eight small, deliberately plain tracked carriers — 80 kg apiece — whose value lives not in any one hull but in what eight of them do together.

Each unit is a moulded GF-nylon tub sized for numbers: cheap to build because the chassis is a moulding, not a weldment. Each carries 20 kg in a single standardized bay — a dimensional subset of the family deck standard — so a pack fields a mix: recon pods, relay nodes, cargo panniers, route-survey packs, passive markers, recovery kit. Eight units, ~160 kg distributed, and no single loss that breaks the mission.

Coordination is the engineering. The leader trails one optical fibre trunk back to the operator; members join by short inter-unit spokes. One person supervises the pack — authorizing tasks, not steering eight joysticks — while every unit holds the family rule for itself: uncertain, or cut off? Stop and hold.

THE CLAIM

DEPTH ON THE GROUND: THE SALVO MATH, RESTATED FOR CARRIERS.

Need six of eight units to deliver? At 90% per-unit availability the pack answers the mission ~96% of the time — resilience bought with numbers, not exquisite hardware. We also publish the caveat: that binomial assumes independent failures and is stated as the upper bound it is.

HOW IT WORKS

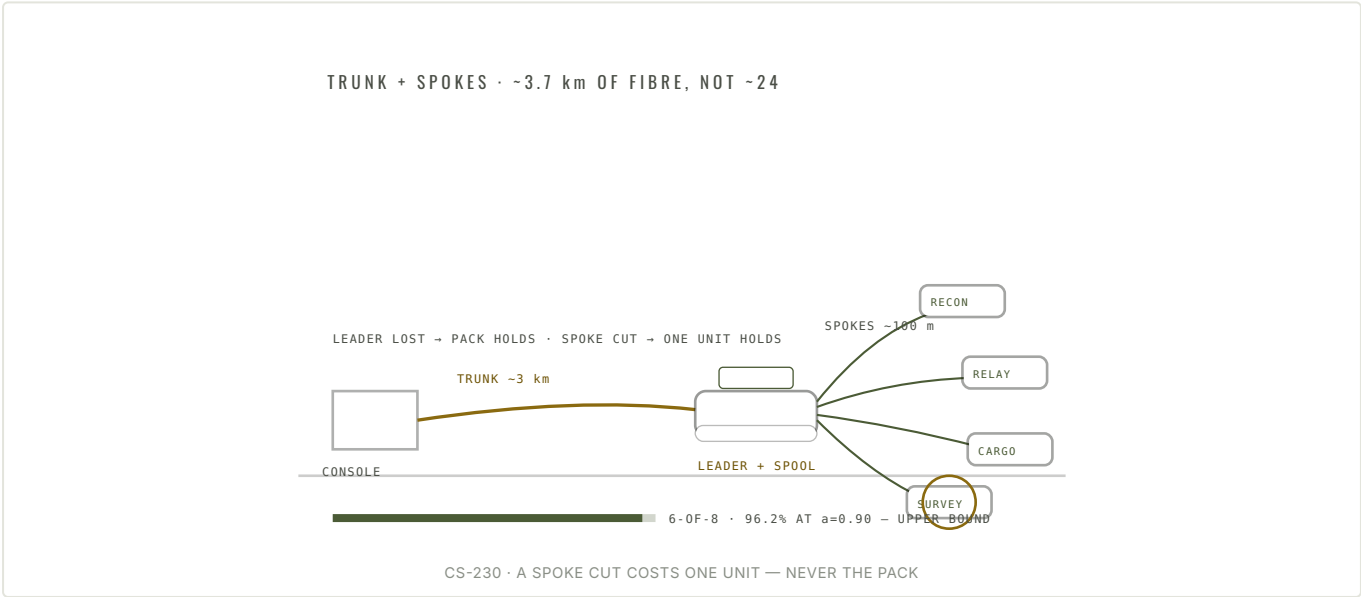
MECHANISM

ONE TRUNK, SHORT SPOKES — A CHOREOGRAPHED PACK

The coordinated drone clouds of the literature need spectrum. The Wolf refuses spectrum — so its coordination is built from things that cannot be jammed: fibre, clocks and perception.

The leader carries the long optical trunk to the operator — a few kilograms of fibre on one unit instead of tens across a star. Members hang off short inter-unit spokes: cut one spoke and you lose one unit's link, not the pack; lose the leader and the pack falls back to its autonomous behaviors and holds. Bandwidth and latency over fibre are effectively free — the engineering cost is mechanical: payout, snag and line-crossing, handled in hardware rather than in spectrum.

Beneath the links sits a quiet design truth: on a small autonomous unit, the pack's mind must be cheap in watts. On firm ground a Wolf spends more energy thinking than driving — so compute-power engineering is range engineering, and the power-state architecture is a first-class design object.



SPECIFICATIONS

CAPABILITIES & SPECIFICATIONS

WOLF CS-230

DIMENSIONS & MASS	
Pack composition	8 coordinated units · mixed modules
Unit gross mass	80 kg
Unit hull class	~0.8–1 m moulded GF-nylon tub
Configuration	Small tracked carrier — the chassis is a moulding, not a weldment

PERFORMANCE & MOBILITY	
Cruise	2.0 m/s
Nominal ground pressure	≈4.4 kPa (~0.63 psi) — half the family anchor
Range — firm ground, 20 °C	~52 km
Range — firm ground, -30 °C	~31 km
Range — deep snow / muskeg, 20 °C	~20 km — a tactical-radius vehicle
Mission radius (pack)	3 km — inside the winter muskeg case with margin

DRIVE & POWER	
Drive power (per side)	~250 W continuous · ~1 kW-class peak
Energy storage (per unit)	2 kWh heated LFP (~15 kg — a one-person swap)
Compute budget	On firm ground a unit spends more energy thinking than driving — power-state architecture is a first-class design object

COORDINATION & CONTROL	
Coordination media	One optical fibre trunk (leader) · short inter-unit spokes — no spectrum in the loop
Fibre budget	Trunk ~3 km · spokes ~100 m — ~3.7 km per pack, vs ~24 km for a star topology
Supervision	One operator — authorizes tasks, does not steer eight joysticks
Pack availability	96.2% for 6-of-8 at 0.90 per unit — binomial upper bound, independent failures assumed
Loss-of-link rule	Stop and hold — leader lost, the pack holds; spoke cut, one unit holds
Emissions	None — no radio, no GPS, no RF module of any kind

PAYLOAD & MODULES	
Unit bay	20 kg in one standardized bay — ~160 kg distributed per pack
Bay interface	Dimensional subset of the family deck standard — pack modules and family modules grow from one interface
Module types	Recon · relay · cargo · survey · marker · utility — all non-kinetic

MATERIALS & CONSTRUCTION	
Hull	Moulded GF-nylon tub — the only ground platform small enough for the hull itself to be a moulding
Tooling	Moulded on the division's own tooling
Battery exchange	~15 kg pack — swapped by hand, one person

COMPLIANCE	
Patent status	Patent pending
Export control	Export-controlled — international transfer subject to Canadian government permits; export posture is counsel-first
Classification	Coordinated carriers — never a strike platform; non-kinetic at the unit and at the pack
Energetic material	None — no warhead, fuze, energetic material, weapon mount or RF emitter on any unit; no pack behavior composes one

PACK AVAILABILITY ASSUMES INDEPENDENT UNIT FAILURES AND IS PRINTED AS THE UPPER BOUND IT IS. EVERY RANGE FIGURE STATES ITS GROUND CLASS AND SEASON; THE DEEP-SNOW FIGURE IS THE ONE THE 3 KM PACK MISSION RADIUS IS SIZED AGAINST.

THE TRADES, STATED

SALVO DEPTH, ON TRACKS.

The fleet's thesis is that depth beats exquisiteness — many cheap, manufacturable units where the loss of one changes nothing. The Wolf is that thesis on the ground: the only ground platform small enough for the hull itself to be a moulding, straight off the division's own tooling.

And the fence is drawn tighter here than anywhere: the family rule — carriers, not munitions — applies to the unit and to the pack as a whole. Coordinated behavior is a logistics and sensing multiplier, nothing else; no unit carries an emitter, an effector or a weapon of any kind, and no pack behavior can compose one. Coordinated carriers — never a strike platform. That is the design, not a caption.

DEPLOYMENT

A PACK MISSION, WALKED THROUGH.

One pack mission, walked end to end — illustrative of how the pack is used, not a mission record.

01 · ARRIVAL

EIGHT UNITS, ONE TRAILER

The pack arrives as freight — eight units and their swap packs on one light trailer or a Grizzly-family deck. At the drop point the modules are mixed for the task: two recon pods, a relay, four cargo panniers, a survey pack. Clocks sync at the physical dock. Nothing transmits.

02 · WORK

THE CHOREOGRAPHY

The leader pays out the trunk; members spoke on and spread to their lanes inside the 3 km mission radius. One operator authorizes tasks over the fibre; units execute and report back down the line. A unit that bogs or falters stops and holds — and the pack re-tasks around it, which is the entire point of being eight.

03 · RECOVER

MUSTER, RESPOOL, ROTATE

Tasks done, the pack musters on the leader, respools its spokes and walks the trunk home. Packs swap by hand — 15 kg, one person. A held unit is recovered by its packmates' recovery kit or a follow-on carrier; its position is known to the metre, because it stopped where it stood.

THE FAMILY

RELATED SYSTEMS

CS-210 · THE ANCHOR

GRIZZLY

The heavy all-terrain mule — its deck standard, console and safety chain are engineering the family buys once.

CS-220 · BULK

MOOSE

Hauls bulk.

CS-240 · SCOUT

LYNX

Scouts ahead.

CS-250 · GROUNDWORK

BEAVER

Works the ground.

CS-260 · ACCESS

WOLVERINE

Carries the access tools.

Wolf CS-230 · patent pending · export-controlled — international transfer requires Canadian government permits; export posture is counsel-first. Coordinated carriers — never a strike platform. Non-kinetic at the unit and at the pack: no warhead, fuze, energetic material, weapon mount or RF emitter on any unit, and no coordinated behavior that composes an effect. No radio and no GPS in any tier.



THE PRODUCT IS THE PACK — NOT THE UNIT

WOLF · GROUND · CS-230

The pack runs errands the big hulls can't split.

01

REQUEST A TECHNICAL EXCHANGE

A working session with engineering, not sales — bring your engagement problem, we bring the mechanism.

02

REQUEST THE GROUND FAMILY DATA PACK

Drawings, tolerances and test basis for Wolf and its siblings, gated behind export screening.

03

DISCUSS A TRIAL QUANTITY

Tell us end-user, jurisdiction, quantity band and timeline — we respond against your program, not a price list.

SALES

sales@cdnshield.ca

GENERAL

info@cdnshield.ca

WEB

cdnshield.ca

Direct lines, named points of contact and facility details are shared with qualified programs following screening — not withheld, sequenced.

Canadian Shield is a defence and industrial drone company, backed by SIG: four-domain uncrewed systems built for jammed, GPS-denied environments — no-radio by design, manufactured for cost and salvo depth.

Wolf CS-230

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Product specification R1.0 · 2026-08-15 · © Canadian Shield, a division of SIG (Sustainable Infrastructure Group).