

The **Sherpa** is a modular, GPS-guided parachute delivery system that supplies airborne cargo from high altitudes or substantial lateral distances to a small drop zone, usually located in hard-to-reach areas. It operates autonomously, is easy to use, and is extremely rugged, having benefited from over two decades of development and testing.

Flexible Airborne Guidance Unit (AGU)

The AGU is the main component of the Sherpa system, which is available in two versions: Ranger and Provider. The Ranger has a maximum payload capacity of 1,200 lbs (544 kg). The Provider AGU includes an additional battery and larger servomotors, making it capable of carrying a payload ranging from 100 lbs (45 kg) to 7,500 lbs (3,400 kg). Both versions can use parachutes suitable for the supported payloads and have a landing accuracy of 100 m radius (50%CEP).

Designed for multiple canopies

Four canopies are sufficient to meet the payload range of 100 lbs to 7,500 lbs. Each parachute has a broad weight range and overlaps adjacent ranges. This allows customers to choose the minimum number of canopies to suit their operational needs using a single AGU. Each parachute is paired with a drogue parachute that facilitates HALO/HAHO deployment. The desired parachute opening altitude is easily achieved with a user-programable release mechanism.

Ease of use

The Sherpa flying unit can be easily integrated with different types of aerial cargo payloads, including standardized container systems (CDS) designed for aerial delivery on military aircraft. It has been successfully deployed with various platforms such as 463L, Type-V, Enhanced Container Delivery Systems (ECDS), LCCs, and custom payloads, including SOCEP.

Optional Features / Ancillaries

Remote Control



Remote control allows the user to override autonomous flight for the purposes of obstacle avoidance at or near the landing area. A modified landing point may be re-programmed with a simple push of a button while the Sherpa is in flight, or direct steering control of the Sherpa can be affected. The Sherpa can be customized with various embedded radio frequency (RF) interface options to suit different requirements for the customer’s operational scenarios, including range and integration with parachutist teams.

Lights – visible and IR

Operation in low light conditions or at night is aided by adding visible and/or IR lights assembled to the AGU and/or the payload.

Immersion

To enable recovery after maritime operations, the waterproof AGU can be provided with an automatic floatation device triggered upon contact with water.

Airborne Guidance Unit (AGU)	 Ranger AGU	 Provider AGU
Payload weight		
Minimum	100 lbs (45 kg)	100 lbs (45 kg)
Maximum	1,200 lbs (544 kg)	7,500 lbs (3,400 kg)
Characteristics		
AGU weight	51 lbs (24 kg)	62 lbs (29 kg)
Battery	One military Li-ion, type BB-2590/U	Two military Li-ion, type BB-2590/U
AGU Size	H= 17" (44 cm) D= 8" (21 cm) W= 13" (34 cm)	H= 17" (44 cm) D= 8" (21 cm) W= 16" (41 cm)

Operational		
Operational limits		
Max deployment altitude (AMSL)	29,000 feet (parachute dependent)	
Min deployment altitude (AGL)	3,500 feet (parachute dependent)	
HALO - HAHO Capability	Programmable drogue delay, HALO or HAHO (GPS Altitude, Pressure Altitude or Time delay) Compatible with paratrooper flight planning	
Landing Options	Into the wind User-selectable approach heading Manually controlled (with remote control factory option)	
Environmental		
Operating temperatures	-60°C to +60°C (when operated in accordance with the Operator manual)	
Waterproofness	1 meter, 30minutes	MIL-STD 810, 512.5, Procedure I or IEC60529, IPx7
Aircraft environment	Radiated emissions, Electric field	MIL-STD 461, RE102, Electric field or AECTP-500, NRE02, Electric field
Aircraft environment		AECTP 300, 312, Procedure III or MIL STD 810, 500.5, Procedure III
ESD	Rapid Decompression, 40,000ft	AECTP-500 NCS12, 501 or IEC 61000-4-2, Level 4
Sand and dust	Hand and Air contact to 15kV	AECTP 300, 313 - Procedure I&II or MIL-STD 810, 510.5, Procedure I&II
Shock	Blowing sand and dust Functional Shock, 20G	MIL-STD 810, 516.5, Procedure I
Factory Options		
Commercial GNSS receiver constellation	Navstar, Galileo, Glonass	
Military GNSS receiver	M-Code enabled (removable) module	
Radio – data link / remote control	TW TSM-6: L-UHF: 225-450 MHz; U-UHF: 698-970 MHz; L/S Bands: 1250–2600 MHz (antenna dependent) MMIST-proprietary 2.45GHz ISM-band	
Mission planning data link	Wired: USB Wireless: 802.11 b/g/n	
Support equipment	All equipment supplied with 110/220 50/60Hz supply connection	

Parachute Options	700 Parachute System	1,200 Parachute System	2,200 Parachute System	7,500 Parachute System
Payload weight (suspended)				
Minimum	100 lbs [45 kg]	400 lbs [181 kg]	650 lbs [294 kg]	5,000 lbs [2,267 kg]
Maximum	700 lbs [317 kg]	1,200 lbs [544 kg]	2,200 lbs [988 kg]	7,500 lbs [3,400 kg]
Specifications				
Max. deployment altitude (AMSL)	29,000 feet	29,000 feet	29,000 feet	18,000 feet
Min. deployment altitude (AGL)*	3,500 feet	4,500 feet	4,500 feet	5,000 feet
Expected glide ratio	-3:1	-3:1	-3:1	-3:1
High glide option	-5:1	--	--	==
Component Weight	55 lbs [25 kg]	90 lbs [41 kg]	110 lbs [32 kg]	400 lbs [182 kg]