C-27J SPARTAN
Unrivalled multi-mission airlifter
The C-27J Spartan is the most effective multi-mission airlifter available on the market today. Its capability to operate from the most rudimentary airstrips in extreme environmental conditions cannot be matched by any other twin-engine airlifter.

Thanks to its exceptional structural strength and systems redundancy, the Spartan offers unique qualities, not found in aircraft of the same class or derived from commercial turboprops: ruggedness, reliability, outstanding survivability and maneuverability.

Ordered and employed with full satisfaction by the most important Air Forces, the Spartan has already fully proven and it is able to effectively accomplish any tactical transport mission, ranging from disaster relief to “last tactical mile” troops support.

The Spartan is a remarkably robust tactical airlifter with state-of-the-art technology in avionics and a powerful turboprop propulsion system, delivering extraordinary performance, extreme operational flexibility and cost effectiveness.
Nowadays, a modern Air Force needs a highly cost effective aircraft, capable of being quickly reconfigured to perform a high number of alternate missions, whilst retaining its primary role of tactical airlifter. Thanks to multiple, roll-on/roll-off easily installable and transportable mission kits and systems, the C-27J can be configured to carry out tactical transport including troops, cargo, paratroops and cargo airdrop; Medevac/Casevac; VIP and personnel transportation.

The C-27J has a cargo bay with the largest cross section in its class (3.33 x 2.60 m), a wide rear door with opening flap, a very strong cargo floor (4,900 kg/m max load for the entire fuselage length). The Cargo Loading System is designed to handle standard 463L pallets/platforms and many types of cargo loads which can be easily loaded, transported and airdropped.

The C-27J is the only aircraft in its class with the capability to adjust the cargo floor both in height and inclination, to facilitate the loading/unloading operations where no external support (cargo loader, etc.) is available.
COMBAT PROVEN
BATTLEFIELD AIRLIFTER

The ruggedness of the C-27J is confirmed by mission availability rates in excess of 85% recorded in years of operational deployments by several Air Forces since 2006, in the austere and extreme Middle East and Central Asia environments.

The C-27J, expressly designed for intra-theatre operations, can be equipped with a full Defensive Aids Sub-Systems suite, secure communications and battlefield armor providing ballistic protection in order to operate in high threat environments, delivering cargo and people wherever they are needed.

The C-27J can directly upload large payloads, like standard 463L pallets or large vehicles such as light trucks, limousines as they are unloaded from heavier airlifters such as the C-130 (Hercules) family or helicopters in the CH-47 (Chinook) class, delivering them straight to the frontline and austere forward operating bases, without repackaging, dismount parts or deflate tires, increasing safety and mission tempo.

The aircraft is equipped with an APU (Auxiliary Power Unit), fundamental for autonomous operations in improvised airfields and to restart the engines in flight. Aircraft loading aids can be stowed on board to allow autonomous operations in remote locations.
UNRIVALLED ABILITIES

The glass cockpit includes 5 Color Multipurpose Display Units, a dual redundant Flight Management System, two Digital Autopilot-Flight Director Systems with Auto-throttle capabilities, radar for tactical transport missions and a comprehensive communications suite. These features, coupled with NVG compatibility and optional Head-Up Displays, make the Spartan an unrivalled performer, minimizing pilot workload while increasing situational awareness in day, night and adverse weather conditions.

The Spartan has an unrivalled ability, and it is qualified, to perform short take-offs and landings (STOL) on snowy, sandy and unprepared airfields.

Compared with other military transport aircraft in its class, the C-27J has the best descent and climb rate (4000 and 2,500 ft/min) and can also perform 3 g tactical maneuvers, minimizing its approach phase and reaching a safe altitude more quickly in high threat scenarios.

The Spartan is qualified for extreme temperature conditions and it is capable to carry its load in very hot and high conditions as already demonstrated in the Andes.

Winglets, now standard, improve climb capabilities and increase the Maximum Take-Off Weight (+2,205lb/1,000 kg). Considering optional growth capabilities, MTOW can be further extended to 71,650 lb (32,500 kg).

In-Flight Refuelling capabilities with hose and drogue system can be added, to extend mission endurance and range if required. Nighttime IFR with NVG can be accomplished.
To perform Maritime Surveillance and Search And Rescue (SAR), Maritime Patrol and to cope with emerging threats from submarines and sea surface units, the MC-27J can also evolve to become an effective SAR, MP, Anti-Submarine Warfare (ASW) and Anti-Surface Warfare (ASuW) platform. Both roll-on/roll-off and fully dedicated configurations are available with additional sensors and dedicated equipment:

- AESA Search Radar
- Electro-Optical/Infra-Red (EO/IR) system
- Automatic Identification System (AIS)
- Two Panoramic Windows with observer seats
- SAR kit
- Magnetic Anomaly Detector (MAD) system
- Acoustic Subsystem
- Two rotary Sonobuoy Launch System
- Two Flare and Smoke Marker Launch System
- Store Management System to employ lightweight torpedoes and anti-ship missiles
- Two wing pylons for weapons
- Rest area with seats and galley

The large and comfortable cabin is ideal suited for safe and efficient operations and has significant space provision for additional operator stations, seats and equipment, if requested.

In the fully dedicated configuration, to provide extra-long range capabilities and extended time on station, in addition to already qualified In Flight Refuelling system, optional extra fuel tanks can be added (up to 12 hours of total mission time).

The palletized roll-on/roll-off solution allows the C-27J MPA to be reconfigured for Naval Mine Warfare to transport and airdrop up to 6 “Murena” mines from the rear ramp.
HUMANITARIAN ASSISTANCE AND DISASTER RELIEF SUPPORT

The Spartan has already fully demonstrated its capability to effectively accomplish any transport mission related to disaster relief efforts, humanitarian assistance and support of Homeland Security missions, thanks to its total autonomy from ground support and ability to airlift materiel, equipment and people from/to remote and unprepared fields or areas where civil infrastructure has been damaged or destroyed, including precisely and timely airlift of pallets and bundles with goods and life-saving supplies as needed on the ground.

The aircraft can also collect people in distress or wounded, thanks to its ability to configure the cargo cabin with several standard stretchers for rapid medical evacuation (Medevac). Special Aircraft Transit Isolators can also be employed to transport patients suffering from highly contagious infectious diseases (biomedical containment).

For firefighting duties, 6 “Guardian” System water/fire retardant containers can be effectively airdropped from a safe altitude (300-1,500 ft), also at night, on a single passage with no aircraft modifications.

Furthermore, the C-27J Fire Fighter with roll-on/roll-off Fire Attack System (FAS) by DART Aerospace - the world leader in design, manufacturing and certification of the most advanced aerial application systems - represents the very latest in airborne firefighting technology and capability.

C-27J capabilities and performance at low altitude and in hot and high conditions are ideally suited for firefighting.

The FAS system can be easily installed or removed by a minimal crew in 60-90 min. via the aircraft’s rear loading ramp. FAS can launch 9,850 l of water/fire retardant via “S” ducts installed in paratroopers’ stub doors (originals locked up in position).

The Fire Fighter configuration is a flexible solution, ideal for enhancing the capabilities of the C-27J multi-mission aircraft with significantly lower acquisition and operating cost than a firefighting dedicated platform. When not used in firefighting duties, the aircraft can be quickly reconfigured for transport, humanitarian support, civil protection and SAR roles.
Throughout hurricane response operations, the C-27J proved to be well suited for rapid movement of small to moderately-sized loads of personnel, equipment and supplies over relatively short distances. The availability and reliability of the deployed C-27J aircraft provided planners with an alternative to dedicating the larger C-130 aircraft that, if used, would have flown with a partially empty cargo compartment.

Capt. Eric Storch, U.S. Coast Guard HC-27J APD commanding officer

September 2017 – USCG website

It’s got a lot of power behind it. Where we would typically put a C-130’s nose up to 10 degrees for takeoff, we’re up around 17 or 18 degrees for takeoff for the C-27J. Even with a load, it’s still a bit of a rocket.

WGCDR Ben Poxon, 35 SQN Commanding Officer, RAAF / June 2018 – Australian Aviation magazine

The C-27J Spartan is an agile aircraft that can land in austere airfields and along dirt strips enabling the quick insertion of supplies to areas that need it most, and would have otherwise been inaccessible for larger aircraft or via road transport. 

[Supporting flood relief efforts in Queensland on February 2019]

SQNLDR Mark Seery, 35 SQN pilot, RAAF / June 2019 – RAAF News magazine

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Italy

“The C-27 is quite well-balanced from the cockpit side. Many other aircraft are good, but I’ve seen pilots putting a lot of effort into setting up their plane even before take-off. Let’s say that the ground time was one hour or even more to set up for the mission. [...] In contrast the C-27 is quite easy to set up and quite fast; normally 40-45 minutes for a complex mission and once you set it up usually both pilots are looking outside most of the time instead of facing down. It is well engineered and robust and has really nice landing gear. You can land on very uneven surfaces; I’ve landed on grass, dirt, gravel, ice and it all felt the same.”

Maj Ruggero S, 98° Gruppo pilot, 46a Brigata Aerea, Aeronautica Militare Italiana

November 2019 – Air Forces Monthly

Perú

“It’s a powerful and robust plane. It can take off from a short runway and can climb rapidly to the maximum cruise ceiling of 30,000 ft and while carrying heavy payload. C-27 J is perfect for operation in mountainous regions of Peru.”

Col. Alejandro Caceda, Peruvian Air Force

December 2015 – Vanguard Canada website
Leonardo Customer Support, Services & Training offers integrated logistics services designed to best support the customer’s C-27J fleet, maximizing its availability and competitiveness of supported products in terms of time, quality and life cycle cost. Evolving from standard Integrated Logistic Support (ILS) through advanced Performance Based Logistics (PBL), Leonardo delivers Turnkey and Full PBL services to the most demanding customers’ fleet. All logistic operations, including 24/7 service for AOG, are supported by a dedicated Logistic Hub. Leonardo offers aircrew and ground crew training courses that enable operators to use their C-27Js in the most effective way, helping customers achieve and sustain operational capabilities.

### Supporting the Spartan

#### C-27J Spartan Characteristics

<table>
<thead>
<tr>
<th>Weight (normal ~ 2.5 g)</th>
<th>70,107 lb</th>
<th>31,800 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Landing Weight (5 ft/s)</td>
<td>67,241 lb</td>
<td>30,500 kg</td>
</tr>
<tr>
<td>Normal Landing Weight (10 ft/s)</td>
<td>60,627 lb</td>
<td>27,500 kg</td>
</tr>
<tr>
<td>Max Payload (normal ~ 2.5 g)</td>
<td>25,574 lb</td>
<td>11,600 kg</td>
</tr>
<tr>
<td>Max Payload (tactical ~ 3 g)</td>
<td>17,967 lb</td>
<td>8,100 kg</td>
</tr>
<tr>
<td>Fuel capacity</td>
<td>5,000 gal</td>
<td>18,900 l</td>
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</table>

#### Powerplant

<table>
<thead>
<tr>
<th>Engine 2 Rolls-Royce AE 2100-D2A</th>
<th>4,637 shp</th>
<th>3,458 kW</th>
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</thead>
<tbody>
<tr>
<td>Propellers 2-blade R-391</td>
<td>6,675 rpm</td>
<td>4,304 kW</td>
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</tbody>
</table>

#### Performance

<table>
<thead>
<tr>
<th>Take-Off Ground Run (MTOW, ISA, S.L.)</th>
<th>1,903 ft</th>
<th>580 m</th>
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</thead>
<tbody>
<tr>
<td>Landing Ground Roll (NLW, ISA, S.L.)</td>
<td>1,115 ft</td>
<td>340 m</td>
</tr>
<tr>
<td>Top Cruising Speed</td>
<td>325 KTAS</td>
<td>602 km/h</td>
</tr>
<tr>
<td>Service Ceiling</td>
<td>30,000 ft</td>
<td>9,144 m</td>
</tr>
<tr>
<td>Cruise Altitude (95% MTOW)</td>
<td>27,500 ft</td>
<td>8,382 m</td>
</tr>
<tr>
<td>Range with 10,000 lb (4,536 kg) of Payload @ MTOW normal, ISA</td>
<td>2,760 nm</td>
<td>5,112 km</td>
</tr>
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<td>Range with 10,000 lb (4,536 kg) of Payload</td>
<td>2,760 nm</td>
<td>5,112 km</td>
</tr>
<tr>
<td>Max Range</td>
<td>3,160 nm</td>
<td>5,852 km</td>
</tr>
</tbody>
</table>

#### Configurations and Loads

#### Troop Transport

- 48 troops, up to 60 troops in high-density configuration
- 24 fully equipped troopers, up to 46 lightly equipped
- 6 HCU-12E (5,000 kg max single load): 463L pallets + 1 HCU-24 on the ramp
- 6 HCU-12E (2,500 kg max single load): 463L pallets (4 on the ramp)

#### Cargo Transport

- Bulk loads, wheeled and tracked vehicles, aircraft engines, light helicopters, etc.
- 6,000 kg max single load
- 463L pallets (2 on the ramp)

#### Cargo Airdrop

- up to 8,000 kg with 2 platforms (15,000 kg max single load)
- up to 4 x 422 (650 kg each)
- up to 5,000 kg with 1 or 2 platforms (1,000 kg max single load) by LAFS
- up to 6,000 kg by combat offload with 1 HCU-6E, 463L pallets

#### Medevac/Casevac

- up to 36 standard stretchers + 6 medical attendants

#### VIP and Personnel Transportation

- up to 8 VIP plus 18 escort passengers plus a service module

#### Fire Fighting

- 4 x “Guardian” System (908 l of water/fire retardant)
- Out-of-truck Fire Attack System with 9,000 l capacity