

---

# A34 – Alenia Aermacchi Spartan

---



Alenia Aermacchi C-27J Spartan A34-005 of No 35 Squadron flying over Sydney, New South Wales to celebrate seventy-five years since formation of the squadron. November 2017. Source: Department of Defence



Alenia Aermacchi C-27J Spartan A34-009 of No 35 Squadron taking off during the Wings Over Illawarra Air Show 2019. Source: Department of Defence



Alenia Aermacchi C-27J Spartan A34-006 of No 35 Squadron taxiing at Honiara Airport, Solomon Islands, on completion of a maritime surveillance mission during Operation *Solania*, March 2020. Source: Department of Defence

On 10 May 2012, the then Minister for Defence, the Honourable Stephen Smith, opened the 2012 Air Power Conference by announcing the acquisition of ten C-27J Spartan aircraft as Australia’s next battlefield airlifter. The announcement came three years after the retirement of the Caribou and nearly four decades after the first discussions regarding a Caribou replacement had been held.

A Foreign Military Sales arrangement was agreed between Australia and the United States Government for the acquisition of the aircraft, associated support equipment, facilities, initial logistics support, aircrew and maintenance technician training, training devices, and through-life support at a total program cost of around \$1.4 billion.

The C-27J Spartan has its origins in Italy’s Fiat G.222 tactical transport, which first flew in 1970 and saw extensive service with the Italian Air Force, as well as a number of export customers including the US.

In 1997, what was then Alenia partnered with Lockheed Martin to create a new generation G.222, the C-27J Spartan. It utilises technologies developed for the C-130J Hercules—itsself an update of a venerable design—including its Rolls-Royce AE2100 engines with Full Authority Digital Engine Control (FADEC), six-bladed Dowty propellers and glass cockpit with multifunction displays and layout similar to the C-130J, including the use of head up displays (HUDs).

The original intention was for the C-27J and C-130J to be jointly marketed as a ‘package’ for air forces, but this subsequently lapsed. The first C-27J flew in September 1999 and has seen service with the Italian Air Force, which has employed the aircraft in Africa and Afghanistan on humanitarian and tactical airlift operations. The C-27J has also been operated by United States Air National Guard units in Afghanistan, as well as during humanitarian relief operations at home. Other nations operating the C-27J include Greece, Lithuania, Bulgaria, Morocco and Mexico.

The RAAF’s first C-27J (A34-001) flew in Italy in December 2013 and was formally accepted on 25 November 2014. Aircraft maintainers began training on the aircraft in Waco, Texas, in December 2014 and the first twelve aircrew began training on the aircraft at Waco in January 2015. The first aircraft was formally welcomed at RAAF Richmond on 30 June 2015 and the tenth and final example (A34-010) on 18 April 2018. The fleet is operated by No 35 Squadron, initially based at Richmond until moving to purpose-built facilities in RAAF Amberley in early 2019.

The C-27J’s cargo compartment is equipped with systems, structural provisions and integrated mission equipment which can be configured for troop transport, medical evacuation, paratroop airdrop, cargo transport, and cargo airdrop. The C-27J can accommodate forty troops or thirty-



Members of the Country Fire Service boarding No 35 Squadron's Alenia Aermacchi C-27J Spartan A34-002 prior to departing Adelaide Airport to Kangaroo Island as part of Operation *Bushfire Assist*, January 2020. Source: Department of Defence

four combat equipped troops or non-combat equipped paratroops, twenty-four combat equipped paratroops, or stretchers for twenty-one litter patients with twelve medical attendants. Freight payload for normal operations is about 8.6 tonnes (18 950lb).

The primary means of loading the aircraft's cargo bay is through the rear loading ramp and cargo door, which can be opened in flight to airdrop cargo. The aircraft can deliver paratroops through either of its rear paradoors or via the rear loading ramp. The Air Movements Training and Development Unit has identified at least forty loads from the C-130J which have the potential to be carried by the C-27J including aircraft and general servicing equipment, generators, portable water tanks and artillery pieces.

When carrying a payload of six tonnes (13 2025lb), the C-27J has a range of just over 4000km (2485 miles), sufficient to deploy a combat-equipped Army section with a G-Wagon support vehicle from Richmond to any location in Australia, Papua New Guinea and New Zealand.

During sustained relief operations, frequent landings by heavy air mobility aircraft can cause damage to runway surfaces, leading to damaged

aircraft or runway closures. Much lighter and about twenty-five per cent smaller than the C-130J Hercules, the C-27J significantly improves Defence's access to small runways and parking aprons, making it much easier to use small airfields where space is at a premium while simultaneously minimising or removing potential surface damage.

Within Australia and in the Asia-Pacific region, the C-27J can operate into many more airfields than the C-130J. In a battlefield environment, the C-27J's high power enables it to conduct steep climbs and reach safer altitudes quickly. This performance is essential in rugged environments where an aircraft may be required to out-climb terrain or weather.

The C-27J has a comprehensive self-protection suite encompassing missile warning systems, electronic self-protection, secure communications and ballistic protection. The aircraft is equipped with weather radar and is compatible with night-vision goggle equipment, providing it with all weather and day/night capability. As with the C-130J, the C-27J can support search and rescue operations including the dispatch of stores or equipment from its ramp or paradoors.

In its first five years of RAAF service the C-27J participated in the 2016 Singapore Airshow, Exercises *Southern Kapito* in 2017 and *Bullseye* in New Zealand in 2018, supported the Papua New Guinea elections under Operation *Hannah* in 2017, supported maritime surveillance off the north-eastern coast of Australia under Operation *Resolute* in 2018 and the South Pacific under Operation *Solania* in 2019 and 2020, and participated in

Exercise *Cope North* in Guam and *Croix Du Sud* in New Caledonia in 2018.

The C-27J has also conducted flood relief operations in Queensland in 2019, transported the Secretary-General of the United Nations on a tour of the South-West Pacific in 2019, airdropped goods to remote communities in Australia as part of Operation *Christmas Drop Australia* in 2019, and supported bushfire relief efforts in early 2020.

## TECHNICAL DATA: Alenia Aermacchi C-27J Spartan

### DESCRIPTION:

Light tactical airlift.

### POWER PLANTS:

Two 3485kW (4637shp) Rolls-Royce AE2100-D2A turboprops.

### DIMENSIONS:

Span 28.70m (94ft 2in); length 22.70m (74ft 6in); height at max weight 9.64m (31ft 10in).

### ACCOMMODATION:

Flight crew of two and loadmaster; forty troops or thirty-four combat equipped troops or non-combat equipped paratroops; twenty-four combat equipped paratroops; or stretchers for twenty-one litter patients. Max payload (2.5G operations) 8600kg (18 959lb) or (2.25G) 11 600kg (25 573lb).

### WEIGHTS:

Operating empty 17 000kg (37 478lb); max loaded 32 500kg (71 650lb).

### PERFORMANCE:

Max speed 578km/h (359mph); ceiling 9144m (30 000ft); max payload range 1037km (644 miles); range with 6000kg (13 228lb) payload 4018km (2497 miles).



Alenia Aermacchi C-27J Spartan A34-009 of No 35 Squadron. Source: Alan Flett collection