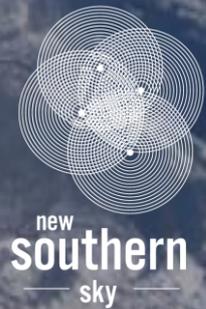


Your Guide to PBN Navigation Specifications and Aircraft Equipment Standards



Navigation Specifications

Each PBN route or procedure is identified by an ICAO navigation specification which sets and requires a specific accuracy for the phase of flight.

For oceanic operations RNP10 and RNP4 are in use. In the domestic FIR, enroute is based upon RNAV2, terminal areas use RNAV1 or RNP1, approach is RNP APCH – identified as RNAV (GNSS) RWY x. For specific operators RNP AR has been authorized.

The following PBN specifications are being added to support a full PBN environment: RNP2 supporting enroute for oceanic and the domestic FIR, RNPO.3 (H) for helicopters (all phases of flight), Advanced-RNP (A-RNP) providing approvals for multiple specifications including enhanced functionality (i.e. RF turns).

Aircraft Equipment Standards

To operate within the PBN environment and recognising that New Zealand will be operating in a full PBN environment by 2023, the following equipment standards are required.

PBN operations are based upon GPS: TSO-C129, TSO-C145, TSO-C146, and TSO-C196

The following points should be considered when determining your equipage solution:

- New Zealand's surveillance solution requires aircraft to have a GPS with Fault Detection and Exclusion (FDE), TSO-C129 does not have FDE as a standard function. However TSO-C129 with a Letter of Approval for FDE functionality is acceptable.
- New Zealand is considering a business case for Satellite Based Augmentation System (SBAS) capability. TSO-C129 and TSO-C196 do not have SBAS capability; this should be considered from an operator's investment perspective, particularly for safety in relation to vertical guidance.

Systems for recovery and contingency operations are based upon VOR and DME. VOR equipment standard is TSO-C40, DME equipment standard is TSO-C66.

Note, the CAA is currently undergoing a safety assessment which will determine the minimum navigation equipage requirements for Air Transport and Part 91 operators, whilst ensuring an adequate level of safety is provided. The results of this work will support regulatory decision making for PBN.

Operators are to be aware that New Zealand are already in a mature PBN environment, with full PBN deployment concluding in 2023. Adoption of PBN from an operator perspective is dependent on routes and airports operating to and from. The system works on a "best equipped, best served" basis.