

Airbus A350 XWB SLS Function

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Credits: Airbus

Thanks to the GPS constellation, aircraft navigation has significantly evolved over the past 20 years. Even if ILS remains the primary means for precision approaches, new technologies based on GPS now exist. [Airbus](#) has integrated these new technologies with an ILS look-alike interface which benefits from the ILS operational experience. This is the xLS concept which aims at standardizing the way of flying an approach. Whatever the type of straight-in approach, the aircraft functions are designed to provide the crew with a similar and consistent operational solution. This concept provides not only the same guidance modes or displays to the crew but is also based on similar avionics architecture.

As part of this xLS concept, Airbus already proposes for all aircraft families: ILS (Instrument Landing System), GLS (GBAS Landing System) and FLS (FMS Landing System) which extends the ILS look-alike concept to non-precision approaches (VOR, NDB, RNAV...)

On A350 XWB, Airbus innovated by pushing the concept one step further with the SLS (Satellite Landing System). This new function uses GPS augmentation coming from SBAS systems such as WAAS or EGNOS to allow the aircraft to fly down to LPV minima, as low as 200 ft DH and 550m RVR.

Thanks to this SLS function Airbus is looking at maximizing airport accessibility for all its operators by providing a real “Precision Approach Service”. This includes in particular a geometrical vertical guidance which is fully independent from barometric setting error or temperature effect. The SLS function can enhance the airlines operations in multiple situations: at airport currently not having precision approach, at main runways as a backup of ILS (e.g. during maintenance) or at alternate airports in case of diversion. Airbus is therefore happy to see that LPV is increasing quickly all over Europe. For example, in April Paris Charles de Gaulle will have LPV approaches with 200 ft minima.