
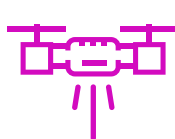
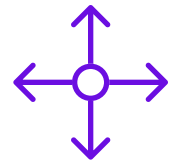
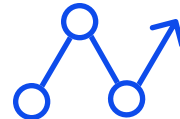
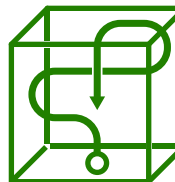



# Levels of Aerial Autonomy | Version 1.0

This overview of autonomy levels is based on standards in the automotive industry that Exyn updated for aerial applications. For a more complete description, download the white paper at <https://www.exyn.com/resources>. Please note, each level contains the capabilities preceding it.



							
<b>Level 0</b> No Autonomy	<b>Level 1</b> Pilot Assist	<b>Level 2</b> Partial Autonomy	<b>Level 3</b> Conditional Autonomy	<b>Level 4A</b> High Autonomy	<b>Level 4B</b> High Autonomy	<b>Level 4C</b> High Autonomy	<b>Level 5</b> Full Autonomy
The pilot <u>is</u> flying the system				The operator <u>is not</u> flying the system			
Pilot provides 100% stick inputs		Pilot flies and activates system	The operator sets points of interest, is ready to fly	The operator sets area of interest, is not required to fly		The operator sets objective	
System provides attitude control	System provides stable vertical position	System provides stable vertical AND horizontal positions	System flies under limited conditions	System flies under limited conditions AND determines its own points of interest within the area		System flies under all conditions	
No Response		Sense and Warn	Sense and Avoid	Sense and Navigate			
No Understanding	Estimates orientation and altitude	Estimates orientation and position	Detects basic obstacles	Detects 3D environment using onboard sensors	Identifies and reasons about obstacles	Identifies and reasons about high-level objectives	Full Understanding
Drone crashes without pilot	Drone remains airborne without pilot	Drone uses sensors to stabilize position and sense walls	System flies and avoids walls	System explores an underground mine without GPS	System reacts differently to dust and trees	System navigates smoky building and identifies people in need	System flies through any environment