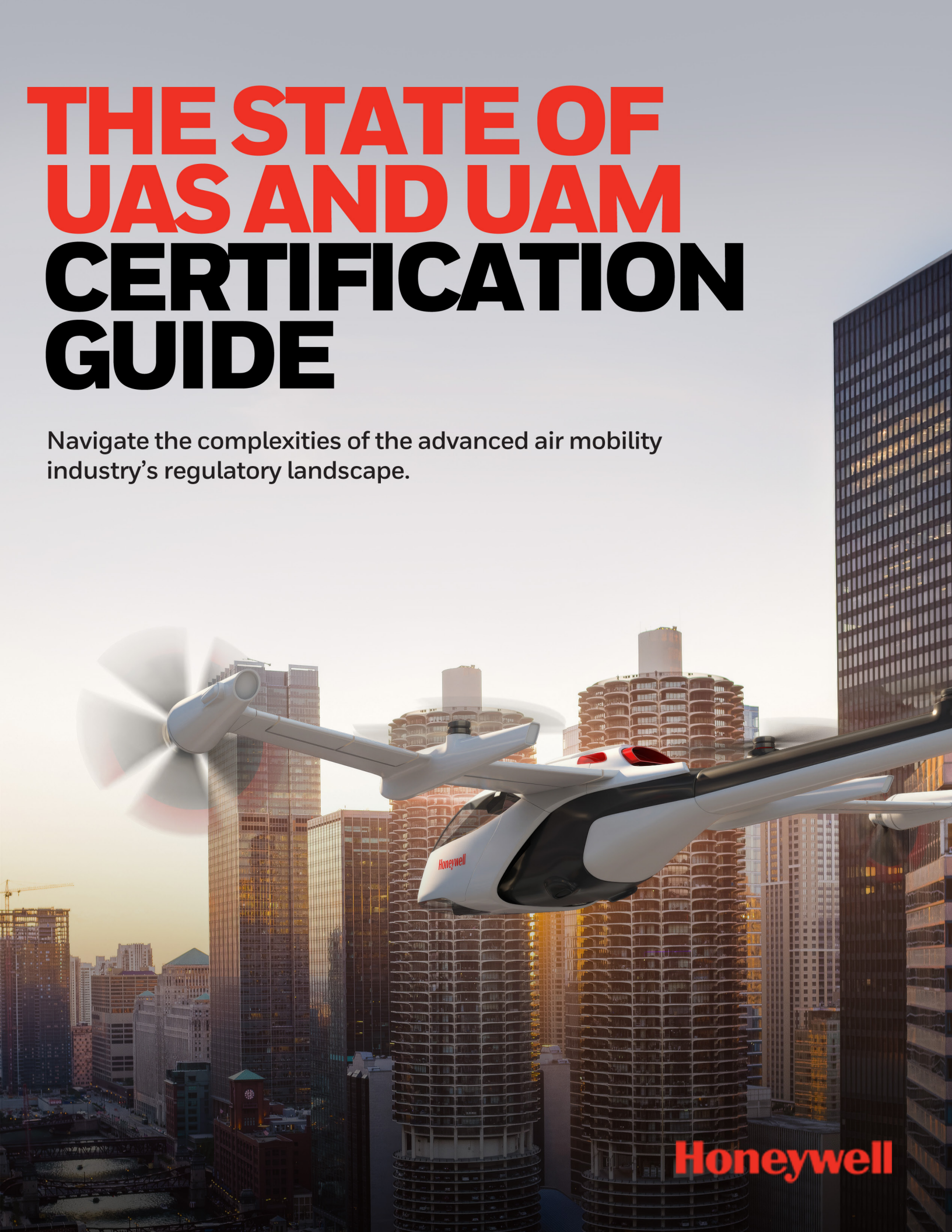
THE STATE OF UAS AND UAM CERTIFICATION GUIDE

Navigate the complexities of the advanced air mobility industry's regulatory landscape.



STATE OF UAS AND UAM CERTIFICATION

	US			EU	
EXAMPLE USE CASE	**AIRCRAFT TYPE CERTIFICATION**	**OPERATIONAL CERTIFICATION**	**FAA REAUTHORIZATION**	**AIRCRAFT TYPE CERTIFICATION**	**OPERATIONAL CERTIFICATION**
Visual Line of Sight Operations below 55 lb and up to 87 Knots	• TC not required. Operations can be conducted under Part 107 operational authorization using Operational Risk Assessment (ORA) • Operations can also be conducted under Proposed Part 108		Sec 908 directs FAA to improve the waiver approval process (Performance and risk-based approach), Standardizing applications, using previous waivers as reference for new approvals	Open category, low risk specific category operations with operational authorization from NAA or Light UAS Operating Certificate (LUC) UAS EU Regulations: EU 2019/945 (Design) EU 2019/947 (Operations)	
Beyond Visual Line of Sight (BVLOS) Operations up to 1320 Lb and 87 Knots	Under proposed Part 108, Type Certification is not needed, instead airworthiness acceptance is required	Under proposed Part 108, Operations can be conducted by obtaining: • Operational Permit : low risk operations, low population density or • Operational Certificate: high risk operations, high population density Allowed Operations: Package Delivery, Agricultural, Aerial Survey, Civic Interest, Operations Training, Demonstrations, Flight Test, Recreational	**[Published]** Sec. 930 directs FAA to publish NPRM within 4 Months to establish PBR for UAS BVLOS operations. The proposed approval process for UA and associated elements should not mandate Type Certification if UA parameters and operations are within limit. Sec 931 directs FAA to develop the risk assessment methodology	PDRA, EU UAS Regulation (SORA framework) and "competent authority" approval or LUC UAS EU Regulations: EU 2019/945 (Design) EU 2019/947 (Operations)	
BVLOS Package Delivery Drone Operations	Under proposed Part 108, Type Certification is not needed, instead Airworthiness acceptance is required	Under proposed Part 108, Package delivery operations can be conducted by obtaining • Operational Permit: Max weight 55 lb and population density up to category 3 or • Operational Certificate: Max weight 110 lb and operation can be conducted anywhere regardless of population density	**[Published]** Sec. 930 directs FAA to publish NPRM within 4 Months to establish PBR for UAS BVLOS operations. The proposed approval process for UA and associated elements should not mandate Type Certification if UA parameters and operations are within limit. Sec 931 directs FAA to develop the risk assessment methodology	PDRA, Specific category (low and medium risk SAIL III), design verification for medium risk under specific category (SAIL IV), type certification for higher risk under specific category (SAIL V, VI) and "competent authority" approval or LUC UAS EU Regulations: EU 2019/945 (Design) EU 2019/947 (Operations)	

*Part 108 is in NPRM phase. The Cert Doc will be updated when the final document is released later.

BVLOS: Beyond visual line of sight
ORA: Operational risk assessment
ARC: Aviation rule making committee
PDRA: Predefined risk assessment
PBR: Performance based regulations
CAA: Civil aviation authorities
MOC: Means of compliance

	US			EU	
EXAMPLE USE CASE	**AIRCRAFT TYPE CERTIFICATION**	**OPERATIONAL CERTIFICATION**	**FAA REAUTHORIZATION**	**AIRCRAFT TYPE CERTIFICATION**	**OPERATIONAL CERTIFICATION**
Remotely piloted middle mile cargo (more than 110 lb and up to 1320 lb)	Undefined Under proposed Part 108	Under proposed Part 108: FAA requested feedback for the inclusion of cargo transportation operating certificate	**[Published]** Sec. 930 directs FAA to publish NPRM within 4 Months to establish PBR for UAS BVLOS operations. The proposed approval process for UA and associated elements should not mandate Type Certification if UA parameters and operations are within limit. Sec 931 directs FAA to develop the risk assessment methodology	Specific category (low and medium risk SAIL III), design verification for medium risk under specific category (SAIL IV), type certification based on Part 21 for higher risk under specific category (SAIL V, VI) or certified category	• Operational approval/LUC up to SAIL VI (SORA framework) specific category • Undefined for certified category
Piloted UAM	• Part 21.17(b) Airworthiness criteria using AC 21.17-04 • Safety objective based on draft policy PS-AIR -21.17-01 Safety Objective based on Policy PS-AIR-21.17-01 Global harmonization/ Transferability effort ongoing	Final SFAR Released	**[Published]** Sec. 955 directs FAA to publish SFAR within 7 months including practical path for pilot training requirements and performance-based energy reserve	SC-VTOL(Easy access rules) Global harmonization/ Transferability effort ongoing	Opinion No 03/2023 Annex IX 'Innovative Air Mobility Operations' (Part-IAM) Regulation (EU) No 965/2012
Autonomous UAM and passenger aircraft	Part 21.17b for aircraft segment Ground segment undefined	Undefined	Sec 955 (d)(2)(B) directs FAA to consider and plan for unmanned and remotely piloted powered-lift aircraft and associated elements using PBR during final rule making activity	Type cert based on Part 21 (Opinion No 03/2023)	Undefined
Artificial Intelligence Roadmap	FAA releases first AI roadmap to establish the guidance for assuring safety of AI in aviation		Sec 1024 Directs FAA to review current and planned artificial intelligence and machine learning technology to improve airport efficiency and safety	EASA published the AI Roadmap 2.0. Roadmap provides a timeline for AI adoption phases	

*Part 108 is in NPRM phase. The Cert Doc will be updated when the final document is released later.

BVLOS: Beyond visual line of sight
ORA: Operational risk assessment
ARC: Aviation rule making committee
PDRA: Predefined risk assessment
PBR: Performance based regulations
CAA: Civil aviation authorities
MOC: Means of compliance

SOURCE DOCUMENTS

DOCUMENT	CONTENT
SC-VTOL Issue 2	Defines the special condition certification regulations for eVTOL
Easy Access Rules for small category VCA (SC-VTOL + MOC)	EASA developed Easy access rules to consolidate special conditions and means of compliance in a single document.
Opinion No 03/2023: After review of comments during NPA 2022-06 comment period, EASA developed this opinion and the draft regulations	Proposes amendments to existing EU aviation regulations: • Initial airworthiness of UAS subject to certification • Continuing airworthiness of the UAS in specific category (SAIL V, VI) • Operational requirements applicable to manned VTOL-capable aircraft
Annex IX 'Innovative Air Mobility Operations' (Part-IAM) Regulation (EU) No 965/2012	Provide means of compliance and guidance material for the operational approval of manned VTOL-capable aircraft (VCA)
SC Light-UAS Medium Risk	Provides special condition light unmanned aircraft system for medium risk (SAIL III and SAILIV)
SC Light-UAS High Risk	Provides special condition light unmanned aircraft system for high risk (SAIL V and SAIL VI)
Specific operations risk assessment (SORA)	• Defines risk assessment framework for UAS • Provides direction to identify ground risk, air risk and specific assurance and integrity levels (SAIL)
Integrity and assurance levels for the operation safety objectives (OSO)	Defines operational safety objective (OSO) based on the SAIL number
Predefined Risk Assessment (PDRA)	Provides predefined risk assessment carried out by EASA. Operation still requires authorization, but process can be simpler
Commission Delegated Regulation (EU) 2019/945	This regulation provides the requirements for the design and manufacture of UAS intended to be operated under operational rules (EU) 2019/947
Commission Implementing Regulation (EU) 2019/947	This regulation provides the provision for the operation of unmanned aircraft systems
AMC and GM to Regulation (EU) 2019/947	EASA issues the update to AMC and GM EU 2019/947 introducing SORA 2.5 frame work
Design verification report	Define EASA process for UAS design verification under SORA
DVR_Guidelines_Issue_2_0	Provide guidelines for the design verification report applicable for specific category SAIL IV operations, mitigation means linked with design and verification of 'enhanced containment'
FAA Reauthorization Act Of 2024 (H.R. 3935) (Full Text)	Provides detailed FAA reauthorization act of 2024
FAA Reauthorization Act Of 2024 (H.R. 3935) (Summary)	Provides section-by section summary of FAA reauthorization act of 2024.
AC_21_17_4_Type_Certification_of_Powered_lift	This advisory circular (AC) provides guidance for the type, production, and airworthiness certification of powered lift.
Draft Policy PS-AIR-21.17-01	This policy establishes a safety continuum for the certification of powered lift.
Final Special Federal Aviation Regulation (SFAR)	Provides final (for 10 years) pilot certification and operational rules for Power- Lift aircrafts.
Standard Practice for Operational Risk Assessment (ORA) of Small Unmanned Aircraft Systems (sAS)	Provide guidance on preparing operational risk assessment for sUAS (aircraft under 55 lb.) design.
Memorandum - AIR600-21-AIR-600-PM01	Defines FAA approach to type certification of low risk unmanned aircraft. This includes certification of UA and the specification of associated elements (ground station).
UAS BVLOS ARC final report	Provides recommendation for UAS to operate BVLOS without waivers or exceptions.
Draft Part 108	• Proposes performance-based regulations to enable the design and operation of Unmanned aircraft system at or below 400 feet BVLOS. • Proposes rules for third-party services, including UAS Traffic Management (UTM).
FAA Roadmap for AI Safety Assurance	Roadmap provides timeline for establish the guidance for assuring safety of AI in aviation. Includes establishing DAL C learned AI assurance by 2025 and DAL A by 2026.
EASA AI Roadmap 2.0	Provides a timeline for AI adoption phases includes: **Phase I:** Exploration and first guidance development **Phase II:** AI/ML framework consolidation **Phase III:** Pushing barriers

For more information, contact:
Pulkit Agrawal
Lead of Regulatory Affairs, UAM/UAS
pulkit.agarwal@honeywell.com

Honeywell Aerospace Technologies
1944 East Sky Harbor Circle
Phoenix, Arizona 85034
aerospace.honeywell.com/urban-air-mobility

N61-3146-000-006 I 10/25

WF: 5971376

THE FUTURE IS WHAT WE MAKE IT

Honeywell