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Titolo	Automated low-altitude air delivery : towards autonomous cargo transportation with drones / / edited by Johann C. Dauer
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Descrizione fisica	1 online resource (xxi, 550 pages)
Collana	Research topics in aerospace
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Nota di contenuto	Aircraft Configurations -- System Components and Operation Environment -- Aircraft Automation and Higher Intelligence -- Validation and Discussion
Sommario/riassunto	This book investigates Unmanned Aircraft Systems (UAS) with a payload capacity of one metric ton for transportation. The authors provide a large variety of perspectivesfrom economics to technical realization. With the focus on such heavy-lift cargo UAS, the authors consider recently established methods for approval and certification, which they expect to be disruptive for unmanned aviation. In particular, the Specific Operations Risk Assessment (SORA) and its impact on the presented technological solutions and operational concepts are studied. Starting with the assumption of an operation over sparsely populated areas and below common air traffic, diverse measures to further reduce operational risks are proposed. Operational concepts derived from logistics use-cases set the context for an in-depth analysis including aircraft and system design, safe autonomy as well as airspace integration and datalinks. Results from simulations and technology demonstrations are presented as a proof of concept for solutions proposed in this book