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- (71) **Applicant:** MICROLINK DEVICES, INC. [US/US];
6457 W. Howard Street, Niles, IL 60714 (US).
- (72) **Inventors:** PAN, Noren; 805 Westwood Lane, Wilmette,
IL 60091 (US). CHAN, Raymond; 1539 Laburnum Road,
Hoffman Estates, IL 60192 (US). MIYAMOTO, Haruki;
299 N. Dunton Avenue #620, Arlington Heights, IL 60004
(US). WIBOWO, Andree; 9241 Fairway Drive # 101, Des
Plaines, IL 60016 (US). OSOWSKI, Mark; 1015 Creek
Bend Drive, Verno Hills, IL 60061 (US). YOUTSEY,
Christopher; 223 Johnson Avenue, Libertyville, IL 60048
(US). MCCALLUM, David; 33 Sunset Avenue, West
Chicago, IL 60185 (US).
- (74) **Agents:** BURNS, David, R. et al.; McCarter & English,
LLP, 265 Franklin Street, Boston, MA 02110 (US).
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DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,

HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI,
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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

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(54) **Title:** INTEGRATION OF HIGH-EFFICIENCY, LIGHTWEIGHT SOLAR SHEETS ONTO UNMANNED AERIAL VEHICLE FOR INCREASED ENDURANCE

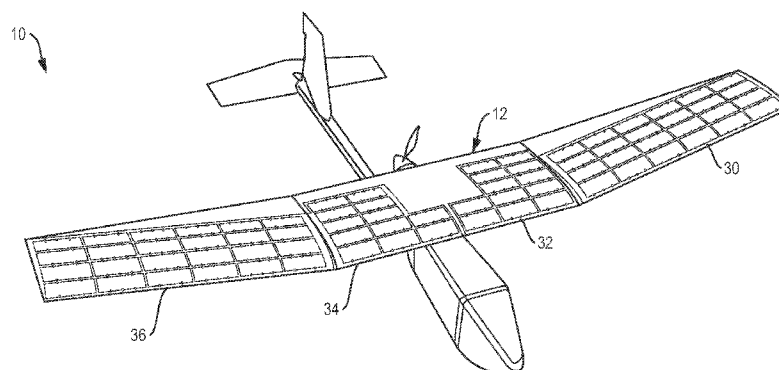
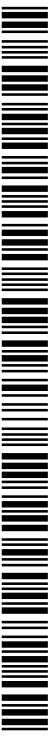


FIG. 1

(57) **Abstract:** Some embodiments include a kit for increasing endurance of a battery-powered unmanned aerial vehicle (UAV) by incorporating flexible solar cells or applying flexible solar cells on a surface of a UAV or on a surface of a component of a UAV. The kit further include a power conditioning system configured to operate the solar cells within a desired power range and configured to provide power having a voltage compatible with an electrical system of the UAV.



INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
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ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B60L B64D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Javier V. Coba: "APPLICATION OF COPPER INDIUM GALLIUM DISELENIDE PHOTOVOLTAIC CELLS TO EXTEND THE ENDURANCE AND CAPABILITIES OF THE RAVEN RQ- 11B UNMANNED AERIAL VEHICLE", 30 September 2010 (2010-09-30), XP055091402, Retrieved from the Internet: URL: http://www.dtic.mil/dtic/tr/fulltext/u2/a531540.pdf [retrieved on 2013-12-03]	1-7, 19, 20, 23-33
Y	abstract figures 9, 10, 18, 19, 26, 34, 36, 38, 44, 48 page 24, line 1 - line 18 page 25, line 1 - page 26, line 7 page 37, line 1 - page 38, line 4 page 44, line 1 - line 8 -/--	8-11, 13-18



Further documents are listed in the continuation of Box C.



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"&" document member of the same patent family

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European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Schmitt, Gilles

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	page 52, line 6 - line 19 page 58, line 6 - page 67, line 10 page 85, line 8 - page 86, line 3 page 90, line 1 - line 5 page 110, line 17 - page 111, line 25 page 119, line 1 - page 121, line 13 table 38 page 80 page 84 -----	
X	Anonymous: "Solar Cells Increase UAV Stamina, Flight Time", , 28 September 2011 (2011-09-28), XP055091247, Retrieved from the Internet: URL:http://www.wpafb.af.mil/news/story_print.asp?id=123273778 [retrieved on 2013-12-03] the whole document -----	1-7,12, 19-22, 25-33
X	Super User: "MicroLink Devices Contract to Develop High-Efficiency Solar Sheets for UAVs Extended", , 22 November 2011 (2011-11-22), XP055091239, Retrieved from the Internet: URL:http://mldevices.com/news/9-recent-news2 [retrieved on 2013-12-03] the whole document -----	1,3,5-7, 12,19, 20,25, 26, 28-30, 32,33
Y	WO 2010/111295 A2 (BOEING CO [US]; KUKULKA JERRY R [US]) 30 September 2010 (2010-09-30) abstract page 1, line 4 - line 21 page 2, line 14 - page 3, line 30 page 6, line 1 - line 3 page 5, line 27 - line 31 page 7, line 23 - page 9, line 8 page 10, line 16 - line 22 figure 2 -----	10,11
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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/026525

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	ARTHUR B. CORNFELD ET AL: "The 3J-IMM solar cell: Pathways for insertion into space power systems", 2009 34TH IEEE PHOTOVOLTAIC SPECIALISTS CONFERENCE (PVSC), 1 June 2009 (2009-06-01), pages 000954-000959, XP055091351, DOI: 10.1109/PVSC.2009.5411129 ISBN: 978-1-42-442949-3	8,9,13, 14
A	abstract . "Unique 3J-IMM CELL Features" . "Proposed panel applications" . "summary" -----	15
Y	WO 2010/129566 A1 (MICROLINK DEVICES INC [US]; CHAN RAYMOND [US]; YOUTSEY CHRISTOPHER [US]) 11 November 2010 (2010-11-11) abstract paragraphs [0029], [0032], [0040] -----	15-17
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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