

**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**  
 Washington, D.C. 20549

**FORM F-1**  
**REGISTRATION STATEMENT**  
 UNDER  
**THE SECURITIES ACT OF 1933**

**ADVANCED ACCELERATOR APPLICATIONS S.A.**

(Exact Name of Registrant as Specified in Its Charter)

France  
 (State or other jurisdiction of  
 Incorporation or organization)

2834  
 (Primary Standard Industrial  
 Classification Code Number)

Not Applicable  
 (I.R.S. Employer  
 Identification No.)

20 rue Diesel  
 01630 Saint Genis Pouilly, France  
 +33 (0) 4 50 99 30 70  
 (Address, Including Zip Code and Telephone Number, of Registrant's Principal Executive Offices)

CCS Global Solutions, Inc.  
 530 Seventh Avenue, Suite 909  
 New York, New York 10019  
 (888) 300-5067  
 (Name, Address, Including Zip Code and Telephone Number, Including Area Code, of Agent for Service)

John G. Crowley, Esq.  
 Davis Polk & Wardwell LLP  
 450 Lexington Avenue  
 New York, NY 10017

*Copies to:*  
 Jacques Naquet-Radiguet, Esq.  
 Davis Polk & Wardwell LLP  
 121 Avenue des Champs-Élysées  
 75008 Paris, France

James A. Lebovitz, Esq.  
 Dechert LLP  
 2929 Arch Street  
 Philadelphia, PA 19104

**Approximate date of commencement of proposed sale to the public:** As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.  333-213806

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

**CALCULATION OF REGISTRATION FEE**

Title of each class of securities to be registered	Proposed maximum aggregate offering price <sup>(2)</sup>	Amount of registration fee <sup>(1)</sup>
Ordinary shares, €0.10 nominal value per share	\$28,750,000	\$3,332.13

(1) The registration fee is calculated in accordance with Rule 462(b) promulgated under the Securities Act of 1933, as amended (the "Securities Act"). The registrant previously registered securities at an aggregate offering price not to exceed \$143,750,000 on a Registration Statement on Form F-1, as amended (File No. 333-213806), which was declared effective by the Securities and Exchange Commission on October 5, 2016. Includes the aggregate offering price of shares that the underwriters have the option to purchase.

(2) Estimated solely for the purpose of computing the registration fee pursuant to Rule 457(o) under the Securities Act. Includes ordinary shares represented by American Depositary Shares, or ADSs, which the underwriters have the option to purchase. Each ADS represents two ordinary shares.

**THIS REGISTRATION STATEMENT SHALL BECOME EFFECTIVE UPON FILING WITH THE COMMISSION IN ACCORDANCE WITH RULE 462(b) UNDER THE SECURITIES ACT OF 1933, AS AMENDED.**

**EXPLANATORY NOTE AND INCORPORATION OF  
CERTAIN INFORMATION BY REFERENCE**

This Registration Statement is being filed pursuant to Rule 462(b) (“Rule 462(b)”) and General Instruction V of Form F-1, both promulgated under the Securities Act of 1933, as amended. Pursuant to Rule 462(b), the contents of the Registration Statement on Form F-1 (File No. 333-213806) of Advanced Accelerator Applications S.A. (the “Registrant”), including the exhibits thereto, which was declared effective by the Securities and Exchange Commission (the “Commission”) on October 5, 2016 are incorporated by reference into this Registration Statement.

The required opinions and consents are listed on the Exhibit Index attached hereto and filed herewith.

---

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form F-1 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, on October 5, 2016.

ADVANCED ACCELERATOR APPLICATIONS S.A.

By: /s/ Stefano Buono

Name: Stefano Buono

Title: Chief Executive Officer

---

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons on October 5, 2016 in the capacities indicated:

<u>Name</u>	<u>Title</u>
<u>/s/ Stefano Buono</u> Stefano Buono	Chief Executive Officer and Director (principal executive officer)
<u>/s/ Heinz Mäusli</u> Heinz Mäusli	Chief Financial Officer (principal financial officer and principal accounting officer)
<u>*</u> Claudio Costamagna	Chairman of the Board
<u>*</u> François Nader	Director
<u>*</u> Kapil Dhingra	Director
<u>*</u> Steve Gannon	Director
<u>Yvonne Greenstreet</u>	Director
<u>*</u> Christian Merle	Director
<u>*</u> Leopoldo Zambelletti	Director
<u>/s/ Edward A. Sturchio</u> Edward A. Sturchio	Authorized Representative in the United States

\* By: /s/ Stefano Buono  
Name: Stefano Buono  
Title: Attorney-in-Fact

---

## EXHIBIT INDEX

<b>EXHIBIT NUMBER</b>	<b>DESCRIPTION OF DOCUMENT</b>
5.1	Opinion of Davis Polk & Wardwell LLP, counsel to Advanced Accelerator Applications S.A., as to the validity of the ADSs.
8.1	Opinion of Orrick, Herrington & Sutcliffe (Europe) LLP, French tax counsel to Advanced Accelerator Applications S.A., as to French tax matters.
8.2	Opinion of Davis Polk & Wardwell LLP, U.S. tax counsel to Advanced Accelerator Applications S.A., as to U.S. tax matters.
23.1	Consent of KPMG S.A.
23.2	Consent of Davis Polk & Wardwell LLP, counsel to Advanced Accelerator Applications S.A., as to the validity of the ADSs (included in Exhibit 5.1).
23.3	Consent of Orrick, Herrington & Sutcliffe (Europe) LLP, French tax counsel to Advanced Accelerator Applications S.A. (included in Exhibit 8.1).
23.4	Consent of Davis Polk & Wardwell LLP, U.S. tax counsel to Advanced Accelerator Applications S.A. (included in Exhibit 8.2).
24.1	Power of Attorney (included on the signature page of the Registration Statement on Form F-1 (File No. 333-213806), filed with the Commission on September 26, 2016 and incorporated herein by reference).

---

New York	Paris
Menlo Park	Madrid
Washington DC	Tokyo
São Paulo	Pékin
Londres	Hong Kong



Davis Polk & Wardwell llp      01 56 59 36 00 tél  
 121, avenue des Champs-      01 56 59 37 00 fax  
 Elysées  
 75008 Paris

Toque N° J020

### OPINION OF DAVIS POLK & WARDWELL LLP

October 5, 2016

Advanced Accelerator Applications  
 20, rue Diesel  
 01630 Saint-Genis-Pouilly

Ladies and Gentlemen,

Advanced Accelerator Applications, a company incorporated under the laws of the Republic of France as a *société anonyme*, having its registered office at 20, rue Diesel, 01630 Saint-Genis-Pouilly, registered with the Trade and Companies Registry of Bourg-en-Bresse under number 441 417 110 (the “**Company**”), has filed with the Securities and Exchange Commission a Registration Statement on Form F-1 (the “**Abbreviated Registration Statement**”) pursuant to the Securities Act of 1933, as amended (the “**Securities Act**”) for the registration of up to \$28,750,000 American Depositary Shares (“**ADSs**”) representing shares of its common stock, par value €0.10 per share. The ADSs are to be purchased by certain underwriters and offered for sale to the public together with the ADSs registered pursuant to a Registration Statement on Form F-1 (File No. 333-213806) of the Company that was declared effective on October 5, 2016 (the “**Initial Registration Statement**”), including the prospectus (the “**Prospectus**”) which forms a part of the Initial Registration Statement.

We, as your counsel, have examined originals or copies of such documents, corporate records, certificates of public officials and other instruments as we have deemed necessary or advisable for the purpose of rendering this opinion.

In rendering the opinion expressed herein, we have, without independent inquiry or investigation, assumed that (i) all documents submitted to us as originals are authentic and complete, (ii) all documents submitted to us as copies conform to authentic, complete originals, (iii) all signatures on all documents that we reviewed are genuine, (iv) all natural persons executing documents had and have the legal capacity to do so, (v) all statements in certificates of public officials and officers of the Company that we reviewed were and are accurate and (vi) all representations made by the Company as to matters of fact in the documents that we reviewed were and are accurate.

Based upon the foregoing, we advise you that, in our opinion, when the price at which the ADSs to be sold has been approved by the Board of Directors of the Company in accordance with the resolutions of the Company’s shareholders adopted at the meeting of September 26, 2016 and when the ADSs have been issued and delivered against payment therefor in accordance with the terms of the Underwriting Agreement referred to in the Prospectus and incorporated by reference in the Abbreviated Registration Statement, the ADSs will be validly issued, fully paid and non-assessable.

We are members of the Paris Bar and the foregoing opinion is limited to the laws of France as in effect on the date hereof as currently construed by the French courts, and does not express any opinion concerning any other law.

We hereby consent to the filing of this opinion as an exhibit to the Abbreviated Registration Statement and further consent to the reference to our name under the caption “Legal Matters” in the Prospectus included in the Initial Registration Statement and incorporated by reference in the Abbreviated Registration Statement. In giving this consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act.

Very truly yours,

/s/ Davis Polk & Wardwell LLP



**Orrick, Herrington & Sutcliffe  
(Europe) LLP**  
31, avenue Pierre 1er de Serbie  
75782 Paris Cedex 16  
France  
Siren : 808 676 316  
tél +33 (0) 1 53 53 75 00  
fax +33 (0) 1 53 53 75 01  
[www.orrick.com](http://www.orrick.com)

October 5, 2016

Advanced Accelerator Applications  
20 rue Diesel  
01630 Saint-Genis-Pouilly  
France

Ladies and Gentlemen:

We have acted as French tax counsel to Advanced Accelerator Applications, a *société anonyme* incorporated in the French Republic (“AAA”), in connection with the filing of the Form F-1 with the Securities and Exchange Commission (“Registration Statement”) pursuant to Rule 462(b) promulgated under the Securities Act of 1933, as amended, covering an underwritten public offering (the “Offering”) of up to \$28,750,000 American Depositary Shares (“ADSs”) representing newly issued ordinary shares of AAA the “Shares”). The Registration Statement incorporates by reference the registration statement on Form F-1 (No. 333-213806), which was declared effective on October 5, 2016 (the “Prior Registration Statement”), including the prospectus which forms a part of the Prior Registration Statement. You have requested our opinion as to French income tax matters relating to the acquisition, ownership and disposition of the ADSs. All capitalized terms used herein, unless otherwise specified, have the meanings assigned to them in the Prior Registration Statement.

In rendering our opinion, we have examined and relied upon the accuracy and completeness of the facts, information, covenants and representations contained in the Registration Statement and Prior Registration Statement filed with the Securities and Exchange Commission relating to the issuance and sale of the ADSs and such other documents and corporate records as we have deemed necessary or appropriate for purposes of this opinion. Our opinion is conditioned on, among other things, the initial and continuing accuracy of the facts, information, covenants and representations set forth in the documents referred to above. We have no reason to believe that such facts, information, covenants and representations are not true, but have not attempted to verify them independently and expressly disclaim an opinion as to their validity and accuracy.

In our examination, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified or photostatic copies and the authenticity of the originals of such documents.

The opinion expressed in this letter is based on the provisions of the French Tax Code (*Code général des impôts*), as amended, final administrative regulations and interpretations thereof (administrative commentaries binding on the French tax authorities pursuant to section L. 80 A of the French Code of Fiscal Procedures (*Livre des procédures fiscales*) published in the Bulletin Officiel des Finances Publiques-Impôts ) promulgated thereunder, all as in effect as of the date hereof and all of which are subject to change (possibly on a retroactive basis). No ruling from the French tax authorities has been or will be sought on any issues related to the acquisition, ownership or disposition of the ADSs, and there can be no assurance that the French tax authorities will not take a contrary view. Although our opinion expressed in this letter represents our best judgment as to the matters addressed, our opinion has no binding effect on the French tax authorities or the courts.

Based upon and subject to the foregoing, and subject to the qualifications set forth herein, the discussion under the heading “Taxation — French Tax Consequences” contained in the Registration Statement, insofar as it relates to statements of French tax law and legal conclusions, constitutes our opinion regarding such matters as of the date hereof.

Except as set forth above, we express no opinion to any party as to the tax consequences, whether French or foreign, relating to AAA or the ADSs or of any transactions related to or undertaken in connection with the issuance and sale of the ADSs. We are furnishing this opinion to you solely in connection with the Registration Statement and the Prior Registration Statement. We consent to the filing of this opinion as an exhibit to the Registration Statement and to the use of and references to our name under the captions “Taxation” and “Legal Matters” in the prospectus included in the Registration Statement. In giving this consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended, or the rules and regulations of the Securities and Exchange Commission promulgated thereunder (collectively, the “Securities Act”), nor do we thereby admit that we are “experts” within the meaning of such term as used in the Securities Act with respect to any part of the Registration Statement, including this opinion letter as an exhibit or otherwise. We disclaim any obligation to update this opinion letter for events occurring or coming to our attention after the date hereof.

Very truly yours,

/s/ ORRICK, HERRINGTON & SUTCLIFFE (EUROPE) LLP

ASK

New York  
Menlo Park  
Washington DC  
São Paulo  
Londres  
Paris  
Madrid  
Tokyo  
Pékin  
Hong Kong



Davis Polk & Wardwell llp      212 450 4000 tel  
450 Lexington Avenue      212 701 5800 fax  
New York, NY 10017

October 5, 2016

Advanced Accelerator Applications  
20, rue Diesel  
01630 Saint-Genis-Pouilly

Ladies and Gentlemen:

We are acting as United States counsel to Advanced Accelerator Applications S.A., a *société anonyme* organized under the laws of the Republic of France (the “**Company**”) in connection with the Company’s Registration Statement on Form F-1 (the “**Abbreviated Registration Statement**”) filed with the United States Securities and Exchange Commission pursuant to the United States Securities Act of 1933, as amended (the “**Act**”) for the registration of up to \$28,750,000 American Depositary Shares (“**ADSs**”) of the Company. Each ADS represents two ordinary shares, nominal value €0.10 per share, of the Company. The ADSs are to be purchased by certain underwriters and offered for sale to the public together with the ADSs registered pursuant to a Registration Statement on Form F-1 (File No. 333-213806) of the Company that was declared effective on October 5, 2016 (the “**Initial Registration Statement**”), including the prospectus (the “**Prospectus**”) which forms a part of the Initial Registration Statement.

We, as your counsel, have examined originals or copies of such documents, corporate records, certificates of public officials and other instruments as we have deemed necessary or advisable for the purpose of rendering this opinion.

We hereby confirm our opinion set forth under the caption “Taxation—U.S. Federal Income Tax Considerations for U.S. Holders” in the Prospectus included in the Initial Registration Statement and incorporated by reference in the Abbreviated Registration Statement.

We are members of the Bar of the State of New York and the foregoing opinion is limited to the laws of the State of New York and the federal laws of the United States.

We hereby consent to the use of our name under the captions “Taxation—U.S. Federal Income Tax Considerations for U.S. Holders” and “Legal Matters” in the Prospectus included in the Initial Registration Statement and incorporated by reference in the Abbreviated Registration Statement, and to the filing, as an exhibit to the Abbreviated Registration Statement, of this letter. In giving this consent we do not admit that we come within the category of persons whose consent is required under Section 7 of the Act.

Very truly yours,

/s/ Davis Polk & Wardwell LLP

---

**KPMG Audit**  
51 rue de Saint Cyr  
CS 60409  
69338 Lyon Cedex 9  
France

Téléphone : +33 (0)4 37 64 76 00  
Télécopie : +33 (0)4 37 64 76 09  
Site internet : [www.kpmg.fr](http://www.kpmg.fr)

Consent of Independent Registered Public Accounting Firm

The Board of Directors  
Advanced Accelerator Applications S.A.

We consent to the incorporation by reference in the Registration Statement on Form F-1 of Advanced Accelerator Applications S.A. of our report dated April 28, 2016, with respect to the consolidated statements of financial position of Advanced Accelerator Applications S.A. and subsidiaries as of December 31, 2015, 2014 and 2013, and the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2015, which report appears in Amendment No. 2 to the Registration Statement on Form F-1 (Registration No. 333-213806), filed on October 4, 2016, and to the references to our firm under the headings “Summary financial and other information”, “Presentation of financial and other information”, “Selected financial and other information” and “Experts” in the prospectus contained in Amendment No. 2 to the Registration Statement on Form F-1 (Registration No. 333-213806).

Lyon, October 5, 2016

KPMG Audit  
*Department of KPMG S.A.*

/s/ Stéphane Devin

Stéphane Devin  
*Partner*

---