
UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 8-A

FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES
PURSUANT TO SECTION 12(b) OR (g) OF THE
SECURITIES EXCHANGE ACT OF 1934

HORIZON TECHNOLOGY FINANCE CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

27-2114934

(State of incorporation or organization)

(I.R.S. Employer Identification No.)

76 Batterson Park Road, Farmington, Connecticut

06032

(Address of principal executive offices)

(Zip Code)

Securities to be registered pursuant to Section 12(b) of the Act:

Title of each class to be so registered

**Name of each exchange on which
each class is to be registered**

Common Stock, par value \$0.001 per share

The NASDAQ Stock Market LLC

If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A. (c), check the following box.

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A. (d), check the following box.

Securities Act registration statement file number to which this Form relates: 333-165570

Securities to be registered pursuant to Section 12(g) of the Act: None

INFORMATION REQUIRED IN REGISTRATION STATEMENT

Item 1. Description of Registrant's Securities to Be Registered.

The securities to be registered hereby are shares of common stock, par value \$0.0001 per share, of Horizon Technology Finance Corporation (the "Company"). The description of shares of common stock contained in the section entitled "Description of Capital Stock" in the Prospectus included in the Company's Registration Statement on Form N-2 (File No. 222-165570), filed with the Securities and Exchange Commission on March 19, 2010 (as amended from time to time, the "Registration Statement"), is hereby incorporated by reference herein. Any form of prospectus or prospectus supplement to the Registration Statement that includes such descriptions and that are subsequently filed are hereby also incorporated by reference herein.

Item 2. Exhibits.

- 3.1 Amended and Restated Certificate of Incorporation*
- 3.2 Amended and Restated Bylaws*
- 4.1 Form of Specimen Certificate**

* Incorporated by reference to Amendment No. 2 of the Registration Statement filed on July 2, 2010.

** Incorporated by reference to Amendment No. 3 of the Registration Statement filed on July 20, 2010.

SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereto duly authorized.

HORIZON TECHNOLOGY FINANCE CORPORATION

Dated: October 28, 2010

By: /s/ Robert D. Pomeroy, Jr.
Robert D. Pomeroy, Jr.
Chief Executive Officer