

FORM 12b-25

CUSIP Number: 602682205

For the Transition Period Ended:

If the notification relates to a portion of the filing checked above, identify the Item(s) to which the notification relates:

PART I REGISTRANT INFORMATION

Mindspeed Technologies, Inc.

Full name of registrant

Former name if applicable

4000 MacArthur Boulevard East Tower

Address of principal executive office (*Street and number*)

Newport Beach, CA 92660-3095

City, state and zip code

PART II RULES 12b-25(b) and (c)

If the subject report could not be filed without unreasonable effort or expense and the registrant seeks relief pursuant to Rule 12b-25(b), the following should be completed. (Check box if appropriate)

- (a) The reasons described in reasonable detail in Part III of this form could not be eliminated without unreasonable effort or expense;
- x (b) The subject annual report, semi-annual report, transition report on Form 10-K, Form 20-F, Form 11-K, Form N-SAR or Form N-CSR, or portion thereof, will be filed on or before the fifteenth calendar day following the prescribed due date; or the subject quarterly report or transition report on Form 10-Q, or portion thereof will be filed on or before the fifth calendar day following the prescribed due date; and
- (c) The accountant's statement or other exhibit required by Rule 12b-25(c) has been attached if applicable.

PART III NARRATIVE

State below in reasonable detail why Forms 10-K, 20-F, 11-K, 10-Q, N-SAR, N-CSR, or the transition report or portion thereof, could not be filed within the prescribed time period.

Mindspeed Technologies, Inc. (the Registrant) experienced a disruption in its normal closing process for the quarter ended September 27, 2013 as a result of the Registrant's negotiation and announcement of a definitive merger agreement with M/A-COM Technology Solutions Holdings, Inc. (MACOM) and Micro Merger Sub, Inc., a wholly-owned subsidiary of MACOM, and the tender offer associated therewith; the Registrant's filing of a recommendation/solicitation statement and associated amendments on Schedule 14d-9 with the Securities and Exchange Commission; and the Registrant's previously announced negotiations with respect to a divestiture of its wireless infrastructure business unit. Active negotiations and financial diligence relating to the transaction with MACOM and the proposed divestiture began in September 2013, as the Registrant's fiscal year was ending, and continued into the closing period. Substantial additional activity relating to these transactions continued through the deadline for Mindspeed's Annual Report on Form 10-K (the Annual Report). The quantity and complexity of matters relating to these transactions required substantial management time and attention and resulted in a delay in Mindspeed's preparation of its financial statements and other documentation relating to the Annual Report. Accordingly, the Registrant is unable to file the Annual Report by the prescribed due date without unreasonable effort or expense. The Registrant expects to file the Annual Report within the extension period of fifteen calendar days provided under Rule 12b-25 of the Securities Exchange Act of 1934, as amended.

The Registrant does not expect any adjustments to its financial results for the fourth quarter and fiscal year ended September 27, 2013, as previously announced on November 5, 2013, or any other prior period, as a result of the foregoing.

PART IV OTHER INFORMATION

(1) Name and telephone number of person to contact in regard to this notification:

Stephen N. Ananias
(Name)

(949)
(Area Code)

579-3000
(Telephone Number)

(2) Have all other periodic reports required under Section 13 or 15(d) of the Securities Exchange Act of 1934 or Section 30 of the Investment Company Act of 1940 during the preceding 12 months or for such shorter period that the registrant was required to file such report(s) been filed? If the answer is no, identify report(s). ☒ Yes ☐ No

(3) Is it anticipated that any significant change in results of operations from the corresponding period for the last fiscal year will be reflected by the earnings statements to be included in the subject report or portion thereof? ☐ Yes ☒ No

If so, attach an explanation of the anticipated change, both narratively and quantitatively, and, if appropriate, state the reasons why a reasonable estimate of the results cannot be made.

Mindspeed Technologies, Inc.

(Name of Registrant as Specified in Charter)

has caused this notification to be signed on its behalf by the undersigned thereunto duly authorized.

Date: December 12, 2013

By: /s/ STEPHEN N. ANANIAS
Stephen N. Ananias

*Senior Vice President and Chief Financial
Officer*