

Rim Semiconductor CO
Form 424B3
August 24, 2007

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Registration No. 333-133508

Prospectus Supplement
(To Prospectus dated August 16, 2006)

RIM SEMICONDUCTOR COMPANY

This prospectus supplement describes an addition to the “SELLING SHAREHOLDER” section found on pages 46-53 of the Rim Semiconductor Company Prospectus dated August 16, 2006. You should read this prospectus supplement in conjunction with the prospectus. This prospectus supplement is qualified in its entirety by reference to the prospectus, except to the extent the information in this prospectus supplement supersedes the information contained in the prospectus. Capitalized terms used in this prospectus supplement and not otherwise defined herein have the meanings specified in the prospectus.

On July 26, 2007, Pond Equities, Inc. transferred to Brasshorn Limited warrants pursuant to which it had a right to purchase (i) an aggregate 7,095,556 shares of the Company’s common stock at an exercise price of \$0.15 per share and (ii) an aggregate 7,095,556 shares of the Company’s common stock at an exercise price of \$0.1693 per share. To reflect this transfer, on page 52, in the “SELLING SHAREHOLDER” section of the prospectus, the selling shareholder “Pond Equities, Inc.” should be replaced with “Brasshorn Limited.”

In addition, footnote 41 to the Selling Shareholder table found on page 52 of the Prospectus should be replaced in its entirety with the following:

(41) Includes 1,419,111 Adjustment Shares and 14,191,112 shares of common stock issuable upon the exercise of warrants as purchased from the placement agent of the 2006 debentures in July 2007. Mr. Chaim Epstein is the President of the selling shareholder and has voting control and investment discretion over the shares held by the selling shareholder.

The Date of this Prospectus Supplement is August 24, 2007