

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-168250) and Form S-8 (Nos. 333-39129, 333-59859, 333-87715, 333-41954, 333-54010, 333-63156, 333-100094, 333-113683, 333-119799, 333-128529, and 333-130419) of Mattson Technology, Inc. of our report dated March 11, 2011, relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

San Jose, California

March 11, 2011