

June 16, 2010

IXYS Corporation
1590 Buckeye Drive
Milpitas, California 95035

Re: Registration of 1,019,552 shares of common stock, par value \$0.01 per share, of IXYS Corporation, pursuant to a Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as special counsel to IXYS Corporation, a Delaware corporation (the "Company"), in connection with the proposed issuance of up to 1,019,552 shares of common stock, \$0.01 par value per share (the "Shares"), including (i) 366,589 Shares issuable under the ZiLOG, Inc. 2002 Omnibus Stock Incentive Plan (as amended, the "2002 Plan") and (ii) 652,963 Shares issuable under the ZiLOG, Inc. 2004 Omnibus Stock Incentive Plan (as amended, the "2004 Plan" and together with the 2002 Plan, the "Plans"). The Company assumed the Plans pursuant to the Agreement and Plan of Merger, dated as of December 5, 2009, by and among the Company, Zanzibar Acquisition, Inc., a Delaware corporation and a wholly-owned subsidiary of the Company and ZiLOG, Inc. ("ZiLOG"). Accordingly, in connection with the transaction, 1,019,552 Shares are to be issued under the Plans pursuant to a registration statement on Form S-8 under the Securities Act of 1933, as amended (the "Act"), filed with the Securities and Exchange Commission (the "Commission") on June 16, 2010 (the "Registration Statement"). This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement, other than as expressly stated herein with respect to the issue of the Shares.

As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this letter. With your consent, we have relied upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters. We are opining herein as to the General Corporation Law of the State of Delaware, and we express no opinion with respect to any other laws.

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof, when either (i) the Shares shall have been duly registered on the books of the transfer agent and registrar therefor in the name or on behalf of the purchasers or (ii) certificates representing the Shares (in the form of the specimen certificate examined by us) have been manually signed by an authorized officer of the transfer agent and registrar therefor, and have been issued by the Company against payment therefor in the circumstances contemplated by the Plans, assuming in each case that the individual issuances, grants or awards under the Plans are duly authorized by all necessary corporate action of the Company and duly issued, granted or

awarded and exercised in accordance with the requirements of law and the Plans (and the agreements and awards duly adopted thereunder and in accordance therewith), the issue and sale of the Shares will have been duly authorized by all necessary corporate action of the Company, and the Shares will be validly issued, fully paid and nonassessable.

This opinion is for your benefit in connection with the Registration Statement and may be relied upon by you and by persons entitled to rely upon it pursuant to the applicable provisions of the Act. We consent to your filing this opinion as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ Latham & Watkins LLP