

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

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| OMB APPROVAL | |
| OMB Number: | 3235-0145 |
| Expires: | February 28, 2009 |
| Estimated average burden hours per response... | 10.4 |

SCHEDULE 13G

Under the Securities Exchange Act of 1934

(Amendment No. __)*

INFUSYSTEM HOLDINGS, INC.

(Name of Issuer)

Common Stock, par value \$0.0001 per share

(Title of Class of Securities)

411357106

(CUSIP Number)

April 29, 2008

(Date of Event which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, *see* the Notes).

| | |
|----|--|
| 1 | Names of Reporting Persons. I.R.S. Identification Nos. of above persons (entities only) Ionic Capital Partners LP |
| 2 | Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="radio"/> (b) <input type="radio"/> |
| 3 | SEC Use Only |
| 4 | Citizenship or Place of Organization. Delaware |
| | 5 Sole Voting Power Number of Shares Beneficially Owned by Each Reporting Person With -0- |
| | 6 Shared Voting Power 1,090,000 shares (1,496,400 shares as of the date of filing) Refer to Item 4 below. |
| | 7 Sole Dispositive Power -0- |
| | 8 Shared Dispositive Power 1,090,000 shares (1,496,400 shares as of the date of filing) Refer to Item 4 below. |
| 9 | Aggregate Amount Beneficially Owned by Each Reporting Person 1,090,000 shares (1,496,400 shares as of the date of filing) Refer to Item 4 below. |
| 10 | Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="radio"/> N/A |
| 11 | Percent of Class Represented by Amount in Row (9)* 6.1% (8.1% as of the date of filing) Refer to Item 4 below. |
| 12 | Type of Reporting Person (See Instructions) OO - Limited Partnership |

CUSIP NO.

411357106

Names of Reporting Persons.

I.R.S. Identification Nos. of above persons (entities only)

Ionic Capital Management LLC

Check the Appropriate Box if a Member of a Group (See Instructions)

(a)

(b)

SEC Use Only

Citizenship or Place of Organization.

Delaware

| | |
|--------------|--|
| | 5 Sole Voting Power |
| Number | -0- |
| of Shares | 6 Shared Voting Power |
| Beneficially | 1,090,000 shares (1,496,400 shares as of the date of filing) |
| Owned by | Refer to Item 4 below. |
| Each | 7 Sole Dispositive Power |
| Reporting | -0- |
| Person With | 8 Shared Dispositive Power |
| | 1,090,000 shares (1,496,400 shares as of the date of filing) |
| | Refer to Item 4 below. |

Aggregate Amount Beneficially Owned by Each Reporting Person

1,090,000 shares (1,496,400 shares as of the date of filing)

Refer to Item 4 below.

Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) N/A

Percent of Class Represented by Amount in Row (9)*

6.1% (8.1% as of the date of filing)

Refer to Item 4 below.

Type of Reporting Person (See Instructions)

OO - Limited Liability Company

CUSIP NO.

411357106

Names of Reporting Persons.

I.R.S. Identification Nos. of above persons (entities only)

Ionic Capital Master Fund Ltd.

Check the Appropriate Box if a Member of a Group (See Instructions)

(a)

(b)

SEC Use Only

Citizenship or Place of Organization.

Cayman Islands

| | |
|--------------|--|
| | 5 Sole Voting Power |
| Number | -0- |
| of Shares | 6 Shared Voting Power |
| Beneficially | 919,900 shares (1,316,400 shares as of the date of filing) |
| Owned by | Refer to Item 4 below. |
| Each | 7 Sole Dispositive Power |
| Reporting | -0- |
| Person With | 8 Shared Dispositive Power |
| | 919,900 shares (1,316,400 shares as of the date of filing) |
| | Refer to Item 4 below. |

Aggregate Amount Beneficially Owned by Each Reporting Person

919,900 shares (1,316,400 shares as of the date of filing)

Refer to Item 4 below.

Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) N/A

Percent of Class Represented by Amount in Row (9)*

5.2% (7.2% as of the date of filing)

Refer to Item 4 below.

Type of Reporting Person (See Instructions)

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Item 1.

- (a) Name of Issuer
Infusystem Holdings, Inc.
- (b) Address of Issuer's Principal Executive Offices
1551 East Lincoln Avenue, Suite 200, Madison Heights, Michigan 48071

Item 2.

- (a) Name of Person Filing
Ionic Capital Partners LP
Ionic Capital Management LLC
Ionic Capital Master Fund Ltd.
- (b) Address of Principal Business Office or, if none, Residence
Ionic Capital Partners LP
Ionic Capital Management LLC
366 Madison Avenue, 9th Floor, New York, New York 10017
Ionic Capital Master Fund Ltd.
Walkers SPV Limited, Walker House, 87 Mary Street, George Town
Grand Cayman KY1-9002, Cayman Islands
- (c) Place of Organization
Ionic Capital Partners LP – Delaware
Ionic Capital Management LLC – Delaware
Ionic Capital Master Fund Ltd. – Cayman Islands
- (d) Title of Class of Securities
Common Stock
- (e) CUSIP Number
411357106

Item 3. If this statement is filed pursuant to §§240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:

- (a) Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o).
- (b) Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c).
- (c) Insurance Company as defined in Section 3(a)(19) of the Act
- (d) Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C 80a-8).
- (e) An investment adviser in accordance with §240.13d-1(b)(1)(ii)(E);
- (f) An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F);
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- (g) A parent holding company or control person in accordance with § 240.13d-1(b)(1)(ii)(G);
- (h) A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i) A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (j) Group, in accordance with §240.13d-1(b)(1)(ii)(J).

Item 4. Ownership

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

- (a) Amount Beneficially Owned**
 - Ionic Capital Partners LP – 1,090,000 shares (1,496,400 shares as of the date of filing)
 - Ionic Capital Management LLC – 1,090,000 shares (1,496,400 shares as of the date of filing)
 - Ionic Capital Master Fund Ltd. – 919,900 shares (1,316,400 shares as of the date of filing)
- (b) Percent of Class
 - Ionic Capital Partners LP – 6.1% (8.1% as of the date of filing)
 - Ionic Capital Management LLC – 6.1% (8.1% as of the date of filing)
 - Ionic Capital Master Fund Ltd. – 5.2% (7.2% as of the date of filing)
- (c) Number of shares as to which such person has:
 - (i) sole power to vote or to direct the vote
 - Ionic Capital Partners LP – 0 shares
 - Ionic Capital Management LLC – 0 shares
 - Ionic Capital Master Fund Ltd. – 0 shares
 - (ii) shared power to vote or to direct the vote
 - Ionic Capital Partners LP – 1,090,000 shares (1,496,400 shares as of the date of filing)
 - Ionic Capital Management LLC – 1,090,000 shares (1,496,400 shares as of the date of filing)
 - Ionic Capital Master Fund Ltd. – 919,900 shares (1,316,400 shares as of the date of filing)
 - (iii) sole power to dispose or to direct the disposition of
 - Ionic Capital Partners LP – 0 shares
 - Ionic Capital Management LLC – 0 shares
 - Ionic Capital Master Fund Ltd. – 0 shares
 - (iv) shared power to dispose or to direct the disposition of

Ionic Capital Partners LP – 1,090,000 shares (1,496,400 shares as of the date of filing)
Ionic Capital Management LLC – 1,090,000 shares (1,496,400 shares as of the date of filing)
Ionic Capital Master Fund Ltd. – 919,900 shares (1,316,400 shares as of the date of filing)

** Shares reported for Ionic Capital Master Fund Ltd. reflect shares of common stock issuable upon the exercise of presently exercisable warrants held of record by Ionic Capital Master Fund Ltd. Shares reported for Ionic Capital Partners LP consist of the shares reported for Ionic Capital Master Fund Ltd. and shares of common stock issuable upon the exercise of presently exercisable warrants held of record by another private investment fund of which Ionic Capital Partners LP is the investment advisor. Ionic Capital Partners LP has voting and investment control over such shares, but disclaims beneficial ownership of the shares reported herein except to the extent of its pecuniary interest therein. Shares reported for Ionic Capital Management LLC reflect shares reported for Ionic Capital Partners LP, of which Ionic Capital Management LLC is the general partner, and in such capacity may be deemed to have voting and investment control over such shares. Ionic Capital Management LLC disclaims beneficial ownership of all such shares except to the extent of its pecuniary interest therein.

Item 5. Ownership of Five Percent or Less of a Class

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following .

Item 6. Ownership of More than Five Percent on Behalf of Another Person

Not applicable.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company

Not applicable.

Item 8. Identification and Classification of Members of the Group

Not applicable.

Item 9. Notice of Dissolution of Group

Not applicable.

Item 10. Certification

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this Statement is true, complete and correct.

September 4, 2008

IONIC CAPITAL PARTNERS LP

By: Ionic Capital Management LLC, its General Partner

By: /s/ John C. Richardson

John C. Richardson
General Counsel

IONIC CAPITAL MANAGEMENT LLC

By: /s/ John C. Richardson

John C. Richardson
General Counsel

IONIC CAPITAL MASTER FUND LTD.

By: Ionic Capital Partners LP, its Investment Advisor

By: Ionic Capital Management LLC, its General Partner

By: /s/ John C. Richardson

John C. Richardson
General Counsel

JOINT FILING AGREEMENT

This Joint Filing Agreement, dated as of September 4, 2008, is by and among Ionic Capital Partners LP, Ionic Capital Management LLC and Ionic Capital Master Fund Ltd. (the foregoing are collectively referred to herein as the "Ionic Filers").

Each of the Ionic Filers may be required to file with the United States Securities and Exchange Commission a statement on Schedule 13G and/or Schedule 13D with respect to shares of common stock issued by Infusystem Holdings, Inc. beneficially owned by them from time to time.

Pursuant to and in accordance with Rule 13d-1(k) promulgated under the Securities Exchange Act of 1934, as amended, the Ionic Filers hereby agree to file a single statement on Schedule 13G and/or 13D (and any amendments thereto) on behalf of each of such parties, and hereby further agree to file this Joint Filing Agreement as an exhibit to such statement, as required by such rule.

This Joint Filing Agreement may be terminated by any of the Ionic Filers upon one week's prior written notice to the other parties or such lesser period of notice as the Ionic Filers may agree.

Executed and delivered as of the date first above written.

IONIC CAPITAL PARTNERS LP

By: Ionic Capital Management LLC, its General Partner

By: /s/ John C. Richardson

John C. Richardson
General Counsel

IONIC CAPITAL MANAGEMENT LLC

By: /s/ John C. Richardson

John C. Richardson
General Counsel

IONIC CAPITAL MASTER FUND LTD.

By: Ionic Capital Partners LP, its Investment Advisor
By: Ionic Capital Management LLC, its General Partner

By: /s/ John C. Richardson

John C. Richardson
General Counsel