Exhibit 3

(12) **United States Patent**

Wang

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(54) **MODULE AND METHOD FOR INTERFACING ANALOG/DIGITAL CONVERTING MEANS AND JPEG COMPRESSION MEANS**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(51) **Int. Cl.**^{7} **G06K 9/36**

(52) **U.S. Cl.** **382/232**; 382/248

(58) **Field of Search** 382/232, 248; 348/231; 341/126, 144; 358/426, 432, 433

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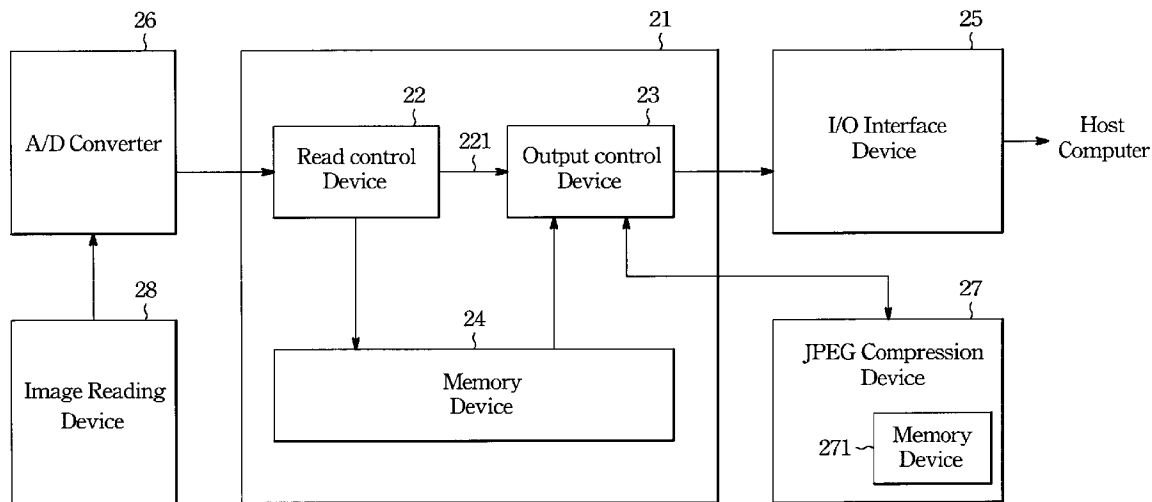|					
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Primary Examiner—Yon J. Couso

(74) *Attorney, Agent, or Firm*—Christensen O'Connor Johnson Kindness PLLC

(57) **ABSTRACT**

An interface module and method is disclosed for receiving the digital image data output of an analog/digital converter and transmitting the digital image data output to the JPEG compression device when the image data is determined to be compressed. The interface module comprises a read control device, an output control device and a memory device. The read control device reads a predetermined number of image lines from the data output of the analog/digital converter and stores these image data in a memory device. The memory device can save the same number of image lines as the memory device built in the JPEG compression device. After reading the predetermined number of image lines, the read control device will generate a control signal to the output control device for sequentially reading an image block from the memory device and sending each of the image block to the JPEG compression device. Since the image block is of the same size of the compression unit required by the JPEG compression device, therefore the image block can be directly transmitted to the JPEG compression device for data compression without having to access an extra memory device.
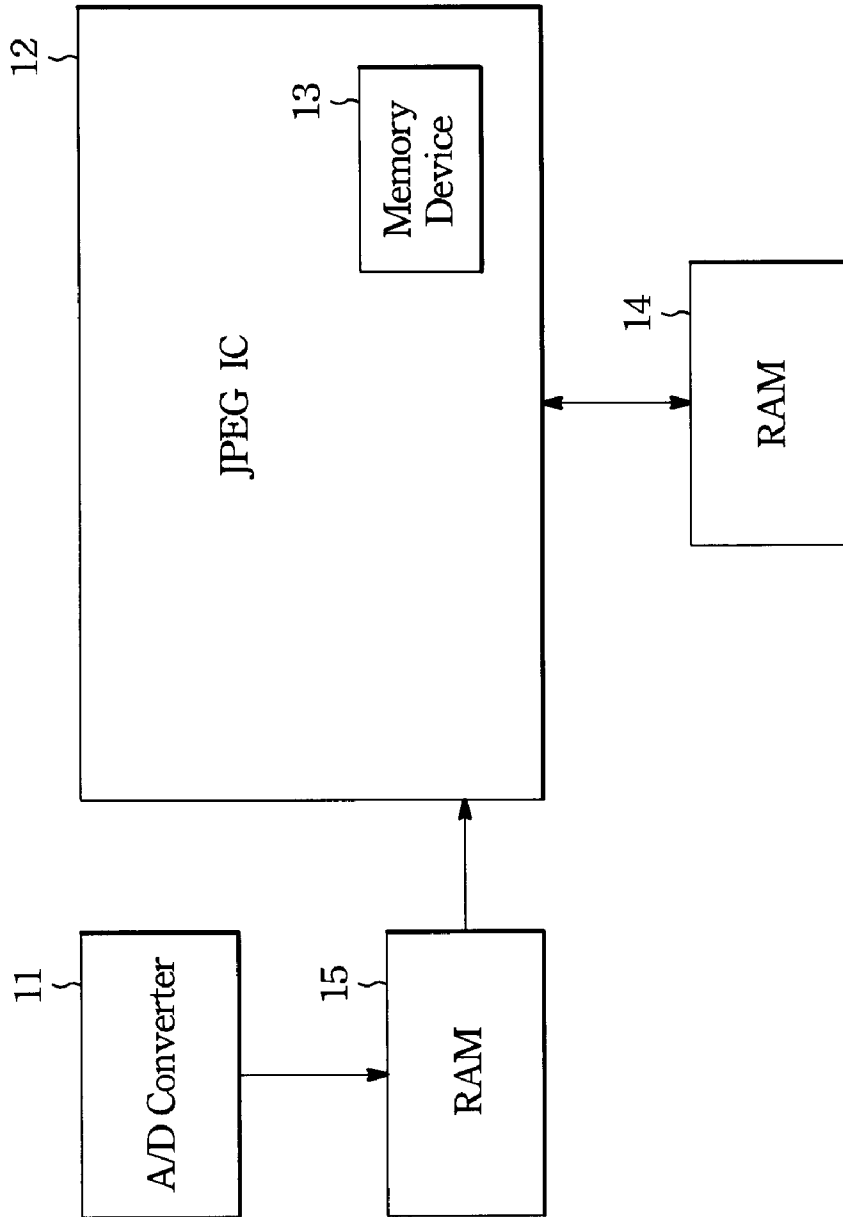
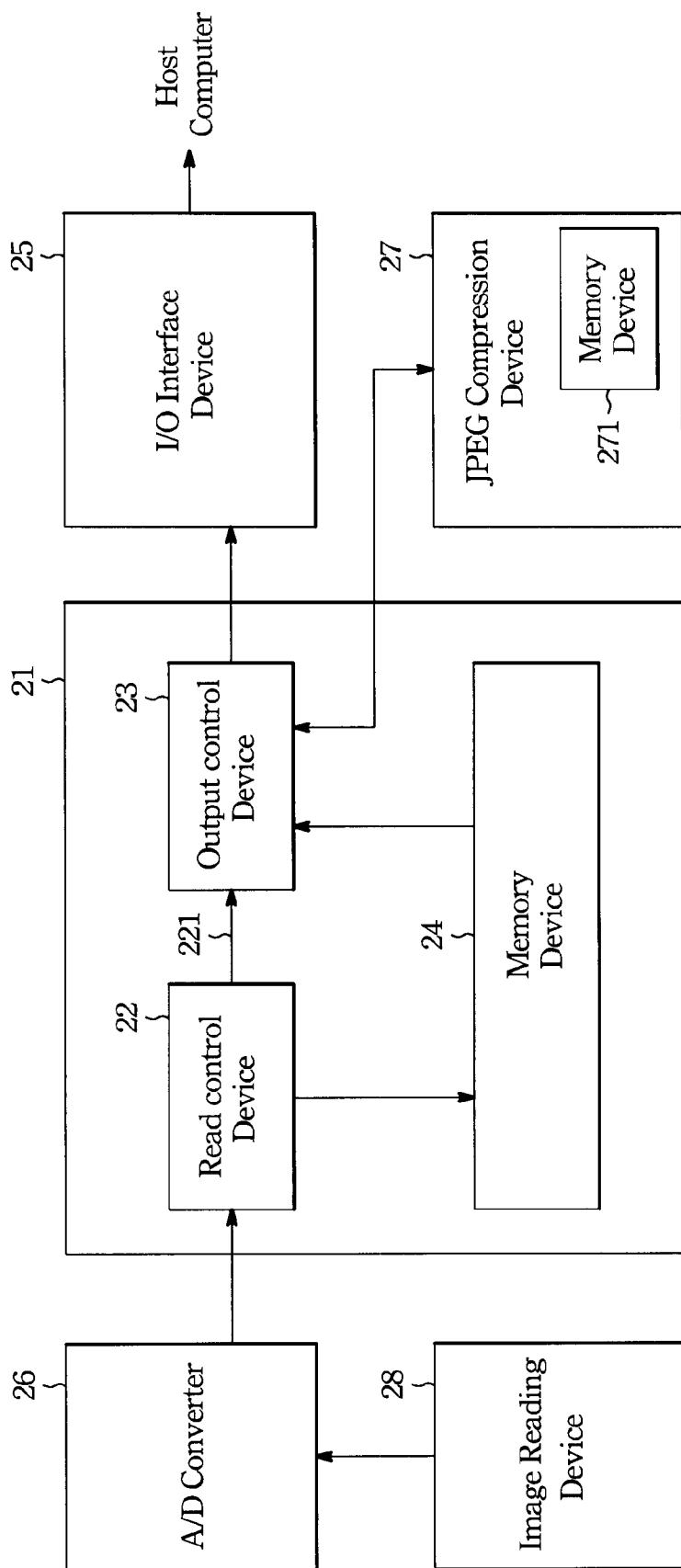**11 Claims, 3 Drawing Sheets**

Fig.1
(Prior Art)

Host
Computer

25

I/O Interface
Device

27

JPEG Compression
Device

Memory
Device

271

21

23

Output control
Device

221

22

Read control
Device

24

Memory
Device

26

A/D Converter

28

Image Reading
Device

Fig.2

Set I=0, J=0, N=the number of image lines of a compression unit, M=the number of pixels for the width of compression unit — 301

Read the data output of the analog/digital converter, set I=I+1 — 302

Store the image data in a memory device — 303

304
I = N ?   No

Yes

305
Compression required ?   No   Send the image data in the memory device the a host computer for further processing — 307

Yes

Set J=M, read J*N image block from the memory device and transmit the image block to the JPEG compression device, M=M+M — 306
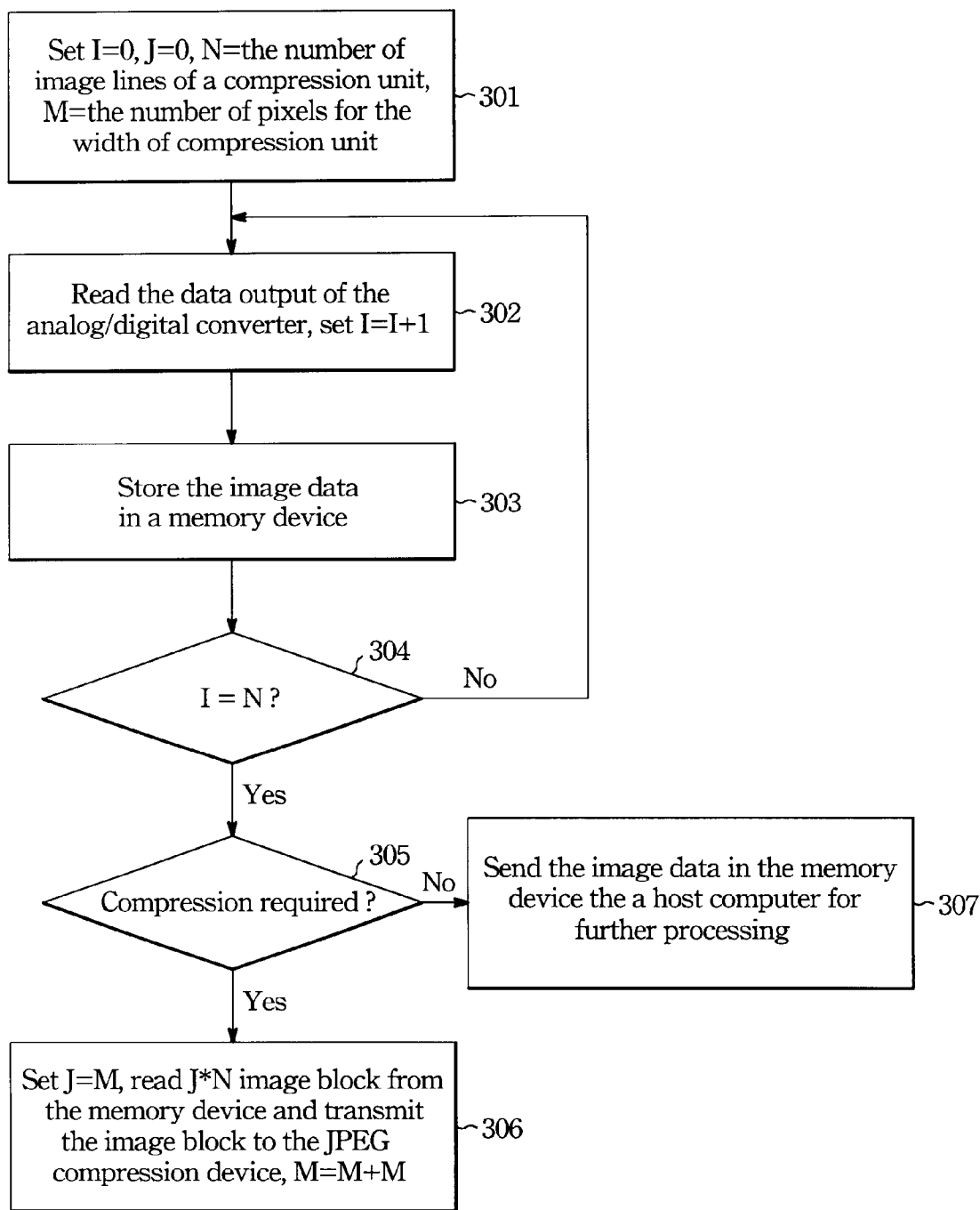
Fig.3

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