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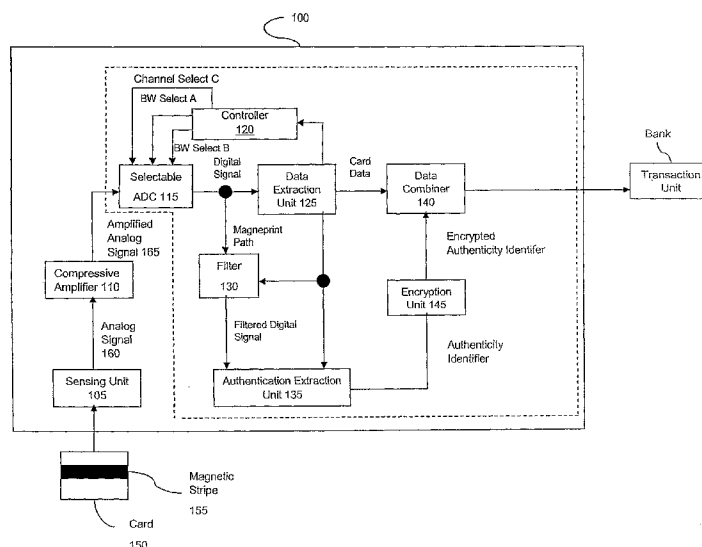
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(54) Title: METHOD AND APPARATUS FOR AUTHENTICATING A MAGNETIC FINGERPRINT SIGNAL USING COMPRESSIVE AMPLIFICATION



(57) Abstract: The invention includes a sensing unit (105) configured to generate a signal (160) indicative of the sensed magnetic field and an amplifier (110). The amplifier is configured to amplify signals having amplitudes less than a threshold by at least a first factor and configured to amplify signals having amplitudes greater than the threshold by at most a second factor. The first factor is greater than the second factor. The invention also includes an analog-to-digital converter (ADC) (115) configured to digitize the analog signal indicative of the ADC configured to attenuate the portion of the digitized signal indicative of the stored data, a data extraction unit (125) configured to measure bit duration and peak location and an authentication extraction unit (135) configured to extract a set of scaled samples representative of the remanent noise characteristics.



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A. CLASSIFICATION OF SUBJECT MATTER
IPC: **G06K 5/00**(2007.01),**19/06**(2007.01)

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,476,743 (BROWN et al) 05 November 2002 (05.11.2002), column 7, lines 50-58; column 8, lines 50-58; column 11, lines 19-32.	1-7
Y	US 4,812,903 (WAGENSONNER et al) 14 March 1989 (14.03.1989), column 3, lines 28-36.	1-7
Y	US 5,546,462 (INDECK et al) 13 August 1996 (13.08.1996), column 21, lines 63-67; column 22, lines 25-30.	1-7

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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"P"	document published prior to the international filing date but later than the priority date claimed		

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