

Title (en)
DIGITAL CORRELATED DOUBLE SAMPLE CAMERA

Title (de)
KAMERA MIT DIGITALER KORRELIERTER DOPPELABTASTUNG

Title (fr)
CAMERA NUMERIQUE A ECHANTILLONNAGE DOUBLE CORRELE

Publication
EP 1000506 A1 20000517 (EN)

Application
EP 98938145 A 19980730

Priority
• US 9815848 W 19980730
• US 90415997 A 19970731

Abstract (en)
[origin: WO9907138A1] A digital electronic camera, method and circuit for converting an analog image-bearing signal from an electronic imaging device. The image-bearing signal provides both a pixel-reference signal and a pixel-image signal for each one of a plurality of pixels of the imaging device. The circuit includes a voltage clamp that adjusts a level of the image-bearing signal based on a black reference level to produce a clamped image-bearing signal. An analog-to-digital converter (ADC) is coupled to digitize the clamped image-bearing signal and operated to produce a first digital value representative of the pixel-reference signal for a pixel, and operated to produce a second digital value representative of the pixel-image signal. Then, a first digital subtractor generates a first digital difference signal based on the first and second digital values to reduce pixel-to-pixel noise and/or drift. The circuit optionally includes a feedback circuit that adjusts the black-reference level based on a comparison between the digital reference value and a digital black-reference value selected to be near or at one end of a range of values accommodated by the ADC. The circuit further optionally includes a clock-adjustment circuit that adjusts an image-voltage-signal sampling clock and/or a reference-voltage-signal sampling clock to sample the respective signal at substantially an end of a valid sampling interval. The circuit further optionally includes an accumulator/averager which is operated to accumulate and average one or more digital values of non-imaging pixels to produce a third digital value, and a second digital subtractor is operated to generate a second digital difference signal based on the first on the first digital difference signal and the third digital value, to reduce row-to-row noise and/or drift. A dovetail camera mounting system is also disclosed.

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H04N 5/217

IPC 8 full level
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CPC (source: EP)
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Cited by
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