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(54) Title of the invention : A SYSTEM AND METHOD FOR APPLYING A PIXEL IMAGER WITH IN-PIXEL HISTOGRAM UNIT FOR IMAGING

(51) International classification : H04N0005235000, H05B0047110000, H04N0005374500, H04N0005357000, H04N0005440000	(71)Name of Applicant : 1)Chitkara University Address of Applicant :Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala ----------- ----------- 2)Bluest Mettle Solutions Private Limited **Name of Applicant : NA** **Address of Applicant : NA** (72)Name of Inventor : 1)MISHRA, Rahul Address of Applicant :ODC-4, Panchshil Tech Park, inside Courtyard by Marriott premises, Hinjewadi Phase - 1, Pune - 411057, Maharashtra, India. Pune ----------- ----------- 2)SINGH, Dhiraj Address of Applicant :ODC-4, Panchshil Tech Park, inside Courtyard by Marriott premises, Hinjewadi Phase - 1, Pune - 411057, Maharashtra, India. Pune ----------- ----------- 3)MANTRI, Archana Address of Applicant :Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala ----------- -----------
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(57) Abstract :
Embodiments of the present disclosure relates to a system (100) and method (300) for applying an enhanced computational pixel imager with an in-pixel histogram acquisition unit for improved image quality. The system (102) comprises a processor (202) coupled to a memory (204). The memory (204) stores processor-executable instructions. The processor (202) is configured to analyse an analog voltage signal generated by a charge-to-voltage conversion unit. Next, the processor (202) is configured to capture a distribution of voltage levels within a pixel based on the analysis. Thereafter, the processor (202) is configured to provide data related to an exposure level of the pixel. In the end, the processor (202) is configured to adjust one or more imaging parameters based on the data to optimize image quality.

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