(12) PATENT APPLICATION PUBLICATION (21) Application No.20241010483 A

(19) INDIA

(22) Date of filing of Application :15/02/2024 (43) Publication Date : 23/02/2024

(54) Title of the invention : SYSTEM USING POLYNOMIALS ON FIELD PROGRAMMABLE GATE ARRAY (FPGA)

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(51) International classification : H04L0009300000, H04L0009060000, H04L0012460000, G06F0007487000, G06F0007483000

(86) International Application No : NA
Filing Date : NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number : NA
Filing Date : NA

(62) Divisional to Application Number : NA
Filing Date : NA

(57) Abstract :
ABSTRACT SYSTEM USING POLYNOMIALS ON FIELD PROGRAMMABLE GATE ARRAY (FPGA) The present disclosure discloses a system (102) using polynomials on a Field Programmable Gate Array (FPGA), comprising a polynomial-based encryption module (104) for transforming plain text into cipher text using key polynomials, a polynomial-based decryption module (106) using the Newton-Raphson to decrypt cipher text and recover the original plain text and a coding and implementation module (108) for performing floating-point operations, including addition, subtraction, multiplication, and division of mantissa and exponential formats. FIG. 1

No. of Pages : 16 No. of Claims : 10