

PCT

200000502-5 IP0S.
WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : G11C 11/22, H03K 19/177		A2	(11) International Publication Number: WO 99/12170
			(43) International Publication Date: 11 March 1999 (11.03.99)
(21) International Application Number: PCT/NO98/00237		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG , SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).	
(22) International Filing Date: 13 August 1998 (13.08.98)			
(30) Priority Data: ① 973782 ✓ 15 August 1997 (15.08.97) ✓ NO ✓			
(71) Applicant (for all designated States except US): OPTICOM ASA [NO/NO]; Brynsveien 3B, N-0667 Oslo (NO).			
(72) Inventors; and (75) Inventors/Applicants (for US only): GUDESEN, Hans, Gude [NO/NO]; Tyrihansveien 5, N-1639 Gamle Fredrikstad (NO); NORDAL, Per-Erik [NO/NO]; Båstadryggen 19, N-1370 Askerv [NO/NO]; LEISTAD, Geirr, I. [NO/NO]; Jongsstubbøen 19, N-1330 Sandvika (NO). ✓		Published In English translation (filed in Norwegian). Without international search report and to be republished upon receipt of that report.	
This Sheet Has Been Replaced 		1 PD 1 appl ⁿ . (See 18/306) 3 Invs. IPC : G11C 11/22 IPER 10/3/99	
(54) Title: A FERROELECTRIC DATA PROCESSING DEVICE ✓			
(57) Abstract			
In a ferroelectric data processing device for processing and/or storage of data with passive or electrical addressing a data-carrying medium is used in the form of a thin film (1) of ferroelectric material which by an applied electric field is polarized to determined polarization states or switched between these and is provided as a continuous layer in or adjacent to electrode structures in the form of a matrix. A logic element (4) is formed at the intersection between an x electrode (2) and a y electrode (3) of the electrode matrix. The logic element (4) is addressed by applying to the electrodes (2, 3) a voltage greater than the coercivity field of the ferroelectric material. Dependent on the polarization state and the form of the hysteresis loop of the ferroelectric material a distinct detection of the polarization state in the logic element (4) is obtained and it may also be possible to switch between the polarization states of the logic element, which hence may be used for implementing a bistable switch or a memory cell. The data processing device according to the invention may be stacked layerwise if the separate layers are separated by an electrical isolating layer and hence be used for implementing volumetric data processing devices.			
			