

Title (en)

Circuit structure of high performance time-to-digital converter

Title (de)

Schaltungsstruktur für einen Hochleistungs-Zeit-Digital-Wandler

Title (fr)

Structure de circuit pour convertisseur temps-numérique haute performance

Publication

**EP 1971032 A2 20080917 (EN)**

Application

**EP 08102491 A 20080311**

Priority

CN 200710037977 A 20070312

Abstract (en)

The invention discloses a circuit structure of a high performance time-to-digital converter including a delay link loop generating low bit data, a counter generating high bit data and a compensated control source. The delay link loop counts low bits and sends a thus-generated signal in a specific cycle to the counter. The counter accumulates a period of the signal in the specific cycle as high bits of the time-to-digital converter. The compensated control source compensates and controls a voltage signal of the delay link loop. The invention has the following advantages: a high measurement precision; a fast processing speed; the connection of the outputs of the latches with the high bit counter can ensure correctness of cycle and carry; the introduction of the compensated control source can ensure consistency of the system; and no high requirement is exerted on the components, and hence the circuit structure is easy to implement.

IPC 8 full level

**G04F 10/00** (2006.01)

CPC (source: EP)

**G04F 10/005** (2013.01)

Cited by

CN106302014A; CN113495816A; CN110266310A; CN114326908A; CN117555212A

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

**EP 1971032 A2 20080917**; **EP 1971032 A3 20100203**; **EP 1971032 B1 20130619**; CN 100539428 C 20090909; CN 101043215 A 20070926

DOCDB simple family (application)

**EP 08102491 A 20080311**; CN 200710037977 A 20070312