T-Engine: The Open, Real-Time Embedded-Systems Platform for Ubiquitous Computing

Noboru Koshizuka and Ken Sakamura

YRP Ubiquitous Networking Laboratory[*1]

The University of Tokyo[*2]

[*1]28th Kowa Bldg., 2-20-1, Nishi-Gotanda, Shinagawa-ku, Tokyo 141-0031, JAPAN

[*2]7-3-1, Hongo, Bunkyo-ku, Tokyo 113-0033, JAPAN

e-mail: {koshizuka, ken}@sakamura-lab.org

Abstract

T-Engine is a standard architecture for next generation real-time embedded systems for ubiquitous computing to improve software productivity of these systems. This paper introduces the basic design philosophy of T-Engine, and overview of its standard hardware and software specifications. By now, several computer vendors have released more than ten hardware systems based on the T-Engine specification. Upon these, software vendor companies are developing major middleware components for embedded systems such as Java, Linux, and mobile phone profiles.