Automotive Hardware Development According to ISO 26262

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Abstract—This paper briefly explains ISO 26262, the new automotive standard for functional safety. The standard is for electrical/electronic systems mounted on series of passenger cars. In the standard, Automotive Safety Integrity Level (ASIL) is classified into four levels according to the required safety level. Each of the ASIL has its own process and steps for item development. This paper focuses on the item development at hardware level, especially for ASIL C and D. The hardware development procedure includes the calculation of single point metric and latent fault metric. Furthermore, we present overall calculation steps of controlling random hardware failure.

Keywords—ISO 26262, System & hardware development, single point fault metric, latent fault metric, diagnostic coverage