DVI (HDMI) and DisplayPort digital video interfaces in electromagnetic eavesdropping process

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Abstract: Increasingly common usage of new technologies in information processing generates escalating threat of confidentiality loss. Utilizing current VGA analog standard based means raises many doubts. It is a

widely held view that this standard is highly susceptible to electromagnetic infiltration. Digital technologies are supposed to ensure a higher security level. This also applies to data processed in graphic form, especially those being transmitted to graphic display devices, such as computer monitors using DVI and DisplayPort standards. This article presents a comparative analysis of graphic technologies (DVI and DisplayPort) in terms of the electromagnetic safety of processed data. Analyses shown are based both on simulations results and practical study. The products of recreating the data using registered sensitive emission signals for studied graphical standards are presented.

Keywords: Standards, Electromagnetics, Image color analysis, Electromagnetic compatibility, Monitoring, Graphics, Eavesdropping

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