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IEEE Recommended Practice for Protecting Publicly Accessible Computer Systems from Intentional Electromagnetic Interference (IEMI)

IEEE Electromagnetic Compatibility Society

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IEEE Std 1642™-2015

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Approved 26 January 2015

IEEE-SA Standards Board

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Abstract: Appropriate electromagnetic threat levels, protection methods, monitoring techniques, and test techniques for specific classes of computer equipment are established. This equipment is expected to be accessible to the public at ranges less than 100 m, and the loss of operation of the equipment due to intentional electromagnetic interference is expected to cause losses (both financial and of confidence) to businesses operating computer equipment, which are providing services to the public or to private companies. The principle class of equipment to be considered in this recommended practice includes fixed (non-mobile) computer equipment. Examples include automated teller machines; electronic cash registers at stores; computer equipment in banks and at airports; computer equipment controlling traffic flow; computer equipment controlling communications or allowing Internet access; computer equipment providing police, fire, and security services; computer equipment controlling the operation of the power grid (including smart meters); computer equipment operating in hospitals; etc.

Keywords: electromagnetic protection, IEEE 1624™, intentional electromagnetic interference; IEMI, high-power electromagnetics; HPEM

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Introduction

This introduction is not part of IEEE Std 1642™-2015, IEEE Recommended Practice for Protecting Publicly Accessible Computer Systems from Intentional Electromagnetic Interference (IEMI).

The purpose of this recommended practice is to provide information for manufacturers and users to specify the electromagnetic compatibility (EMC) requirements for computer equipment and systems that can be used by the public or businesses, which require a high level of security to prevent intentional electromagnetic fields from interfering with the operation of these computers.

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