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IEEE Standard for the Universal Test Interface Framework and Pin Configuration for Portable/Bench Top Test Requirements Utilizing IEEE 1505™ Receiver Fixture Interface Standard

IEEE Standards Coordinating Committee 20

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IEEE Standards Coordinating Committee 20 on
Test and Diagnosis for Electronic Systems

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IEEE Std 1505.3™-2015

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Abstract: Portable/benchtop test equipment applications are supported in this document by defining a mass interconnection scheme and pin configuration based upon IEEE Std 1505™-2010 and IEEE Std 1505.1™-2008. Particular emphasis has been placed on defining a more specific set of performance requirements than is defined by IEEE Std 1505-2010 and IEEE Std 1505.1-2008. These performance requirements are in the areas of the pin configuration, specific connector modules, and respective contacts.

Keywords: ATE, ATS, fixture, IEEE 1505.3™, interface, receiver, scalable, TPS, UUT

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Introduction

This introduction is not part of IEEE Std 1505.3™-2015, IEEE Standard for the Universal Test Interface Framework and Pin Configuration for Portable/Benchtop Test Requirements Utilizing IEEE 1505™ Receiver Fixture Interface Standard.

Developers, users, and buyers of benchtop and general purpose portable test equipment can benefit from having a standardized mechanical interface and electrical signal input/output (I/O) pin configuration. Implementing a standard interface and pin configuration will permit testing interoperability with other benchtop and portable test equipment that has implemented the same standards. This standard provides the definition of both the mechanical interface and the pin configuration.

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IEEE Standard for the Universal Test Interface Framework and Pin Configuration for Portable/Benchtop Test Requirements Utilizing IEEE 1505™ Receiver Fixture Interface Standard

1. Overview

1.1 General

The IEEE Std 1505™ family of Standards allows test systems and test system fixtures to be designed, developed, and deployed; the fixtures could then be exchanged with other test systems adhering to the common format of the IEEE Std 1505 family of Standards. The IEEE Std 1505 family of Standards has been developed and are maintained under the guidance of the Hardware Interfaces (HI) Subcommittee of IEEE Standards Coordinating Committee 20 (SCC20).

1.2 Scope

The scope of this standard is the definition of a universal framework/footprint and pin configuration utilizing IEEE 1505 receiver-fixture interface (RFI) framework and connector specifications for portable and benchtop test applications. The pin configuration defined within this standard shall apply to commercial, aerospace, and military automatic test equipment (ATE) testing applications.