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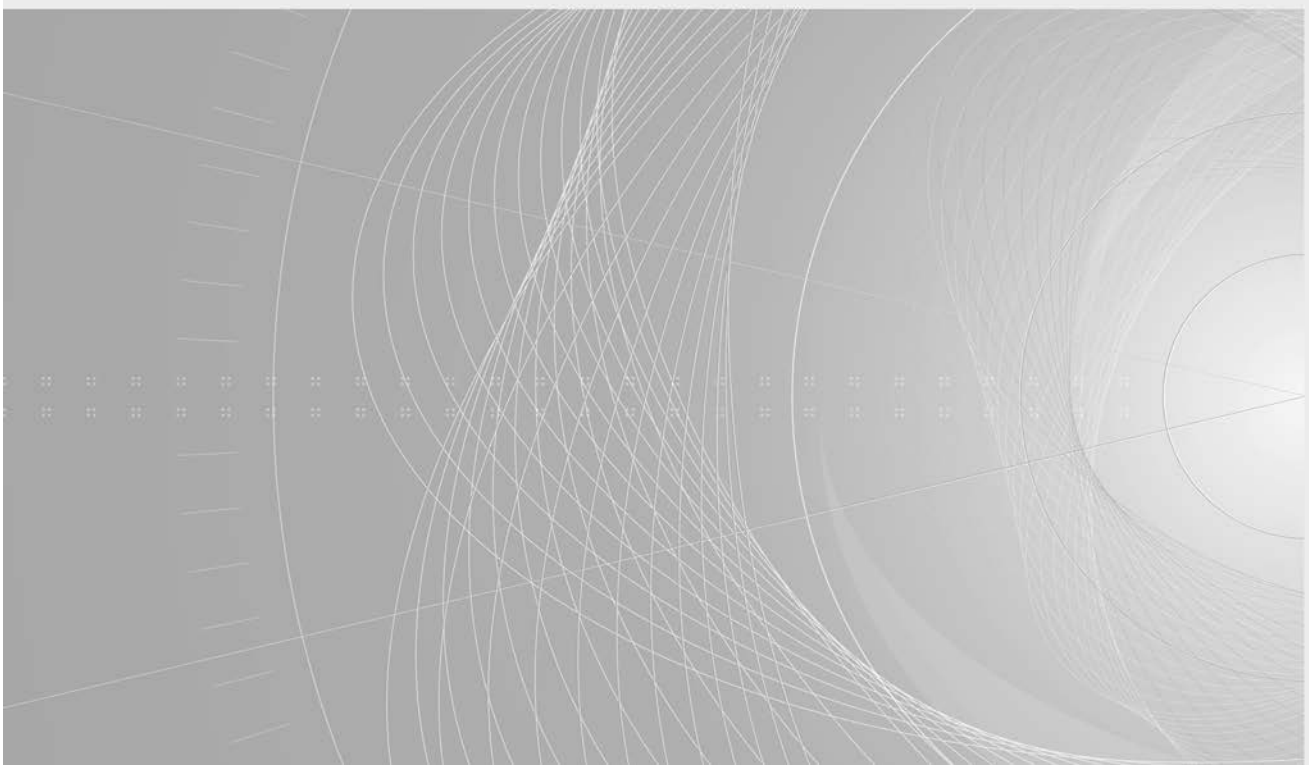
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# **INTERNATIONAL STANDARD** IEEE Std 1505.1™



**Standard for the common test interface pin map configuration for high-density, single-tier electronics test requirements utilizing IEEE Std 1505™**





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# **INTERNATIONAL IEEE Std 1505.1™ STANDARD**



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**Standard for the common test interface pin map configuration for high-density, single-tier electronics test requirements utilizing IEEE Std 1505™**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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# STANDARD FOR THE COMMON TEST INTERFACE PIN MAP CONFIGURATION FOR HIGH-DENSITY, SINGLE-TIER ELECTRONICS TEST REQUIREMENTS UTILIZING IEEE Std 1505™

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IEEE Std	FDIS	Report on voting
IEEE Std 1505.1-2008	91/1274/FDIS	91/1298/RVD

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# **IEEE Standard for the Common Test Interface Pin Map Configuration for High-Density, Single-Tier Electronics Test Requirements Utilizing IEEE Std 1505™**

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Test and Diagnosis for Electronic Systems**

Approved 26 September 2008

**IEEE-SA Standards Board**

Approved as a Full-Use Standard on 14 June 2013

**IEEE-SA Standards Board**

**Abstract:** This standard represents an extension to the IEEE 1505 receiver fixture interface (RFI) standard specification. Particular emphasis is placed on defining within the IEEE 1505 RFI standard a more specific set of performance requirements that employ a common scalable: (a) pin map configuration; (b) specific connector modules; (c) respective contacts; (d) recommended switching implementation; and (e) legacy automatic test equipment (ATE) transitional devices. This is intentionally done to standardize the footprint and assure mechanical and electrical interoperability between past and future automatic test systems (ATS).

**Keywords:** ATE, ATS, fixture, ICD, IEEE 1505.1<sup>TM</sup>, interface, ITA, mass termination, receiver, scalable, TPS, UUT

## IEEE Introduction

This introduction is not part of IEEE Std 1505.1-2008, IEEE Standard for the Common Test Interface Pin Map Configuration for High-Density, Single-Tier Electronics Test Requirements Utilizing IEEE Std 1505™.

This standard stems from the history of ATE implementations having unique input/output (I/O) pin out definitions. This uniqueness has prevented the interoperability of test program sets (TPSs) among different ATEs within the same organizations. Even if the same RFI was used by the target ATE, the signals I/O could not be guaranteed to be at the same pin location. This is due to there being no suitable standard pin out definition for general purpose electronic testing applications.

IEEE Std 1505-2006<sup>a</sup> has addressed part of the interoperability problem by defining the common mechanical interface for the ATE. This project takes the TPS interoperability problem one step further toward completion by standardizing the electrical signal I/O pin map for general purpose electronic testing applications.

Particular emphasis is placed on defining within the IEEE 1505 RFI standard a more specific set of performance requirements that employ a common scalable: (a) framework; (b) pin map configuration; (c) specific connector modules; (d) respective contacts; (e) recommended switching implementation; and (f) legacy ATE transitional devices. This is intentionally done to standardize the footprint and assure mechanical and electrical interoperability between past and future ATS. The suggested mechanical and electrical requirements necessary to implement a specific IEEE 1505 RFI product in support of a common test interface (CTI) across all U.S. Department of Defense (DoD) defense agencies, related aerospace industry, and a variety of non-U.S. government agencies such as the U.K. Ministry of Defense (MoD) is provided.

The DoD is a major buyer and user of ATE; however, existing acquisition guidance desires the use of commercial standards and/or best practices for these systems. Suitable standards currently do not exist in the commercial marketplace; therefore, this standard will provide such specification.

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# Standard for the Common Test Interface Pin Map Configuration for High-Density, Single-Tier Electronics Test Requirements Utilizing IEEE Std 1505™

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## 1. Overview

### 1.1 Scope

The scope of this standard is the definition of a pin map utilizing the IEEE 1505™<sup>1</sup> receiver fixture interface (RFI). The pin map defined within this standard shall apply to military and aerospace automatic test equipment (ATE) testing applications.

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<sup>1</sup> Information on references can be found in Clause 2.