



**ATIS-0600015.08.2014(S.2024)**

**Energy Efficiency for Telecommunication Equipment  
Methodology for Measurement and Reporting for Small  
Network Equipment**

**AMERICAN NATIONAL STANDARD FOR TELECOMMUNICATIONS**



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## ATIS-0600015.08.2014(S2014) Energy Efficiency for Telecommunication Equipment: Methodology for Measurement and Reporting for Small Network Equipment

Is an American National Standard developed by the **Telecommunications Energy Efficiency (TEE) Subcommittee** under the **ATIS Sustainability in Telecom: Energy and Protection Committee (STEP)**.

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American National Standard for Telecommunications

# Energy Efficiency for Telecommunication Equipment: Methodology for Measurement and Reporting for Small Network Equipment

Alliance for Telecommunications Industry Solutions

Approved October 27, 2014

## Abstract

This document specifies the definition of router and Ethernet switch products based on their position in a network, as well as a methodology to calculate the Telecommunication Energy Efficiency Ratio (TEER). The standard will also provide requirements for how equipment vendors shall respond to a TEER request based on a specific application description by making use of relevant data from internal and independent test reports.

## Foreword

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The information contained in this Foreword is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. As such, this Foreword may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the Standard.

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ANSI guidelines specify two categories of requirements: mandatory and recommendation. The mandatory requirements are designated by the word *shall* and recommendations by the word *should*. Where both a mandatory requirement and a recommendation are specified for the same criterion, the recommendation represents a goal currently identifiable as having distinct compatibility or performance advantages.

Suggestions for improvement of this document are welcomed. They should be sent to the Alliance for Telecommunications Industry Solutions, STEP, 1200 G Street NW, Suite 500, Washington, DC 20005.

At the time of consensus on this document, STEP, which was responsible for its development, had the following leadership:

- K. Biholar, STEP Chair [Alcatel-Lucent]
- J. Krahnert, STEP Vice-Chair [Cisco]
- L. Rabinovich, STEP TEE Chair [Cisco]
- L. Rabinovich, Technical Editor [Cisco]

The TEE Subcommittee was responsible for the development of this document.

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# Energy Efficiency for Telecommunication Equipment: Methodology for Measurement and Reporting for Small Networking Equipment

## 1 Scope, Purpose, & Application

### 1.1 Scope

The requirements and definitions in this document are for Small Networking Equipment. This document represents one part of the larger ATIS suite of standards concerning Telecommunications Energy Efficiency.

### 1.2 Purpose

This document provides a set of definitions, requirements, and guidelines for calculating the Telecommunications Energy Efficiency Ratio (TEER) of a product. The test methodology used to measure the Energy Consumption used as part of the TEER calculation is addressed in ATIS-0600015.2013.

### 1.3 Application

This document (and supporting documentation) is intended to be used by network operators, equipment manufacturers, and re-sellers as a standard method for determining the energy efficiency Small Networking Equipment. By comparing the TEER reports of multiple products with the same functional capabilities, which meet a common set of requirements, a communications network operator, reseller, or end user can select the equipment that best meets their energy efficiency needs.

## 2 Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this ATIS Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this ATIS Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

ISO 17025, *General Requirements for the competence of testing and calibration laboratories*.<sup>1</sup>

ATIS-0600015.2013, *Methodology for Measurement and Reporting: General Requirements*.<sup>2</sup>

ITU-T recommendation 1310: *Energy efficiency metrics and measurement methods for telecommunication equipment*<sup>3</sup>

<sup>1</sup> This document is available from the International Organization for Standardization. < <http://www.iso.ch/iso/en/prods-services/ISOstore/store.html> >

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