

CEA Standard

Control Networking Protocol Specification Part 6: Application Elements

CEA-709.6

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(Formulated under the cognizance of the CEA **R7 Consumer Electronics Networking Committee**)

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FOREWORD

This standard is prepared based upon work provided to the Consumer Electronics Association (CEA) R7 Consumer Electronics Networking Committee by LonMark International, a non-profit standards development association. This work has been modified from its original creation to update it to the latest revision. Similar documents have been used in other international standards bodies.

This standard is part of a series of standards for open data transmission in building automation, home automation, and control in building management systems. The content of this standard covers the data communications used for management, automation/control and field functions.

The CEA-709.6 is part of a series of ANSI/CEA-709 Standards under the general title *Control Network Protocol (CNP)*, which comprises the following parts:

Part 1: *Protocol Stack Specification*

Part 2: *Power Line Channel Specification*

Part 3: *Twisted-Pair Communication*

Part 4: *Fiber Optic Specification*

Part 5: *Implementation*

Part 6: *Application Elements*

Tags

Descriptors: system management, open systems interconnection, interoperability, device communications, network interconnection, buildings, heating, ventilation, air conditioning, data bus, data transmission, protocols, device profiles, configuration properties, network variables, enumeration types, device resource files, building automation, controls, building management

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CONTROL NETWORKING PROTOCOL SPECIFICATION PART 6: APPLICATION ELEMENTS

Introduction

CEA-709.6 is used by all involved in specifying, design, manufacture, engineering, installation, management and commissioning activities.

This standard specifies the definition of various types of data-transfer containers for carrying temperature, pressure, state, and other forms of data over the protocol defined by ANSI/CEA-709.1-D from any number of devices to any other number of devices, as defined by the limits in ANSI/CEA-709.1-D. This standard also specifies the data types for configuration information, used to define timing, default values, and other data. This standard also specifies a data-file transfer method that may be used for transferring configuration information to and from devices. This standard specifies the device-interface format that describes the interconnection points of a device. This standard also defines a set of application specific device profile definitions.

NOTE The file-transfer mechanism is not exclusively for loading configuration information into a device and therefore it can be used for other purposes.

This standard is contributing to the general US policy for energy savings for building automation, monitoring, and control of energy consuming systems in typical buildings.

ANSI/CEA-709 Control Network Protocol	CEA-709.6 Application Elements			
	CEA-709.5 Implementation Guideline			
	ANSI/CEA-709.1 Protocol Stack			
	ANSI/CEA-709.2 Power Line Channel	ANSI/CEA-709.3 Twisted Pair Communication	ANSI/CEA-709.4 Fiber Optic Channel	ANSI/CEA-852.1 Enhanced IP Tunneling Protocol

Figure 1 — Scope of the ANSI/CEA-709 suite of standards

1 Scope

This specification provides mechanisms through which various vendors of building automation, home automation, control, and building management systems may exchange information in a standardised way.

This document provides specifications for the Application Elements of Control Network Protocol packets as follows:

- Definitions of standardized packet (network-variable) data types;
- Definitions of device-interface files;