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SERIES G: TRANSMISSION SYSTEMS AND MEDIA,
DIGITAL SYSTEMS AND NETWORKS

Access networks – In premises networks

Unified high-speed wire-line based home networking transceivers – Management specification

Recommendation ITU-T G.9962

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For further details, please refer to the list of ITU-T Recommendations.

Recommendation ITU-T G.9962

Unified high-speed wire-line based home networking transceivers – Management specification

Summary

Recommendation ITU-T G.9962 specifies the physical and data link layer management for the ITU-T G.996x-series home networking transceiver specifications. It defines common management parameters and protocols for all ITU-T G.996x-series Recommendations for the purpose of device configuration, status and performance management, fault monitoring and diagnostics. It also provides management functionalities to coordinate multiple domains. It includes support for LCMP communication through the L1 and L6 interfaces.

History

Edition	Recommendation	Approval	Study Group	Unique ID*
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G.hn, management layer.

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FOREWORD

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure, e.g., interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

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Recommendation ITU-T G.9962

Unified high-speed wire-line based home networking transceivers – management specification

1 Scope

This Recommendation specifies the physical and data link layer management for the ITU-T G.996x-series home networking transceiver specifications. It defines the management architecture, protocols and common management parameters, for all ITU-T G.996x-series Recommendations. More specifically, this Recommendation includes the following:

- Architecture and reference model for management layer;
- Management protocols defined in [ITU-T G.9980], [BBF TR-069], necessary for device configuration, status and performance management, fault monitoring, and diagnostics and security;
- Management parameters defined in [BBF TR-181 I2A8] for transparent integration with remote management functionality;
- Global master (GM) functionality that facilitates coordination of multiple ITU-T G.996x domains;
- Support for Layer 2 Configuration and Management Protocol (LCMP).

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

- [ITU-T G.9960] Recommendation ITU-T G.9960 (2019), *Unified high-speed wire-line based home networking transceivers – System architecture and physical layer specification*.
- [ITU-T G.9961] Recommendation ITU-T G.9961 (2019), *Unified high-speed wire-line based home networking transceivers – Data link layer specification*.
- [ITU-T G.9963] Recommendation ITU-T G.9963 (2019), *Unified high-speed wire-line based home networking transceivers – Multiple input/multiple output specification*.
- [ITU-T G.9964] Recommendation ITU-T G.9964 (2011), *Unified high-speed wire-line based home networking transceivers – Power spectral density specification*.
- [ITU-T G.9980] Recommendation ITU-T G.9980 (2012), *Remote management of customer premises equipment over broadband networks – Customer premises equipment WAN Management Protocol*.
- [BBF TR-069] Broadband Forum TR-069 (2013), *CPE WAN Management Protocol*.
- [BBF TR-181 I2A8] Broadband Forum TR-181 Issue 2, Amendment 12 (2018), *Device data model for TR-069*¹.

¹ See also <http://www.broadband-forum.org/cwmp/tr-181-2-8-0.html> for the root object definitions.

3 Definitions

3.1 Terms defined elsewhere

Unless otherwise noted, the definitions in [ITU-T G.9960] and [ITU-T G.9961] shall apply.

3.2 Terms defined in this Recommendation

This Recommendation defines the following terms:

3.2.1 client: An application entity distinguished in the network by its unique address (e.g., MAC address).

3.2.2 global master (GM): A function that provides coordination between different domains (such as communication resources, priority setting, policies of domain masters and crosstalk mitigation). A global master may also convey management functions initiated by the remote management system (e.g., the Broadband Forum CPE WAN management protocol) to support broadband access.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

AE	Application Entity
DLL	Data Link Layer
DM	Domain Master
DME	DLL Management Entity
DMME	Domain Master Management Entity
GM	Global Master
GME	Global Master Entity
LCMP	Layer 2 Configuration and Management Protocol
LLC	Logical Link Control
LSB	Least Significant Bit
MCS	Management, Control and Security
MSB	Most Significant Bit
NME	Node Management Entity
NMS	Network Management System
PHY	Physical
PME	PHY Management Entity
SC	Security Controller
SCE	Security Controller Entity

5 Conventions

None.