

TR-374

YANG modules for management of G.hn systems in FTTdp architectures

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Executive Summary

This specification defines the YANG data models necessary for the management of ITU-T G.hn technology when used in FTTdp architectures.

1 Purpose and Scope

1.1 Purpose

This specification defines the YANG data models necessary for the management of ITU-T G.hn technology when used in FTTdp architectures.

1.2 Scope

This Technical Report currently defines the following interface-related YANG modules:

- **bbf-ghn**: Includes all standardized parameters and associated types for G.hn configuration, status monitoring, performance management, testing and diagnostics of a G.hn network connected to the interface.

Future Amendments are likely to define additional YANG modules.

The YANG modules of TR-374 are posted on GitHub at <https://github.com/BroadbandForum/yang>. This file documents the theory of operation and structure of the YANG modules in TR-374. This file also provides a starting point for understanding TR-374; containing high-level descriptions and pointers to more detailed documentation in the YANG files.

Section 4 of this document briefly outlines the modules defined in TR-374.

Section 5 describes the documentation included in the modules in TR-374.

2 References and Terminology

2.1 Conventions

In this Technical Report, several words are used to signify the requirements of the specification. These words are always capitalized. More information can be found in RFC 2119 [1].

MUST	This word, or the term “REQUIRED”, means that the definition is an absolute requirement of the specification.
MUST NOT	This phrase means that the definition is an absolute prohibition of the specification.
SHOULD	This word, or the term “RECOMMENDED”, means that there could exist valid reasons in particular circumstances to ignore this item, but the full implications need to be understood and carefully weighed before choosing a different course.
SHOULD NOT	This phrase, or the phrase "NOT RECOMMENDED" means that there could exist valid reasons in particular circumstances when the particular behavior is acceptable or even useful, but the full implications need to be understood and the case carefully weighed before implementing any behavior described with this label.
MAY	This word, or the term “OPTIONAL”, means that this item is one of an allowed set of alternatives. An implementation that does not include this option MUST be prepared to inter-operate with another implementation that does include the option.

2.2 References

The following references are of relevance to this Technical Report. At the time of publication, the editions indicated were valid. All references are subject to revision; users of this Technical Report are therefore encouraged to investigate the possibility of applying the most recent edition of the references listed below.

A list of currently valid Broadband Forum Technical Reports is published at www.broadband-forum.org.

Document	Title	Source	Year
[1] RFC 2119	<i>Key words for use in RFCs to Indicate Requirement Levels</i>	IETF	1997
[2] RFC 7223	<i>A YANG Data Model for Interface Management</i>	IETF	2014
[3] RFC 6991	<i>Common YANG Data Types</i>	IETF	2013
[4] RFC 7950	<i>The YANG 1.1 Data Modeling Language</i>	IETF	2016
[5] TR-181	<i>Device Data Model for TR-069</i>	BBF	2014
[6] TR-383	<i>Common YANG Modules for Access Networks</i>	BBF	2017
[7] G.9960	<i>Unified high-speed wire-line based home networking transceivers – Physical layer specification</i>	ITU-T	2016
[8] G.9961	<i>Unified high-speed wire-line based home networking transceivers – Data link layer specification</i>	ITU-T	2016
[9] G.9962	<i>Unified high-speed wire-line based home networking transceivers – Management Specification</i>	ITU-T	2014
[10] G.9964	<i>Unified high-speed wire-line based home networking transceivers – Power spectral density specification</i>	ITU-T	2016

2.3 Definitions

The following terminology is used throughout this Technical Report.

FTTh Fiber To The Distribution Point

2.4 Abbreviations

This Technical Report uses the following abbreviations:

DM	Domain Master
EP	End Point

3 Technical Report Impact

3.1 Energy Efficiency

TR-374 has no impact on energy efficiency.

3.2 IPv6

TR-374 has no impact on IPv6.

3.3 Security

TR-374 has no impact on security.

3.4 Privacy

Any issues regarding privacy are not affected by TR-374.

4 Modules

The YANG modules contained in TR-374 are briefly described here.

4.1 bbf-ghn

ITU-T G.hn technology ([7], [8], [9], [10]) defines the system architecture, physical and data link layer of an OFDM-based wireline-based transmission system able to operate over different physical media.

The bbf-ghn module's YANG files are in the interface directory. This is the G.hn YANG data model.

The top level module is in file bbf-ghn.yang, and all included submodules have file names beginning with bbf-ghn. The individual parameters are defined in *body.yang submodule files.

Documentation is in the interface/docs directory.

bbf-ghn uses parameters defined in ITU-T G.9960 [7], ITU-T G.9961 [8], ITU-T G.9962 [9], ITU-T G.9964 [10] and TR-181 [5].

5 Documentation

There are "README.md" files; these are short text files giving brief descriptions of the contents of the directories they are in.

Documentation for the bbf-ghn module are contained in directory *interface/docs* and have filenames beginning with bbf-ghn.

The tree file named bbf-ghn-full.tree shows the tree structure and all parameters in the module.

6 Dependencies on related YANG modules and Standards

TR-374 is based on YANG 1.1 [4]

The following YANG modules are used by TR-374:

- ietf-interfaces.yang [2]
- ietf-yang-types.yang [3]
- bbm-yang-types [6]

End of Broadband Forum Technical Report TR-374