
**Information technology —
Telecommunications and information
exchange between systems — High rate
60 GHz PHY, MAC and PALs**

*Technologies de l'information — Téléinformatique — PHY, MAC et
PALs 60 GHz à haut débit*



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2011

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword	ix
Introduction	x
1 Scope	1
2 Conformance	1
3 Normative references	1
4 Terms and definitions	1
5 Notational conventions	3
6 Abbreviated terms	4
7 General description (informative)	7
7.1 PHY general description	7
7.2 MAC general description	7
7.2.1 General description of the architecture	7
7.2.2 Device address	8
7.2.3 Features assumed from the PHY	8
7.2.4 Overview of MAC service functionality	9
7.2.5 MAC policies	12
7.2.6 Support for higher-layer timer synchronization	12
7.3 MUX general description	12
7.4 HDMI PAL description	13
8 PHY layer (informative)	13
9 Description of signal	13
9.1 Mathematical framework for SCBT, OFDM, DBPSK, DQPSK, UEP-QPSK, OOK and 4ASK	13
9.2 Mathematical framework for the narrow band section of the discovery mode preamble	14
10 PLCP sublayer	14
10.1 General PPDU frame format	14
10.1.1 PLCP preamble	16
10.1.2 PLCP header	16
10.1.3 PPDU payload	19
10.1.4 Antenna training sequence	20
10.2 Type A PPDU	20
10.2.1 Mode dependent parameters	20
10.2.2 SCBT	21
10.2.3 OFDM	42
10.2.4 Constellation mapping	60
10.2.5 Discovery mode	69
10.3 Type B PPDU	71
10.3.1 Mode dependent parameters	71
10.3.2 Single carrier (DBPSK, DQPSK, UEP-QPSK)	72
10.3.3 Channel bonding	80
10.3.4 Discovery mode	80
11 General requirements	80
11.1 Operating band frequencies	80
11.1.1 Operating frequency range	80
11.1.2 Channel numbering	80
11.2 PHY layer timing	81
11.2.1 Receive-to-transmit turnaround time	81
11.2.2 Transmit-to-receive turnaround time	82