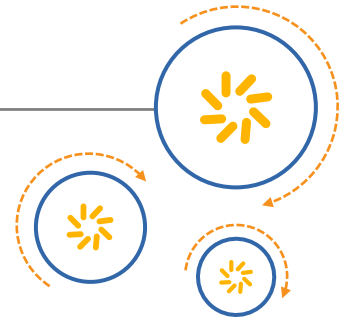




Qualcomm Atheros, Inc.



QCA8075

Device Revision Guide

80-Y9112-3 Rev. C

September 28, 2015

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Qualcomm Atheros, Inc.
1700 Technology Drive
San Jose, CA 95110
U.S.A.

Revision history

Revision	Date	Description
A	July 2015	Initial release
B	July 2015	Updated Issues – description, impact, and workaround
C	September	Updated section 2.2 and chapter 3 for QCA8075 1.1 ES

QUALCOMM®
2016-03-03 18:26:59 PST
owen.ou@arrowasia.com

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1 Introduction

Technical information for the QCA8075 device is primarily covered by the documents listed in [Table 1](#).

Table 1 Primary QCA8075 documents

Document number	Documentation title
80-Y9112-1	<i>QCA8075 Five-Port 10/100/1000 Mbps Ethernet Transceiver Preliminary Device Specification</i>
80-Y9112-2	<i>QCA8075 Five-Port 10/100/1000 Mbps Ethernet Transceiver Hardware Programming Reference</i>
80-Y9112-3 (this document)	<i>QCA8075 Device Revision Guide</i>

1.1 Scope and intended audience

This device revision guide identifies issues with all QCA8075 samples released to date. The following information is included:

- Introduction to this document and its topic ([Chapter 1](#))
- Device identification ([Chapter 2](#))
 - Device marking
 - Identification details for each sample type
 - Sample testing (ES and CS explanations)
- Known issues ([Chapter 3](#))
 - Issue description
 - Impact to system performance
 - Possible workarounds (what designers should do to minimize the issue's impact)

This device revision guide is intended for new product developers who are designing, testing, and/or evaluating products that include the QCA8075 device.

2 Device Identification

The QCA8075 device can be identified by the markings on its top surface and by the contents of an identification register; these identification techniques are described in Section 2.1 through Section 2.2.

2.1 Device marking

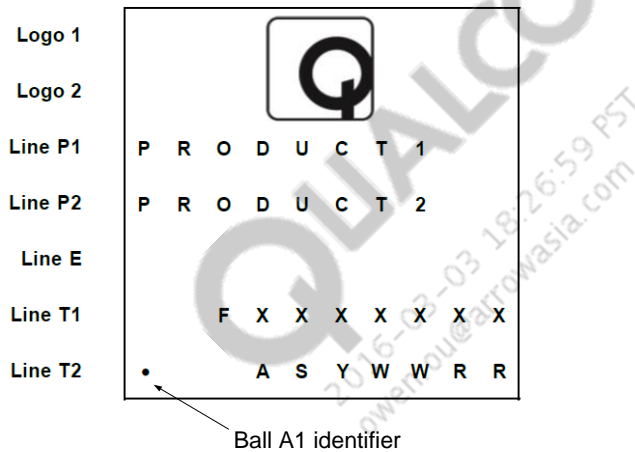


Figure 1 Device marking (top view, not to scale)

Table 2 Device marking line definitions

Line	Marking	Description
Logo 1 and 2	Qualcomm®	Qualcomm Atheros name or logo
P1	QCA8075	Qualcomm Atheros product name
P2	PAA	P = product configuration code AA = product feature code
E ¹		Blank space between P2 and T1
T1	FXXXXXXX	F = source of supply code XXXXXXX = wafer lot ID
T2	ASYWWRR	A = assembly site code S = assembly sequence number Y = single, last digit of year WW = work week (based on calendar year) RR = product revision

1. Line E may appear on the part marking for some samples. This is manufacturing information that is only relevant to Qualcomm and Qualcomm suppliers.

2.2 Device identification for each sample type

Table 3 Device identification details

Device	Product configuration code (P)	Product revision (RR)	Feature code (AA)	Sample type	Year/work week	Operating temperature (case)
QCA8075	0	00	VV	1.0 ES	≥ 1529	0 to 70°C
QCA8075	1	00	VV	1.0 ES	≥ 1529	-40 to 85°C
QCA8075	0	01	VV	1.1 ES	≥ 1538	0 to 70°C
QCA8075	1	01	VV	1.1 ES	≥ 1538	-40 to 85°C

2.3 Sample testing

The “Sample type” codes in [Table 3](#) are defined below.

2.3.1 Engineering samples (ES)

These devices have undergone limited testing and sometimes have significant feature limitations. They are suitable to assist with PCB development, conduct board-level electrical evaluation tests, and explore manufacturing considerations.

2.3.2 Commercial samples (CS)

These devices have undergone full production-level testing and meet the specifications and features described in the device specification, except as otherwise noted in this document. They have passed device-level qualification. Commercial samples are suitable to be used for performance testing, and also product-level production and qualification.

3 Known Issues

3.1 Summary of known issues

All known issues for each revision of the QCA8075 device are summarized in [Table 4](#). The text within the Issue column provides links to the sections of this document that explain the issues, regardless of the sample type (or types) on which they occur. An X in any of the other columns indicates that the issue occurs on the corresponding sample type.

Table 4 known issues – all sample types and revisions¹

#	Issue	QCA8075 1.0 ES	QCA8075 1.1 ES
		P = 0, 1	P = 0, 1
		RR = 00	RR = 01
1	100BASE-TX link issue	X	

1. P and RR values are detailed in [Table 2](#).

3.2 Issues – description, impact, and workaround

Issue 1 100BASE-TX link issue

Description	For each 100BASE-TX link, there is a chance that QCA8075 enters a state of no traffic. In this state, if checking the RX_CRC_check counter, there are all CRC error packets. After relink the cable, traffic may recover.
Impact	Relink needed for 100BASE-TX traffic recovery.
Workaround	For QCA8075 1.0 silicon, need to unplug-plug the cable when this issue happens. It does not relate to whether the PHY auto-negotiation is enabled or disabled. This issue is fixed in QCA8075 1.1 silicon.