AX88772E Product Introduction

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Revision History

Revision	Date	Description
1.00	2023/11/10	Initial release
1.01	2024/01/17	Updated Selection Guide in Figure 3.
1.02	2024/05/13	Updated Selection Guide in Figure 3.

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1. Introduction

The AX88772E USB 2.0 to 10/100M Fast Ethernet controller is a high performance and highly integrated ASIC which enables low cost, small form factor, and simple plug-and-play Fast Ethernet network connection capability for desktops, notebook PC's, Ultrabook's, docking stations, game consoles, digital-home appliances, and any embedded system using a standard USB port.

The AX88772E features a USB interface to communicate with a USB Host Controller and is compliant with USB specification V2.0, and V1.1. It implements a 10/100Mbps Fast Ethernet LAN function based on IEEE802.3 and IEEE802.3u standards with embedded SRAMs for packet buffering.

This document provides an overview of AX88772E USB 2.0 to 10/100 Fast Ethernet controller product.

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2. Block Diagram

The following is AX88772E block diagram,

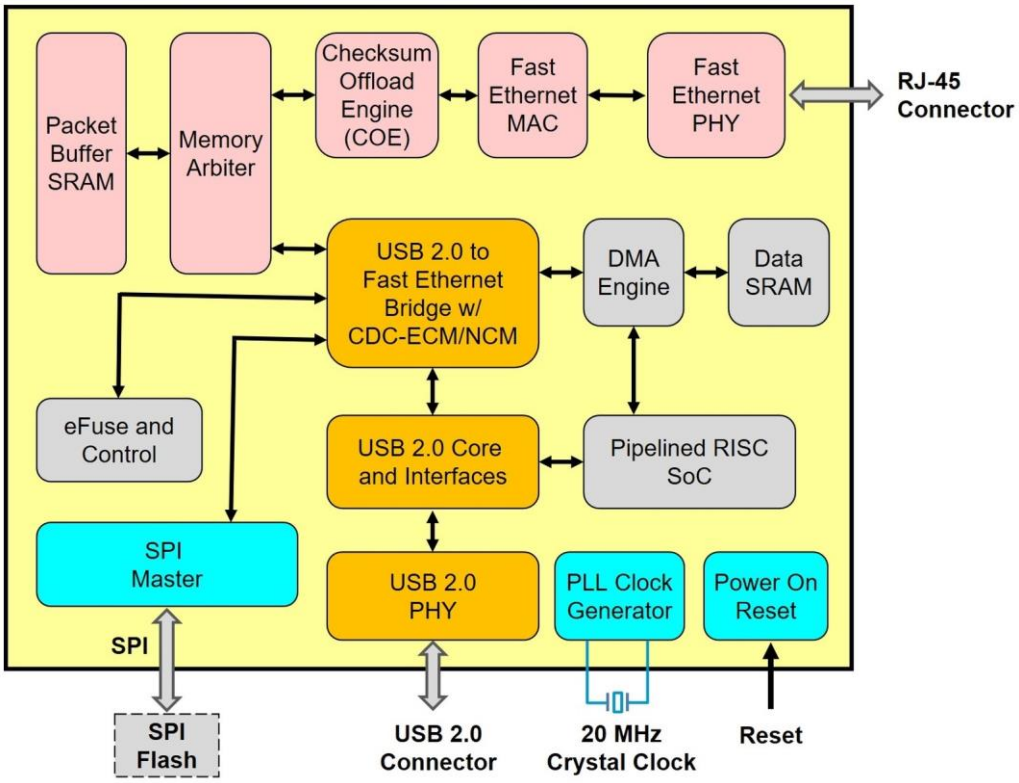

Figure 1. AX88772E Block Diagram

2-1. Typical System Block Diagram

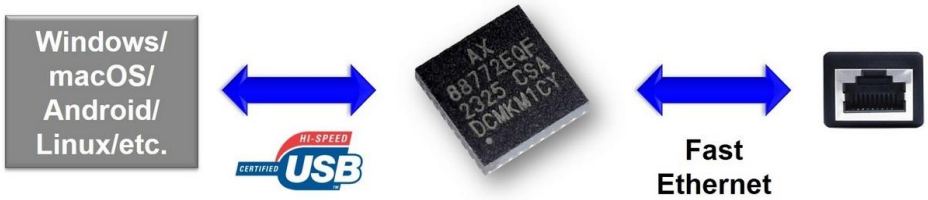

Figure 2. AX88772E Typical Applications Diagram

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3. Selection Guide

The following is the selection guide of ASIX Electronics USB Ethernet ICs for different requirement applications. Please visit ASIX Electronics USB Ethernet ICs web pages and contact ASIX's Sales (sales@asix.com.tw) for details.

Part No.	USB Speed	Ethernet MAC/ PHY (bps)	CDC-NCM Driverless	iPXE	PTP	MAC Interface	Temperature Range (^{0}C)	Package
AX88279	USB 3.2	2.5G/1G/100M	V	V	V	-	0 ~ +70	QFN-60
AX88179B	USB 3.2	1G/100M/10M	V	V	V	-	0 ~ +70 -40 ~ +85	QFN-40
AX88179A	USB 3.2	1G/100M/10M	V	V	-	-	0 ~ +70	QFN-40
AX88772E	USB 2.0	100M/10M	V	V	V	-	0 ~ +70	QFN-32
AX88772D	USB 2.0	100M/10M	V	V	-	-	0 ~ +70	QFN-32
AX88772C	USB 2.0	100M/10M	-	-	-	RMII/ Rev-RMII	0 ~ +70/ -40 ~ +85	LQFP-64
AX88772B	USB 2.0	100M/10M	-	-	-	RMII/ Rev-RMII	0 ~ +70/ -40 ~ +85	LQFP-64
AX88772A	USB 2.0	100M/10M	-	-	-	-	0 ~ +70	LQFP-64

Figure 3. Selection Guide

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4. Ordering Information

The following are the ordering information of AX88772E silicon and AX88772E demo board. Please contact ASIX's Sales (sales@asix.com.tw) for more details.

Part Number	Description
AX88772EQF	32-pin QFN lead Free package, Commercial temperature range: 0 to 70°C.

AX88772E Demo Board	Description
AX88772E Demo Board	This is a USB dongle for AX88772E USB 2.0 to 10/100 Fast Ethernet application

Figure 4. Ordering Information

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5. Target Applications

The following are some PC/Internet and consumer electronics target applications for your reference.

Figure 5. Target Applications

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6. Mass Production Solutions

To support the mass production for those products using AX88772E chip. ASIX provides the Windows Mass Production Tool solution for AX88772E customers. This chapter provides a brief introduction for this solution. Please refer to "**AX88772E Mass Production User Guide**" for details.

6-1. Windows Mass Production Tool

ASIX Electronics provides a Windows Mass Production tool for users to easily program the Serial Flash/eFuse of AX88772E on a typical Windows PC. This AX88772E Windows Mass Production Tool supports to customize the MAC address, Serial Number, Vendor ID and Product ID, etc. for AX88772E based application systems in mass production.

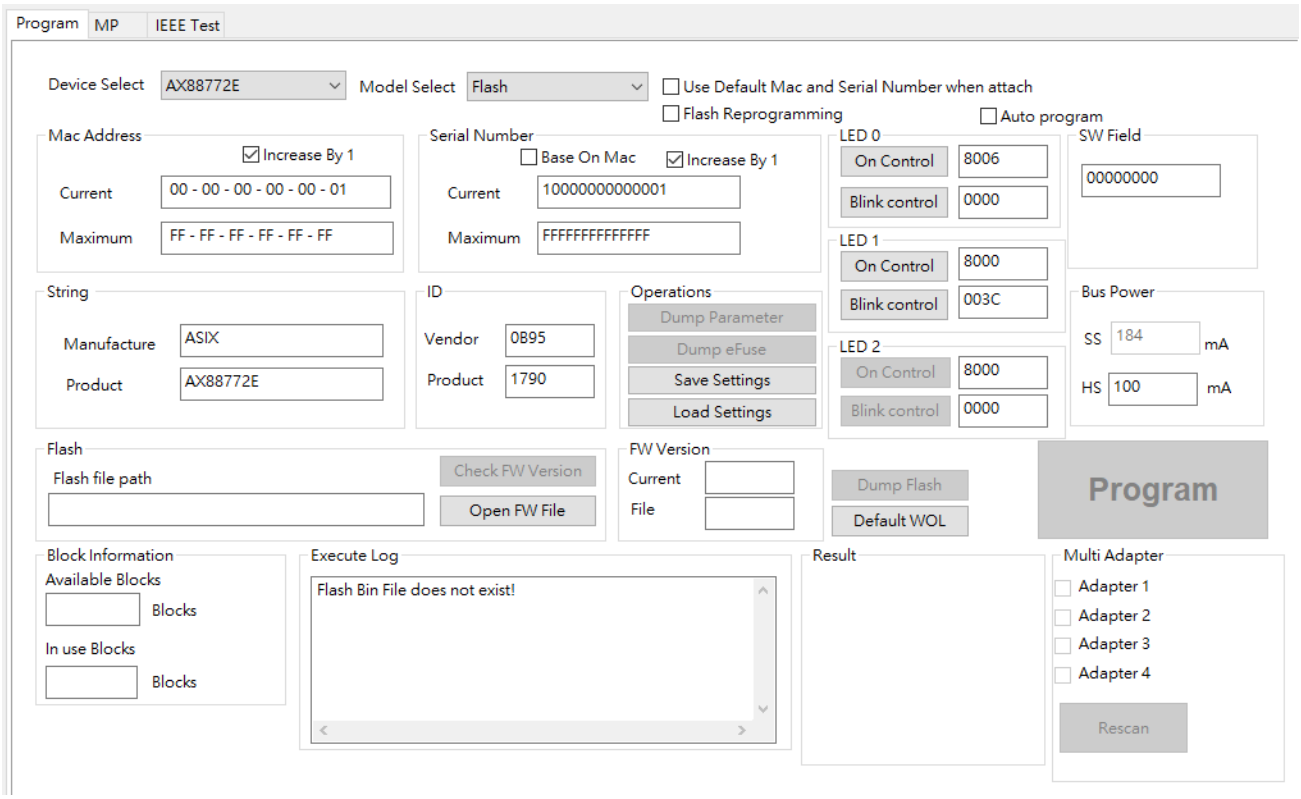

Figure 6. Program Page for Windows Mass Production Tool

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This tool also supports to send/receive packets in different Ethernet speed modes, and program the serial Flash/eFuse. This tool can be run on a Windows PC, which installs the AX88772E Windows driver. This tool also needs a separate server PC to run the test server tool (TestServer.exe). The test server tool on server PC can receive packets from the "device under test" product, and then reply back.

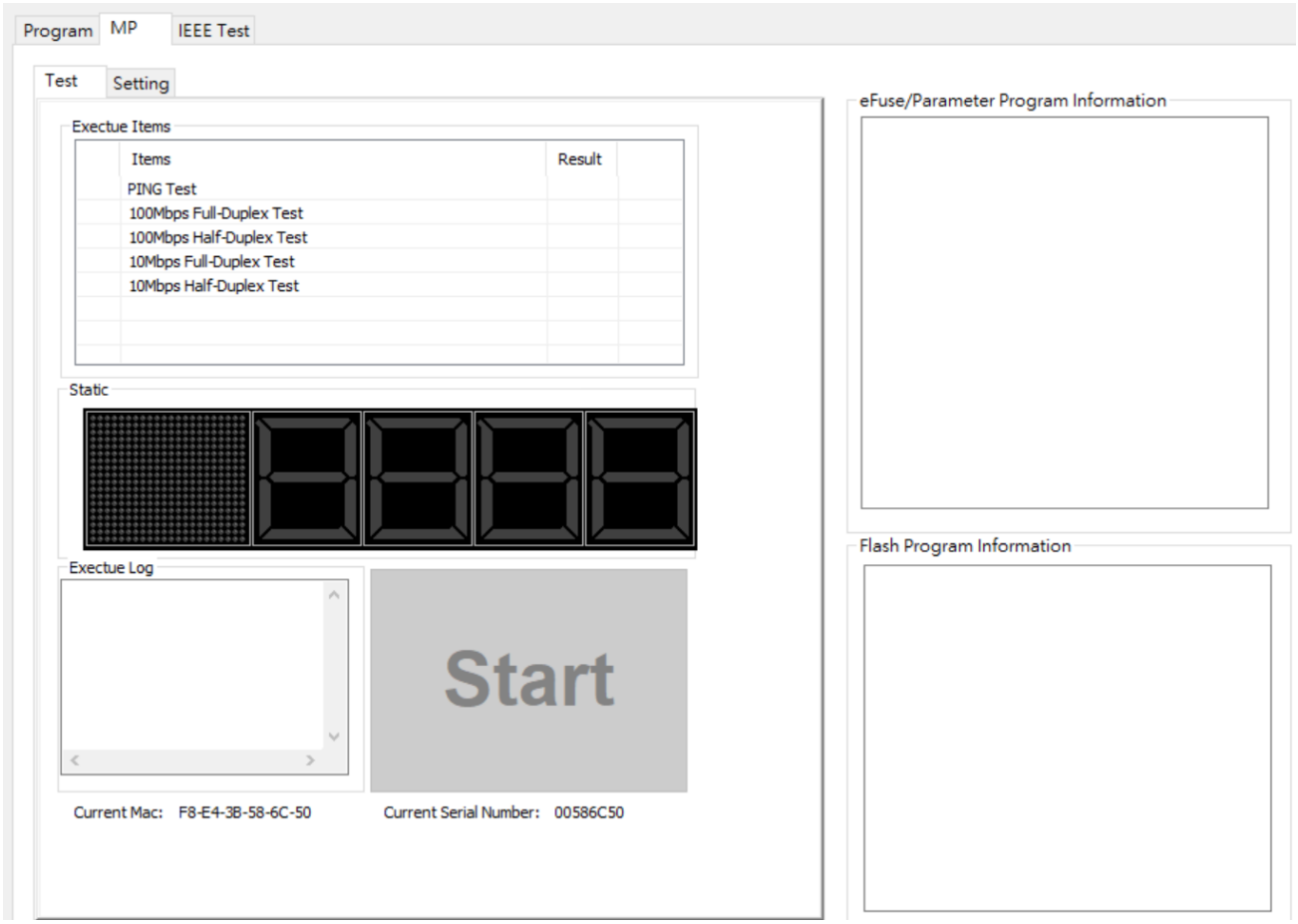

Figure 7. MP Page for Windows Mass Production Tool

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7. AX88772E Demo Board

ASIX Electronics provides AX88772E demo board for users to evaluate the basic functions of AX88772E on different target applications. If you need to purchase the AX88772E demo board, please contact ASIX's Sales (sales@asix.com.tw) for more details.

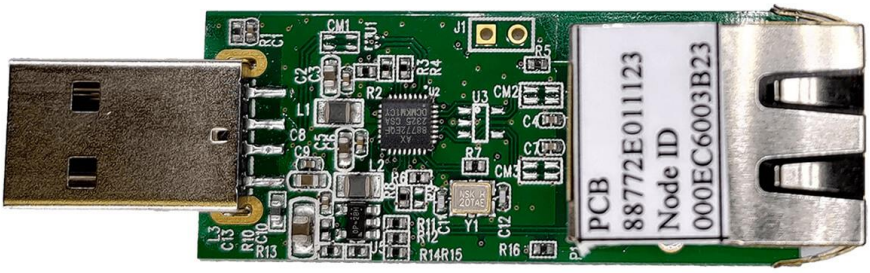

Figure 8. AX88772E Demo Board

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