

XXBX Device Under Test – XBD

XBD User Guide v1.0

Jens-Peter Kaps jkaps@gmu.edu

March 26, 2018 George Mason University Fairfax, Virginia



cryptography.gmu.edu



Contents

1	Inti	roduction	3		
2	Boo	Boot Loader			
	2.1	Overview	4		
	2.2	Hardware Abstraction Layer	4		
	2.3		4		
	2.4		4		
			4		
			4		
			4		
			4		
3	Boa	ard Specific Changes	5		
	3.1	Texas Instruments MSP430	5		
		3.1.1 Memory Map			
		3.1.2 Flash			
	3.2	Texas Instruments MSP432			
	3.3	Texas Instruments Tiva C			
	3.4		5		
	J.T	DI Microelectionics (vucico	J		
4	Usi	ing AES Peripherals	6		
Δ	ХB	RH - XRD Protocol	7		

1 Introduction

2 Boot Loader

- 2.1 Overview
- 2.2 Hardware Abstraction Layer
- 2.3 Stack Usage Measurement
- 2.4 XBH-XBD Communication
- 2.4.1 I²C Interface
- 2.4.2 XBH-XBD Protocol
- 2.4.3 General Purpose IO
- 2.4.4 Reset

3 Board Specific Changes

- 3.1 Texas Instruments MSP430
- 3.1.1 Memory Map
- 3.1.2 Flash
- 3.2 Texas Instruments MSP432
- 3.3 Texas Instruments Tiva C
- 3.4 ST Microelectronics Nucleo

4 Using AES Peripherals

A XBH - XBD Protocol