# CWE Detail – CWE-1192

## Description

The System-on-Chip (SoC) does not have unique, immutable identifiers for each of its components.

## Extended Description

A System-on-Chip (SoC) comprises several components (IP) with varied  
 trust requirements. It is required that each IP is identified  
 uniquely and should distinguish itself from other entities in  
 the SoC without any ambiguity. The unique secured identity is  
 required for various purposes. Most of the time the identity is used  
 to route a transaction or perform certain actions, including   
 resetting, retrieving a sensitive information, and acting upon or on  
 behalf of something else. There are several variants of this weakness: A "missing" identifier is when the SoC does not define  
 any mechanism to uniquely identify the IP. An "insufficient" identifier might provide  
 some defenses - for example, against the most common  
 attacks - but it does not protect against everything  
 that is intended. A "misconfigured" mechanism occurs when a mechanism  
 is available but not implemented correctly. An "ignored" identifier occurs when the SoC/IP has not applied  
 any policies or does not act upon the identifier securely.

## Threat-Mapped Scoring

Score: 3.0

Priority: P2 - Serious (High)

## Related Attack Patterns (CAPEC)

* CAPEC-113

## Modes of Introduction

**•** Architecture and Design: N/A

**•** Implementation: N/A

**•** Operation: N/A

## Common Consequences

**•** Impact: Bypass Protection Mechanism — Notes:

## Potential Mitigations

**•** Architecture and Design: Every identity generated in the SoC should be unique and  
 immutable in hardware. The actions that an IP is trusted or  
 not trusted should be clearly defined, implemented,  
 configured, and tested. If the definition is implemented via a  
 policy, then the policy should be immutable or protected with  
 clear authentication and authorization. (Effectiveness: N/A)

## Applicable Platforms

**•** None (Class: Not Language-Specific, Prevalence: Undetermined)