

[White Paper]

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**DRAFT**

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unicode-ISO/IEC 15963 (ISO/IEC 7816-6 Class) Domain

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## ucode-ISO/IEC 15963 (ISO/IEC 7816-6 Class) Domain

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### Introduction

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#### Scope

This document defines how to store Permanent UID of ISO/IEC 7816-6 class specified in ISO/IEC 15963 in the ucode [1].

#### Position of this Document

This document is concerned with "Permanent UID specified for ISO/IEC 7816-6 class" of Authorized Standard Meta-code in ucode [2].

#### Reference Documents

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- [1] T-Engine Forum, Ubiquitous ID Center, "Ubiquitous Code: ucode," 930-S101/UID-00010, 2006.
- [2] T-Engine Forum, Ubiquitous ID Center, "Authorized Standard Meta-code in ucode," 930-S101 (2)/UID-00011, 2006.
- [3] ISO/IEC 15963, "Information technology - Radio frequency identification for idem management - Unique identification for RF tags," 2004

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## 1. ISO/IEC 15963 (ISO/IEC 7816-6 Class)

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ISO 15963 defines a numbering system available as an RFID tag identifier [3]. The ID to identify an RFID during communicating between an RFID tag and R/W is called a UID (Unique ID). In particular, an identifier system called, the Permanent UID system is defined for guaranteeing globally perfect uniqueness of UIDs (Figure 1).

Allocation class (AC)	UID issuer registration number	Serial number
8bits	Assigned on each AC basis	Assigned based on the combination of both AC and issuer registration number basis

**Figure 1: Permanent UID Structure in general (1)**

Some ACs have been already defined. In this document, we deal with only Permanent UIDs in ISO/IEC 7816-6 class with AC = 0xe0. The UID structure of this class is 64 bits (Figure 2).

Allocation class	UID issuer registration number	Serial number
0xe0	8bits	48bits

**Figure 2: Permanent UID Structure in case of ISO/IEC 7816-6 class (2)**

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## 2. ISO/IEC 15963 (ISO/IEC 7816-6 class) Domain

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### 2.1. ucode-ISO/IEC 15963 (ISO/IEC 7816-6 class) -UID

When an UID compliant with ISO/IEC 7816-6 class in ISO/IEC 15963 is embedded into the ucode, the whole unmodified UID is used as part of the resulting ucode. The ucode-ISO/IEC 15963 (ISO/IEC 7816-6 class) -UID is defined as this UID.

### 2.2. ISO/IEC 15963 (ISO/IEC 7816-6 class) Domain

For "ucode-ISO/IEC 15963 (ISO/IEC 7816-6 class) –UID," a Second Class Domain of a 64-bit ic is reserved in the Top Level Domain for Authorized Standard Meta-code in ucode (Table 1).

**Table 1: ISO/IEC 15963 (ISO/IEC 7816-6 class) Domain**

Domain Name	ISO/IEC 15963 (ISO/IEC 7816-6 class)
Class	Class C
Version	0x0
TLDC	0xe000
cc	0xb = 1011
SLDC (40 bits)	0x0000000000
ic (64 bits)	Embedded UID

### 2.3. ISO/IEC 15963 (ISO/IEC 7816-6 class) Domain ucode

Figure 3 shows the correspondence of the ucode in ISO/IEC 15963 (ISO/IEC 7816-6 class) domain to the UID.

ISO/IEC 15963 (ISO/IEC 7816-6 class) UID

ucode-ISO/IEC 15963  
(ISO/IEC 7816-6 class) -UID



ISO/IEC 15963 (ISO/IEC 7816-6 class) Domain ucode

ver. (4)	TLDC (16)	cc (4)	SLDC(40)	ic (64)
0	0xe000	0xb	0x000000000000	ucode-ISO/IEC 15963 (ISO/IEC 7816-6 class) -UID

**Figure 3: Correspondence between ucode and UID**

