

2005-11

3-44

# RFID 가

8.0



2005. 11







RFID

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Post IT

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RFID

RFID

RFID

EPC

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가

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RFID

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RFID

가

RFID

2-3

RFID

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RFID

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RFID

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가

RFID

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# CONTENT

1.	.....	4
1.1	.....	4
1.2 RFID	.....	5
2.	.....	7
2.1	.....	7
2.2	.....	9
3.	.....	12
3.1 /	.....	12
3.2	.....	13
3.3 (UID)	.....	13
3.4 (ASN)	.....	13
3.5	.....	15
3.6	.....	15
3.7	.....	16
3.7.1	.....	16
3.7.2 DoD - 64	.....	17
3.7.3 DoD - 96	.....	21

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3.8		26
3.9		28
4.		28
5.		28
6.		29
( -1) 64 (1 - 4 )		
( -1) 64	(1 - 4 )	20
( -2) 64	(5 - 6 )	21
( -3) 96	(1 - 4 )	24
( -4) 96	(5 - 6 )	25
( -5)	RFID	27
( -6)	RFID	27



1. 

1.1 

(RFID)

. RFID

RFID

가

2004 7

RFID

DFARS

(Defense Federal Acquisition Regulations Supplement)

11 14

2005 9 13 RFID

2005

RFID

RFID

DFARS

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## RFID

### 1.2 RFID

RFID

RFID

RFID

,가



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\* : 가

가

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- / 가
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가

가

RFID

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## 2.

RFID RFID  
 가  
 , , , /  
 가  
 EPC EPC  
 RFID RFID  
 RFID

### 2.1

RFID RFID  
 EPC : EPCglobal 0 1  
 EPCglobal RFID ( , , )  
 UHF Gen2 가 EPC  
 UID( ) : MIL - STD - 129(Military Standard 129)


: RFID  
, , 가 ,





- 
- 
- ( , )
- 
- 가
- - , ,

, RFID 가  
가 (E3 : Electromagnetic Effects on the Environment), 가 (HERO : Hazards of Electromagnetic Radiation to Ordnance) 가

:

 : MIL - STD - 129 , , ,

 : MIL - STD - 129 , , 가 ( , , ) 가

 : MIL - STD - 129

2.2

RFID

RFID  
RFID

2005

RFID

가

- -
- -
- -
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- (DDSP)
- (DDJC)

2006

가

RFID

가



USA(United States Army)  
(DLA)

가

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USMC(United States Marine Corps)  
(DLA)

가

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USN(United States Navy)  
(DLA)

가

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USAF(United States Air Force)  
(DLA)

가

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2007

RFID

RFID

가

3.

RFID

가

(WAWF : Wide Area Wok flow)

(ASN : Advance Shipment Notices)

가

WAWF

ASN

3.1

RFID

RFID 가

Approach ”

[supplierimplementation.htm](http://supplierimplementation.htm)

“Implementation

[www.dodrfid.org/](http://www.dodrfid.org/)

RFID

가

가

3.2

2005 11 14 DFARS  
( ) RFID

3.3 (UID)

(UID : Unique Identification) 2007  
UID가  
, UID

3.4 (ASN : Advance Shipment Notice)

(WAWF)  
. DFARS RFID 가 WAWF  
(ASN) ASN  
(MIRR : Material Inspection Receiving Report) RFID 가 가  
WAWF RFID 2005 4 MIRR 가

WAWF <https://wawf.e.mil>

WAWF 가

WAWF (<https://wawftraining.e.mil>)

● <https://wawftraining.e.mil>

- WAWF ' ' ,
- ( )
  - ID : Vndbr11 / : Vndbr1\$
  - ID : Vndbr22 / : Vndbr2\$
- ' Submt ' , "FTP/EDI Guides & Other Supporting Documents"

RFID 가 .

1. Receiving Report User Defined Format(UDF) Vendor FTP
2. Receiving Report for Pack Update UDF Vendor FTP
3. Combo Invoice & RR UDF Vendor FTP
4. 856 WAWF 4010 EDI Detail Receiving Report
5. 856 Pack Update WAWF 4010 EDI Detail Receiving Report for Pack Update

EDI FTP

EDI FTP WAWF  
 (JITC : Joint Interoperability Test  
 Command)

가

ASN RFID  
 2 ASN  
 RFID 가16 .16 RFID  
 , 2 가16



3.5

< -1> RFID 가2005

UHF Gen 1 EPC ( 0 1 ) UHF Gen 2 UHF Gen 2 EPC EPC Gen

< -1> 가 RFID

	( )	
0	64	EPCglobal UHF Gen2 가 2
0	96	EPCglobal UHF Gen2 가 2
1	96	EPCglobal UHF Gen2 가 2

3.6

RFID ID  
 ID 0 가, 1 /  
 가 . 2 , 10 16  
 . RFID 2 ID  
 ID RFID  
 2 ID  
 ( 1110(2)=14(10)=E(16) )

ID가

ID , ID가 ID 가  
16 가 .

RFID 가 ID  
ASN . ASN  
RFID ID 16 .

3.7

EPC (EPC Tag Data Standards)

. EPCglobal EPC 가  
EPC . EPC  
<http://www.epcglobal.org/standards/technology/specifications.html>

(CAGE :  
Commercial and Government Entity)  
가 .

3.7.1

가 .

- EPCglobal 가
- CAGE(Commercial and Government Entity)

EPCglobal CAGE

가 RFID 가

CAGE

RFID

. < -2>

64

96

< -2>

(UID Pack)	DoD - 64 DoD - 96	UID(Unique Identification)
	DoD - 64 DoD - 96	

### 3.7.2 DoD - 64

64      0      1      . 64      <  
-3>      가      .      .  
         가      가      .

< -3> DoD-64

		CAGE	
8	2	30	24

:

Ⓛ (Header) : DoD - 64      가      , 2      1100  
1110가 .

Ⓛ (Filter) :      ,      UID      ,      2

- 00 =

- 01 =

- 10 = UID(Unique Identification)

- 11 =



(Government Managed Identifier) :

CAGE

ASCII CAGE 30  
 CAGE 8 ASCII 가  
 2 CAGE  
 , 6 ASCII < -4>



(Serial Number) :  $2^{24} = 16,777,216$  가

2 , 24 0

< -4> ASCII CAGE

CAGE	2
A	00 0001
B	00 0010
C	00 0011
D	00 0100
E	00 0101
F	00 0110
G	00 0111
H	00 1000
I	CAGE
J	00 1010
K	00 1011
L	00 1100
M	00 1101
N	00 1110
O	CAGE
P	01 0000
Q	01 0001
R	01 0010
S	01 0011
T	01 0100
U	01 0101
V	01 0110
W	01 0111
X	01 1000

---

CAGE	2
Y	01 1001
Z	01 1010
0	11 0000
1	11 0001
2	11 0010
3	11 0011
4	11 0100
5	11 0101
6	11 0110
7	11 0111
8	11 1000
9	11 1001
	10 0000

DoD - 64

. 16

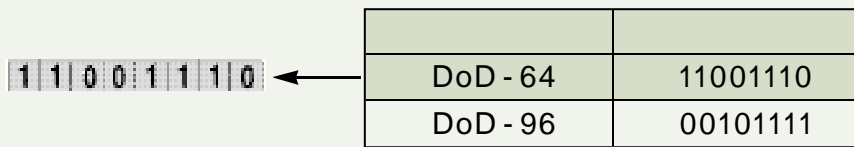
&lt; -7&gt;

.

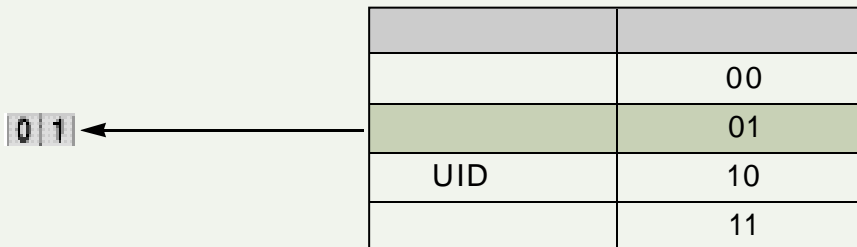
( -1) 64 (1-4 )

: CAGE 가 1D381 가 16,522,293  
64

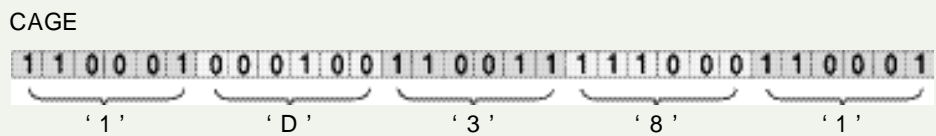
[1 ] DoD



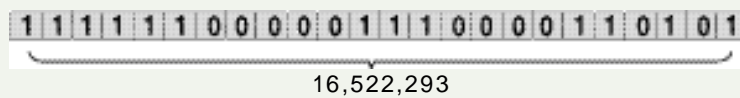
[2 ]



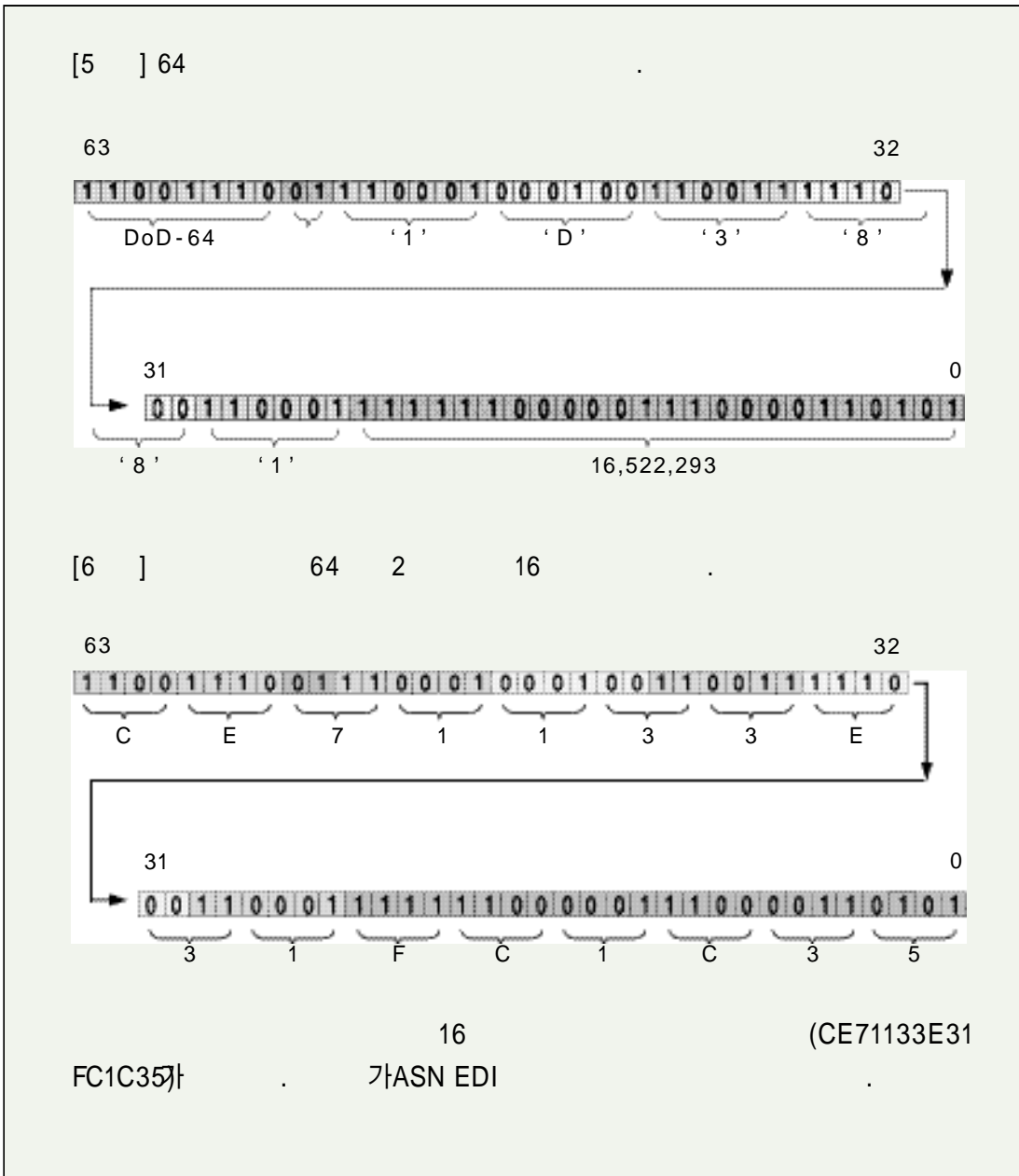
[3 ] CAGE



[4 ]



( -2) 64 (5-6 )



3.7.3 DoD - 96

5> 가 가

64 0 1 . 96 < -

가 가

< -5> DoD-96

8	4	48	36

:

▣ (Header) : DoD - 96 가 , 2 0010  
 111가 .

▣ (Filter) : , UID , 2  
 .  
 - 0000 =  
 - 0001 =  
 - 0010 = UID (Unique Identification)  
 - =

▣ (Government Managed Identifier) :  
 CAGE . 8 ASCII .  
 DoD - 96 ASCII 가 CAGE  
 6 ASCII . < -6> CAGE 2  
 .

▣ (Serial Number) : 236=68,719,476,736 가 .  
 2 , 36 0 .



&lt; -6&gt; ASCII CAGE

CAGE	2
A	0100 0001
B	0100 0010
C	0100 0011
D	0100 0100
E	0100 0101
F	0100 0110
G	0100 0111
H	0100 1000
I	CAGE
J	0100 1010
K	0100 1011
L	0100 1100
M	0100 1101
N	0100 1110
O	CAGE
P	0101 0000
Q	0101 0001
R	0101 0010
S	0101 0011
T	0101 0100
U	0101 0101
V	0101 0110
W	0101 0111
X	0101 1000
Y	0101 1001
Z	0101 1010
0	0011 0000
1	0011 0001
2	0011 0010
3	0011 0011
4	0011 0100
5	0011 0101
6	0011 0110
7	0011 0111
8	0011 1000
9	0011 1001
	0010 0000

DoD-96

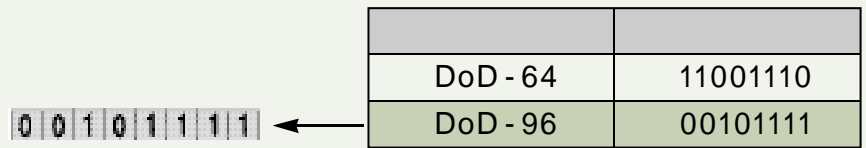
96

. 16

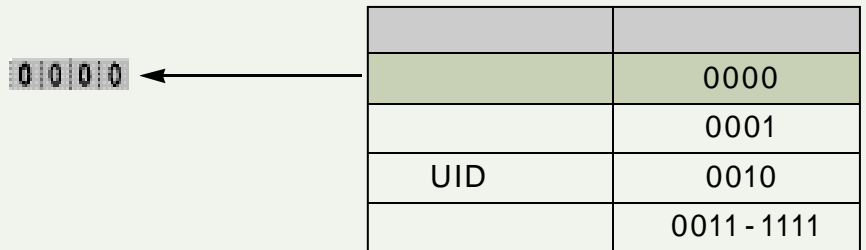
&lt; -7&gt;

: CAGE 가 2S194 가 12,345,678,901  
96

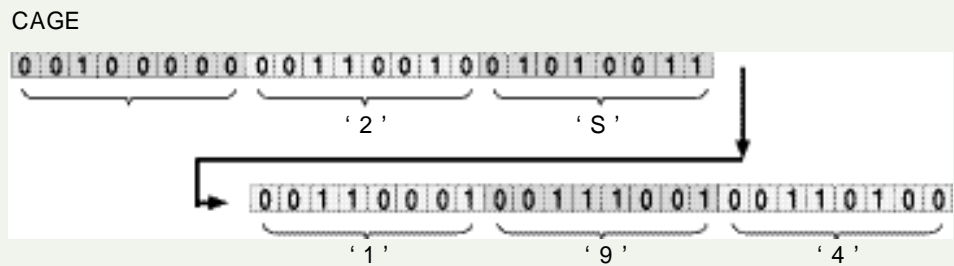
[1 ] DoD



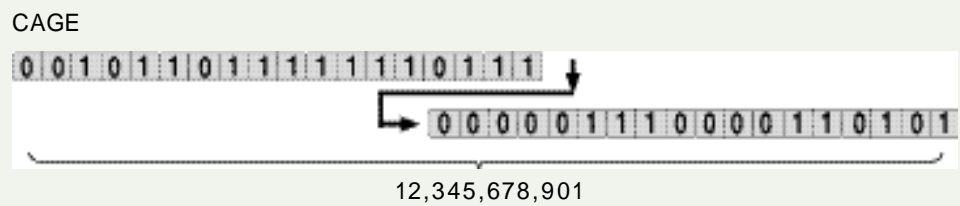
[2 ]



[3 ] CAGE



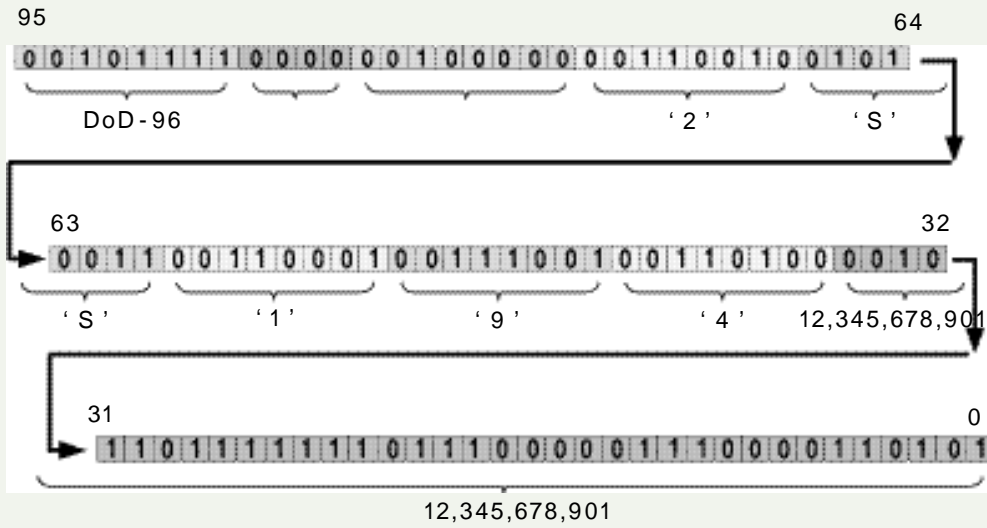
[4 ] 36 2



( -4) 96

(5-6 )

[5 ] 96

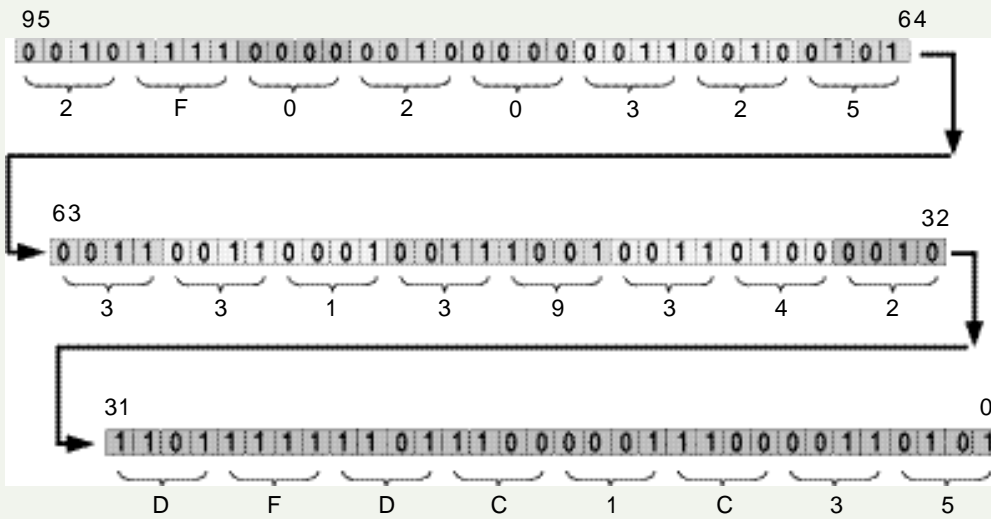


[6 ]

96

2

16



16

(2F02032533139342

DFDC1C35}

가ASN EDI

3.8

RF (RFID ) , ( ) .

RF

81cm 122cm

가51cm

5cm

가

(GRAI)

RF 가  
RF

MIL-STD-129

RFID

- 가 5cm 가
- 가

RFID 가

RFID RF 10cm

RFID

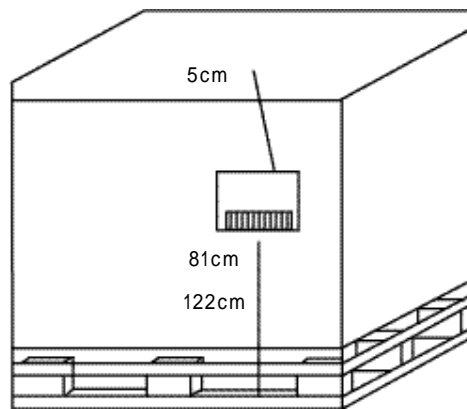
RFID RFID

RFID 가 5cm

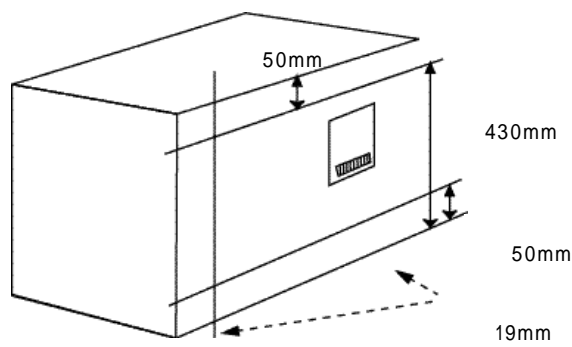
● RFID RF . 10cm

● RFID

( -5) RFID



( -6) RFID



3.9

RF



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RFID , RFID  
3m 10 RFID



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RFID , RFID  
1m 600 RFID

RFID

가

가

( / / )

4.

RFID ,  
RFID

RFID

5.

RFID

RFID

가

● EPCglobal : <http://www.epcglobal.com>

가 . 가 <http://www.dodrfid.org>

6.

. 10 0-15 16 2

&lt; -7&gt;

10	16	2	10	16	2
0	0	0000	8	8	1000
1	1	0001	9	9	1001
2	2	0010	10	A	1010
3	3	0011	11	B	1011
4	4	0100	12	C	1100
5	5	0101	13	D	1101
6	6	0110	14	E	1110
7	7	0111	15	F	1111

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## RFID 가

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2005 11 30

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4가 45

17

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