

# Ariba Network UOM Mapping for ANSI X12

This document describes Unit of Measure (UOM) mappings between cXML documents and American National Standards Institute (ANSI) X12 documents sent through Ariba Network. It discusses the following topics:

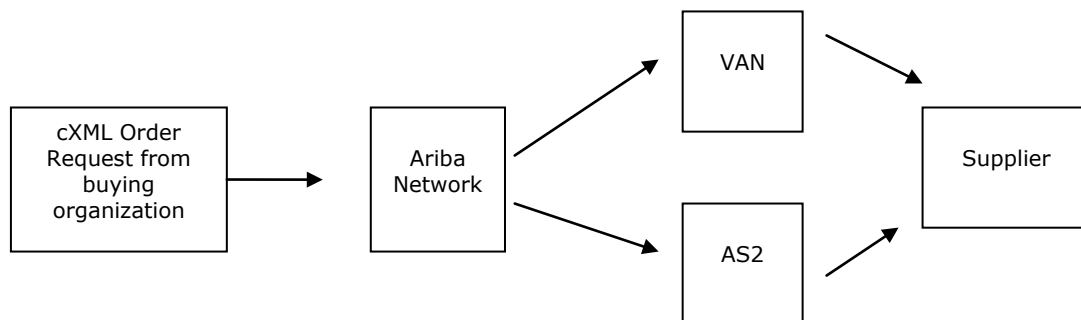
- [How Mapping Codes Work](#)
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## How Mapping Codes Work

cXML documents use United Nations Units of Measure (UNUOM) codes while EDI X12 documents use ANSI UOM codes. The UNUOM standard is also known as the United Nations Center for the Facilitation of Procedure and Practices for Administration, Commerce, and Transport (UN/CEFACT) codes, and as United Nations Trade Data Elements Directory (UNTDDED) common codes.

You can configure your Ariba Network account and your EDI application to route ANSI X12 and EDIFACT business documents, such as purchase orders and invoices.

The following figure shows the flow of a purchase order from a buying organization to you:



1. The buying organization sends a cXML OrderRequest to Ariba Network.
2. Ariba Network converts your document to an ANSI ASC X12 EDI 850 document. It maps two-and three-character UNUOM codes in the cXML document to two-character ANSI UOM codes. However, if the UNUOM code has no direct translation to the ANSI code table used by cXML, it does not get converted and remains the same in the EDI 850 document.
3. Ariba Network sends the EDI 850 document containing the converted ANSI UOM to the VAN or to AS2 as configured by you and then routes it to you.
4. When you send the corresponding ANSI X12 810 Invoice through VAN or AS2, Ariba Network converts ANSI UOM codes to two-and three-character UNUOM codes. On mapping the 810 Invoice gets converted to a cXML InvoiceDetailRequest and is sent to Ariba Network. Ariba Network then sends it to the buying organization.

If the document contains errors, it fails. While converting the ANSI X12 810 Invoice, there are two reasons for the document to fail:

1. If the UOM code present in the ANSI X12 Invoice does not have a direct translation to UNUOM code, the document fails and is rejected. Ariba Network sends you an error notification.

For example, the cXML purchase order has an invalid UNOUM code of 'Q5'. When Ariba Network converts the cXML purchase order to an ANSI X12 850 document, this code remains the same. Because 'Q5' is an invalid UNUOM code and does not have a direct translation to an ANSI code. While converting the corresponding ANSI X12 810 invoice containing "Q5" to a cXML InvoiceDetailRequest, the document fails and is rejected. This happens because 'Q5' is an unsupported ANSI code. This error occurs for all invalid ANSI UOM codes. See [Unsupported Mapping Codes](#).

2. If the UOM code present in the ANSI X12 Invoice has a direct translation to UNUOM code, Ariba Network maps it to a corresponding code. If there are differences in the UOM code present in the ANSI X12 Invoice and the PO cXML documents, the document fails.

For example, the PO cXML has 'PC' as the UNUOM code. On converting the PO cXML to an ANSI X12 850 document, this code remains the same. This is because the 'PC' UNUOM code is an invalid UNUOM code and does not have a direct translation to an ANSI code present. But, on converting the corresponding ANSI X12 810 invoice to a cXML InvoiceDetailRequest, it maps the UOM code 'PC' in your EDI 810 document to the corresponding UNUOM code 'C62' in the cXML InvoiceDetailRequest document. This happens because 'PC' is a valid ANSI UOM code and has a mapping to 'C62' which is an ANSI UOM code. However, the document fails due to the difference in the code present in the PO and the invoice.

If documents fail, Ariba Network sends a notification to you with the error description. To avoid any mapping errors, ensure that your buying organization uses valid UOM codes in their documents.

For more information on EDI, see Getting Started with EDI.

What the labels in the following tables mean:

<b>Label</b>	<b>Value</b>
UNUOM	UOM code present in cXML transactions
ANSI UOM	UOM code present in ANSI X12 transactions
Value	Description

## Mapping Inconsistencies Between the Mapping Codes

Some UNUOM codes translate to two or more ANSI UOM codes. In such cases, the UNUOM code is mapped to the nearest matching code.

The following table lists the duplicate codes:

UNUOM	Value	ANSI UOM	Value
4H	MICROMETER	MH	MICRONS (MICROMETERS)
4H	MICROMETER	4H	micrometre (micron)
77	milli-inch	77	MIL
77	milli-inch	T2	THOUSANDTHS OF AN INCH
C62	one / piece / unit	UN	UNIT
C62	one / piece / unit	PC	PIECE
GT	gross ton / metric gross ton	MG	METRIC GROSS TON
GT	gross ton / metric gross ton	GT	GROSS KILOGRAM
IU	inch per second (linear speed)	IB	INCHES PER SECOND (VIBRATION VELOCITY)
IU	inch per second (linear speed)	IU	INCHES PER SECOND (LINEAR SPEED)
IV	inch per second squared (acceleration)	IW	INCHES PER SECOND PER SECOND (VIBRATION ACCELERATION)
IV	inch per second squared (acceleration)	IV	INCHES PER SECOND PER SECOND (ACCELERATION)
LBR	POUNDS	PJ	POUNDS, DECIMAL - POUNDS PER SQUARE FOOT - POUND GAGE
LBR	POUNDS	LB	POUND
LD	litre per day	LD	LITERS PER DAY
LD	litre per day	LQ	LITERS PER DAY
PK	pack	PK	PACKAGE

<b>UNUOM</b>	<b>Value</b>	<b>ANSI UOM</b>	<b>Value</b>
PK	pack	PH	PACK (PAK)
SMI	MILE	DH	MILES
SMI	MILE	02	STATUTE MILE
STN	NET TON (2000 LB)	TN	NET TON (2,000 LB).

### ***Unsupported Mapping Codes***

The following table lists unsupported ANSI UOM codes:

<b>ANSI UOM Code</b>	<b>Value</b>
01	Actual Pounds
06	Digits Expresses a value using total number of digits, e.g., 6 digits
07	Strand
09	Tire
1N	Count
1O	Season
1P	Tank Car
1Q	Frames
1R	Transactions
2F	Volts Per Meter Measure of electrical field strength
2G	Volts (Alternating Current) Measure of electrical potential
2H	Volts (Direct Current) Measure of electrical potential
39	Basis Points
50	Actual Kilograms
51	Actual Tonnes
52	Credits
8C	Cord
8D	Duty
8P	Project
8R	Program
8S	Session
8U	Square Kilometer
99	Watt
AG	Angstrom
AN	Minutes or Messages Number of minutes or messages contracted or used in telephone services where either the number of minutes or messages are the unit of measure for the calculation of charges
AO	Ampere-turn
AU	Ocular Insert System A drug delivery system which is placed in the lower conjunctival fornix

<b>ANSI UOM Code</b>	<b>Value</b>
	from which the drug diffuses through a membrane at a constant rate over a seven-day period
AX	Twenty 20 each of an item of supply
CD	Carat
D2	Shares
DH	Miles
DO	Dollars, U.S.
DW	Calendar Days
E1	Hectometer A unit of metric length equal to 109.36 yards or 0.062 mile
E3	Inches, Fraction--Average
E4	Inches, Fraction--Minimum
E5	Inches, Fraction--Actual
E7	Inches, Decimal--Average
E8	Inches, Decimal--Actual
E9	English, (Feet, Inches)
ED	Inches, Decimal--Nominal
EE	Employees
EF	Inches, Fraction-Nominal
EG	Double-time Hours
EH	Knots
EJ	Locations
EM	Inches, Decimal-Minimum
EX	Feet, Inches and Fraction
EY	Feet, Inches and Decimal
EZ	Feet and Decimal
F2	International Unit A unit accepted by an international agency; potency of a drug/vitamin based on a specific weight of that drug/vitamin
F3	Equivalent Weight of a substance which combines with or replaces one gram atomic weight of hydrogen
F4	Minim An apothecary's fluid measure; 60 minims = 1 fluid gram (approx. 5 cc)
F5	MOL Gram-molecular weight of a gas
F6	Price Per Share
FJ	Sizing Factor
FK	Fibers
GF	Grams per 100 Centimeters
GU	Gauss per Oersteds
HQ	Hectare
HV	Hundred Weight (Short)
IB	Inches Per Second (Vibration Velocity) Measure of vibration velocity
IH	Inhaler Metered-dose pressurized method of getting medication into the lungs or nasal passages
IK	Peaks per Inch (PPI)
IW	Inches Per Second Per Second (Vibration Acceleration) Measure of vibration acceleration

<b>ANSI UOM Code</b>	<b>Value</b>
JA	Job
K9	Kilograms per Millimeter Squared (KG/MM2)
KK	100 Kilograms
KM	Kilograms per Square Meter, Kilograms, Decimal
KO	Millequivalence Caustic Potash per Gram of Product Acid number and saponification number test results have a unit of measure of Millequivalence KOH per Gram
KU	Task
LL	Lifetime A duration ending with the death of the individual
M2	Millimeter-Actual
MB	Millimeter-Nominal
MG	Metric Gross Ton
MH	Microns (Micrometers) 1/1,000,000 meter
MI	Metric
MW	Metric Ton Kilograms
MX	Mixed
MY	Millimeter-Average
MZ	Millimeter-minimum
N7	Parts
N9	Cartridge Needle Used with auto-injector units only, a disposable, filled cartridge that includes a needle
NS	Short Ton Two thousand pounds
OC	Billboard
PC	Piece
PH	Pack (PAK)
PJ	Pounds, Decimal - Pounds per Square Foot - Pound Gage
Q1	Quarter (Time)
Q4	Fifty A unit of issue in which a group of 50 items are consolidated and measured as a single entity
Q5	Twenty-Five A unit of issue in which a group of 25 items are consolidated and measured as a single entity
Q6	Thirty-Six A unit of issue in which a group of 36 items are consolidated and measured as a single entity
Q7	Twenty-Four A unit of issue in which a group of 24 items are consolidated and measured as a single entity
QC	Channel
QE	Photographs
R5	Thousands of Dollars
R6	Millions of Dollars
R7	Billions of Dollars
R8	Roentgen Equivalent in Man (REM)
RB	Radian
RC	Rod (area) - 16.25 Square Yards
S1	Semester
S2	Trimester

<b>ANSI UOM Code</b>	<b>Value</b>
SZ	Syringe Glass or plastic barrels used to administer fluid medication under the skin, into a vein artery, or into a muscle
T2	Thousandths of an Inch
TZ	Thousand Cubic Feet
U3	Ten 10 each of an item of supply
U5	Two Hundred Fifty 250 each of an item of supply
UL	Unitless Unit of Measure for properties or test results without units of measure
UP	Troche A flat, round, tablet made of a medicinal substance
UQ	Wafer A light, thin, crisp, cake
UR	Application An action of putting something into material contact
US	Dosage Form
UT	Inhalation
UU	Lozenge
UV	Percent Topical Only A measure of medication intended only for external use
UW	Milliequivalent
UX	Dram (Minim)
UY	Fifty Square Feet
UZ	Fifty Count
V1	Flat A shallow rectangular container frequently used for fruits and vegetables
V2	Pouch
VC	Five Hundred 500 each of an item of supply
VP	Percent Volume
VR	Volt-ampere-reactive
WD	Work Days
X2	Bunch A measure used to identify a group of like items grown or fastened together
X3	Clove A measure used to identify a section of a separate bulb
X4	Drop The smallest quantity of liquid heavy enough to form a spherical mass
X5	Head A measure used for a rounded, compact mass of leaves, buds or flowers
X6	Heart A measure used to identify the central or innermost physical part
X7	Leaf A measure used to identify a usually green flattened structure of vascular plants processed for a particular purpose
X8	Loaf A shaped mass of food cooked or prepared in one piece
X9	Portion A measure used to identify a section or quantity within a larger thing
XP	Base Box per Pound
Y1	Slice A measure used to identify a thin broad piece cut from a larger object

<b>ANSI UOM Code</b>	<b>Value</b>
Y2	Tablespoon A measure equal to three teaspoons or a half fluid ounce
Y3	Teaspoon A measure equal to five milliliters or one third tablespoon
Y4	Tub A measure used to identify a storage container
ZA	Bimonthly
ZB	Biweekly
ZC	Semiannual

### **Valid Codes**

The following codes are valid for X12 and have no inconsistencies. In a few cases, the ANSI UOM value is duplicated. This is because a many-to-one relationship is accepted and not considered an error.

The following table lists the valid codes:

<b>ANSI UOM</b>	<b>UNUOM</b>	<b>Value</b>
02	SMI	STATUTE MILE
03	SEC	SECONDS
04	06	SMALL SPRAY
05	05	LIFTS
08	08	HEAT LOTS
10	10	GROUP
11	11	OUTFIT
12	PA	PACKET
13	13	RATION
14	14	SHOT
15	15	STICK
16	16	115 KILOGRAM DRUM
17	17	100 POUND DRUM
18	18	55 GALLON DRUM
19	19	TANK TRUCK
1A	1A	CAR MILE
1B	1B	CAR COUNT
1C	1C	LOCOMOTIVE COUNT
1D	1D	CABOOSE COUNT
1E	1E	EMPTY CAR
1F	1F	TRAIN MILE
1G	1G	FUEL USAGE (GALLONS)
1H	1H	CABOOSE MILE
1I	1I	FIXED RATE
1J	1J	TON MILES
1K	1K	LOCOMOTIVE MILE
1L	1L	TOTAL CAR COUNT
1M	1M	TOTAL CAR MILE
1X	1X	QUARTER MILE
20	20	20 FOOT CONTAINER
21	21	40 FOOT CONTAINER



<b>ANSI UOM</b>	<b>UNUOM</b>	<b>Value</b>
22	22	DECILITER PER GRAM
23	23	GRAMS PER CUBIC CENTIMETER
24	24	THEORETICAL POUNDS
25	25	GRAMS PER SQUARE CENTIMETER
26	26	ACTUAL TONS
27	27	THEORETICAL TONS
28	28	KILOGRAMS PER SQUARE METER
29	29	POUNDS PER 1000 SQUARE FEET
2A	2A	RADIANS PER SECOND
2B	2B	RADIANS PER SECOND SQUARED
2C	2C	ROENTGEN
2I	2I	BRITISH THERMAL UNITS (BTUS) PER HOUR
2J	2J	CUBIC CENTIMETERS PER SECOND
2K	2K	CUBIC FEET PER HOUR
2L	2L	CUBIC FEET PER MINUTE
2M	2M	CENTIMETERS PER SECOND
2N	2N	DECIBELS
2P	2P	KILOBYTE
2Q	2Q	KILOBECQUEREL
2R	2R	KILOCURIE
2U	2U	MEGAGRAM
2V	2V	MEGAGRAMS PER HOUR
2W	2W	BIN
2X	2X	METERS PER MINUTE
2Y	2Y	MILLIROENTGEN
2Z	2Z	MILLIVOLTS
30	30	HORSEPOWER DAYS PER AIR DRY METRIC TONS
31	31	CATCHWEIGHT
32	32	KILOGRAMS PER AIR DRY METRIC TONS
33	33	KILOPASCAL SQUARE METERS PER GRAM
34	34	KILOPASCALS PER MILLIMETER
35	35	MILLILITERS PER SQUARE CENTIMETER SECOND
36	36	CUBIC FEET PER MINUTE PER SQUARE FOOT
37	37	OUNCES PER SQUARE FOOT
38	38	OUNCES PER SQUARE FOOT PER 0.01 INCH
3B	3B	MEGAJoule
3C	3C	MANMONTH
3E	3E	POUNDS PER POUND OF PRODUCT
3F	B35	KILOGRAMS PER LITER OF PRODUCT
3G	3G	POUNDS PER PIECE OF PRODUCT
3H	3H	KILOGRAMS PER KILOGRAM OF PRODUCT
3I	3I	KILOGRAMS PER PIECE OF PRODUCT
40	40	MILLILITER PER SECOND
41	41	MILLILITER PER MINUTE
43	43	SUPER BULK BAG
44	44	500 KILOGRAM BULK BAG
45	45	300 KILOGRAM BULK BAG
46	46	25 KILOGRAM BULK BAG
47	47	50 POUND BAG
48	48	BULK CAR LOAD

<b>ANSI UOM</b>	<b>UNUOM</b>	<b>Value</b>
4A	4A	BOBBIN
4B	4B	CAP
4C	4C	CENTISTOKES
4D	CUR	CURIE
4E	4E	20-PACK
4F	CNP	100-PACK
4G	4G	MICROLITER
4H	4H	MICROMETER
4I	MTS	METERS PER SECOND
4J	MSK	METERS PER SECOND PER SECOND
4K	4K	MILLIAMPERES
4L	4L	MEGABYTE
4M	4M	MILLIGRAMS PER HOUR
4N	4N	MEGABECQUEREL
4O	4O	MICROFARAD
4P	4P	NEWTONS PER METER
4Q	4Q	OUNCE INCH
4R	4R	OUNCE FOOT
4S	PAL	PASCAL
4T	4T	PICOFARAD
4U	4U	POUNDS PER HOUR
4V	MQH	CUBIC METER PER HOUR
4W	4W	TON PER HOUR
4X	4X	KIOLITER PER HOUR
53	53	THEORETICAL KILOGRAMS
54	54	THEORETICAL TONNES
56	56	SITAS
57	57	MESH
58	58	NET KILOGRAMS
59	59	PARTS PER MILLION
5A	5A	BARRELS PER MINUTE
5B	5B	BATCH
5C	5C	GALLONS PER THOUSAND
5E	5E	MMSCF/DAY
5F	5F	POUNDS PER THOUSAND
5G	5G	PUMP
5H	5H	STAGE
5I	5I	STANDARD CUBIC FOOT
5J	5J	HYDRAULIC HORSE POWER
5K	5K	COUNT PER MINUTE
5P	5P	SEISMIC LEVEL
5Q	5Q	SEISMIC LINE
60	60	PERCENT WEIGHT
61	61	PARTS PER BILLION
62	62	PERCENT PER 1000 HOURS
63	63	FAILURE RATE IN TIME
64	64	POUNDS PER SQUARE INCH GAUGE
65	COU	COULOMB
66	66	OERSTEDS
67	SIE	SIEMENS

<b>ANSI UOM</b>	<b>UNUOM</b>	<b>Value</b>
68	AMP	AMPERE
69	69	TEST SPECIFIC SCALE
70	VLT	VOLT
71	71	VOLT-AMPERE PER POUND
72	72	WATTS PER POUND
73	73	AMPERE TURN PER CENTIMETER
74	74	MILLI PASCALS
76	76	GAUSS
77	77	MIL
78	78	KILOGAUSS
79	A53	ELECTRON VOLT
80	80	POUNDS PER SQUARE INCH ABSOLUTE
81	81	HENRY
82	OHM	OHM
83	FAR	FARAD
84	84	KILO POUNDS PER SQUARE INCH (KSI)
85	85	FOOT POUNDS
86	JOU	JOULES
87	87	POUNDS PER CUBIC FOOT
89	89	POISE
90	90	SAYBOLD UNIVERSAL SECOND
91	91	STOKES
92	92	CALORIES PER CUBIC CENTIMETER
93	93	CALORIES PER GRAM
94	94	CURL UNITS
95	95	20,000 GALLON TANKCAR
96	96	10,000 GALLON TANKCAR
97	97	10 KILOGRAM DRUM
98	98	15 KILOGRAM DRUM
A8	D67	DOLLARS PER HOURS
AA	AA	BALL
AB	AB	BULK PACK
AC	ACR	ACRE
AD	AD	BYTES
AE	AE	AMPERES PER METER
AF	CGM	CENTIGRAM
AH	AH	ADDITIONAL MINUTES
AI	AI	AVERAGE MINUTES PER CALL
AJ	AJ	COP
AK	AK	FATHOM
AL	AL	ACCESS LINES
AM	AM	AMPOULE
AP	AP	ALUMINUM POUNDS ONLY
AQ	AQ	ANTI-HEMOPHILIC FACTOR (AHF) UNITS
AR	AR	SUPPOSITORY
AS	AS	ASSORTMENT
AT	ATM	ATMOSPHERE
AV	AV	CAPSULE
AW	AW	POWDER-FILLED VIALS
AY	AY	ASSEMBLY

<b>ANSI UOM</b>	<b>UNUOM</b>	<b>Value</b>
AZ	AZ	BRITISH THERMAL UNITS (BTUS) PER POUND
B0	B0	BRITISH THERMAL UNITS (BTUS) PER CUBIC FOOT
B1	B1	BARRELS PER DAY
B2	B2	BUNKS
B3	B3	BATTING POUND
B4	B4	BARREL, IMPERIAL
B5	B5	BILLET
B6	B6	BUN
B7	B7	CYCLES
B8	BD	BOARD
B9	B9	BATT
BA	BL	BALE
BB	BB	BASE BOX
BC	BJ	BUCKET
BD	BE	BUNDLE
BE	D79	BEAM
BF	BFT	BOARD FEET
BG	BG	BAG
BH	BH	BRUSH
BI	BR	BAR
BJ	D92	BAND
BK	D63	BOOK
BL	D64	BLOCK
BM	BT	BOLT
BN	VQ	BULK
BO	BO	BOTTLE
BP	BP	100 BOARD FEET
BQ	BHP	BRAKE HORSE POWER
BR	BLL	BARREL
BS	BK	BASKET
BT	E2	BELT
BU	BUA	BUSHEL
BV	BUI	BUSHEL, DRY IMPERIAL
BW	BW	BASE WEIGHT
BX	BX	BOX
BY	BTU	BRITISH THERMAL UNIT (BTU)
BZ	BZ	MILLION BTU'S
C0	C0	CALLS
C1	C1	COMPOSITE PRODUCT POUNDS (TOTAL WEIGHT)
C2	C2	CARSET
C3	CLT	CENTILITER
C4	C4	CARLOAD
C5	C5	COST
C6	C6	CELL
C7	C7	CENTIPOISE (CPS)
C8	DMQ	CUBIC DECIMETER
C9	C9	COIL GROUP
CA	CS	CASE
CB	CO	CARBOY
CC	CMQ	CUBIC CENTIMETER

<b>ANSI UOM</b>	<b>UNUOM</b>	<b>Value</b>
CE	CEL	CENTIGRADE, CELSIUS
CF	FTQ	CUBIC FEET
CG	CG	CARD
CH	CH	CONTAINER
CI	INQ	CUBIC INCHES
CJ	CJ	CONE
CK	CK	CONNECTOR
CL	CY	CYLINDER
CM	CMT	CENTIMETER
CN	CA	CAN
CO	D90	CUBIC METERS (NET)
CP	CR	CRATE
CQ	CQ	CARTRIDGE
CR	MTQ	CUBIC METER
CS	D66	CASSETTE
CT	CT	CARTON
CU	CU	CUP
CV	CV	COVER
CW	CWA	HUNDRED POUNDS (CWT)
CX	CL	COIL
CY	YDQ	CUBIC YARD
CZ	CZ	COMBO
D3	DMK	SQUARE DECIMETER
D5	D5	KILOGRAM PER SQUARE CENTIMETER
D8	D8	DRAIZE SCORE
D9	D9	DYNE PER SQUARE CENTIMETER
DA	DAY	DAYS
DB	DB	DRY POUNDS
DC	DC	DISK (DISC)
DD	DD	DEGREE
DE	DE	DEAL
DF	DRA	DRAM
DG	DG	DECIGRAM
DI	DI	DISPENSER
DJ	DJ	DECAGRAM
DK	KMT	KILOMETERS
DL	DLT	DECILITER
DM	DMT	DECIMETER
DN	DN	DECI NEWTON-METER
DP	DPR	DOZEN PAIR
DQ	DQ	DATA RECORDS
DR	DR	DRUM
DS	DS	DISPLAY
DT	DT	DRY TON
DU	DU	DYNE
DX	DX	DYNES PER CENTIMETER
DY	DY	DIRECTORY BOOKS
DZ	DZN	DOZEN
EA	EA	EACH
EB	EB	ELECTRONIC MAIL BOXES