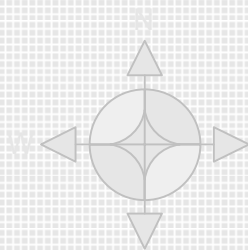


PD/SW ECR PROTOCOL

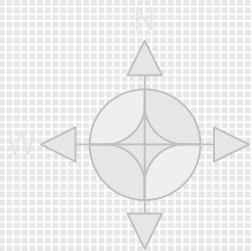
(V1.4)

Update : 2013/04/01



CHANGE HISTORY

Date	Version	Issue
2011/10/17	1.0	Type-7 추가 - R&D Center 김광현
2012/11/07	1.1	Type#6 Weight에 Decimal Point 추가 – AP Protocol과 동일하게 함
2013/02/13	1.2	Type#4,6 PD-2와 동일하게 Weight Unit(kg, lb, oz, g) 소문자로 변경
2013/02/22	1.3	Type#12 Dialog6 프로토콜 추가
2013/06/13	1.4	Type#5 프로토콜 추가

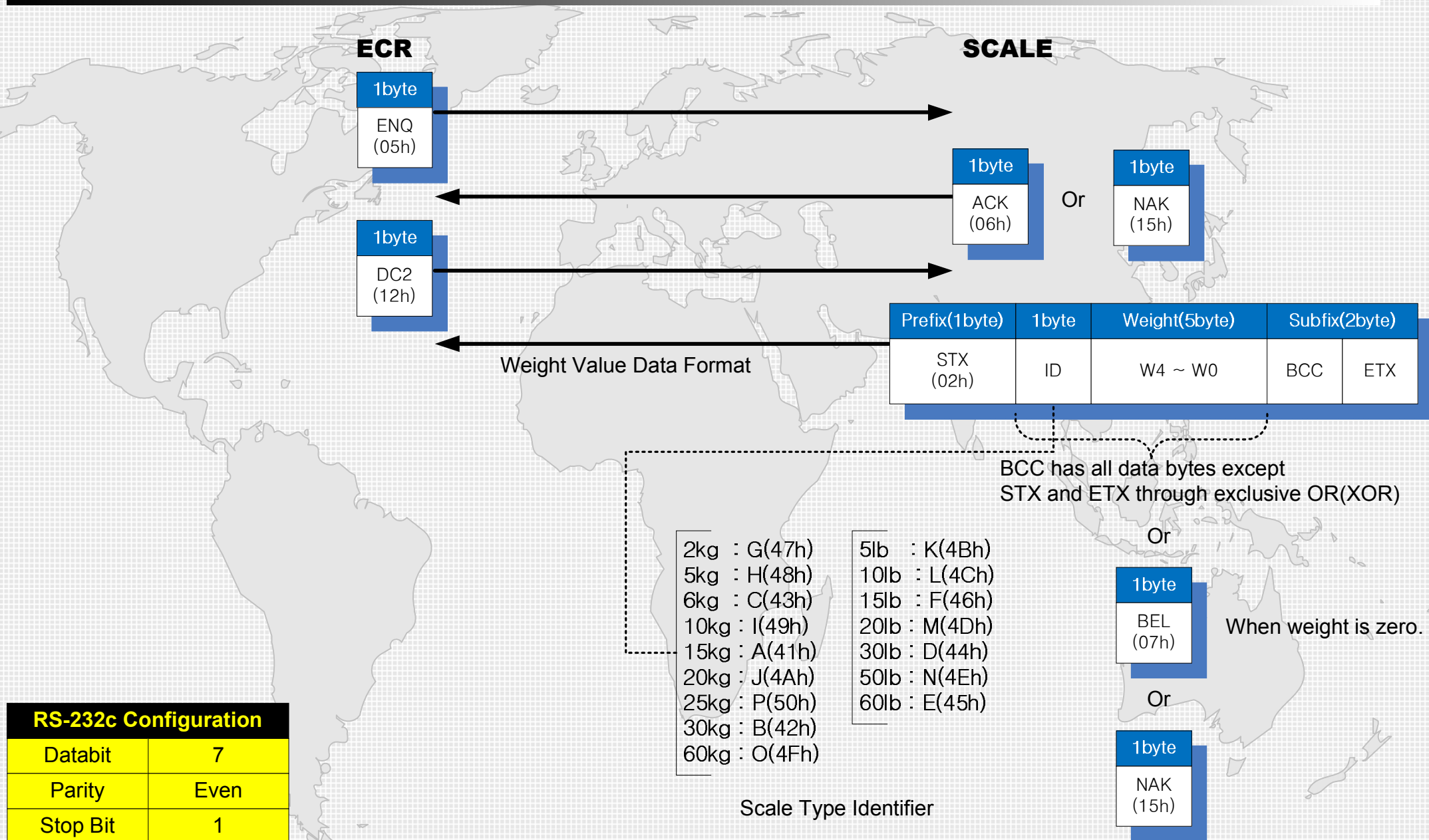


Transmission Data Description

Data	Hex	Description
SOH	01h	Start of heading
STX	02h	Start of Text
STA	53h, 55h	S(53h) : Stable, U(55h): Unstable
SIGN	2Dh, 20h	Sign of the weight data(2Dh-'-', 20h-'')
W5~W0		Weight data
P7~P0		Total Price data
U7~U0		Unit Price Data
PN4~PN0		PLU number data

Data	Hex	Description
UN1~UN2	KG, LB	Unit of weight
BCC		Block check character(exclusive or - ^)
ETX	03h	End of text
EOT	04h	End of transmission

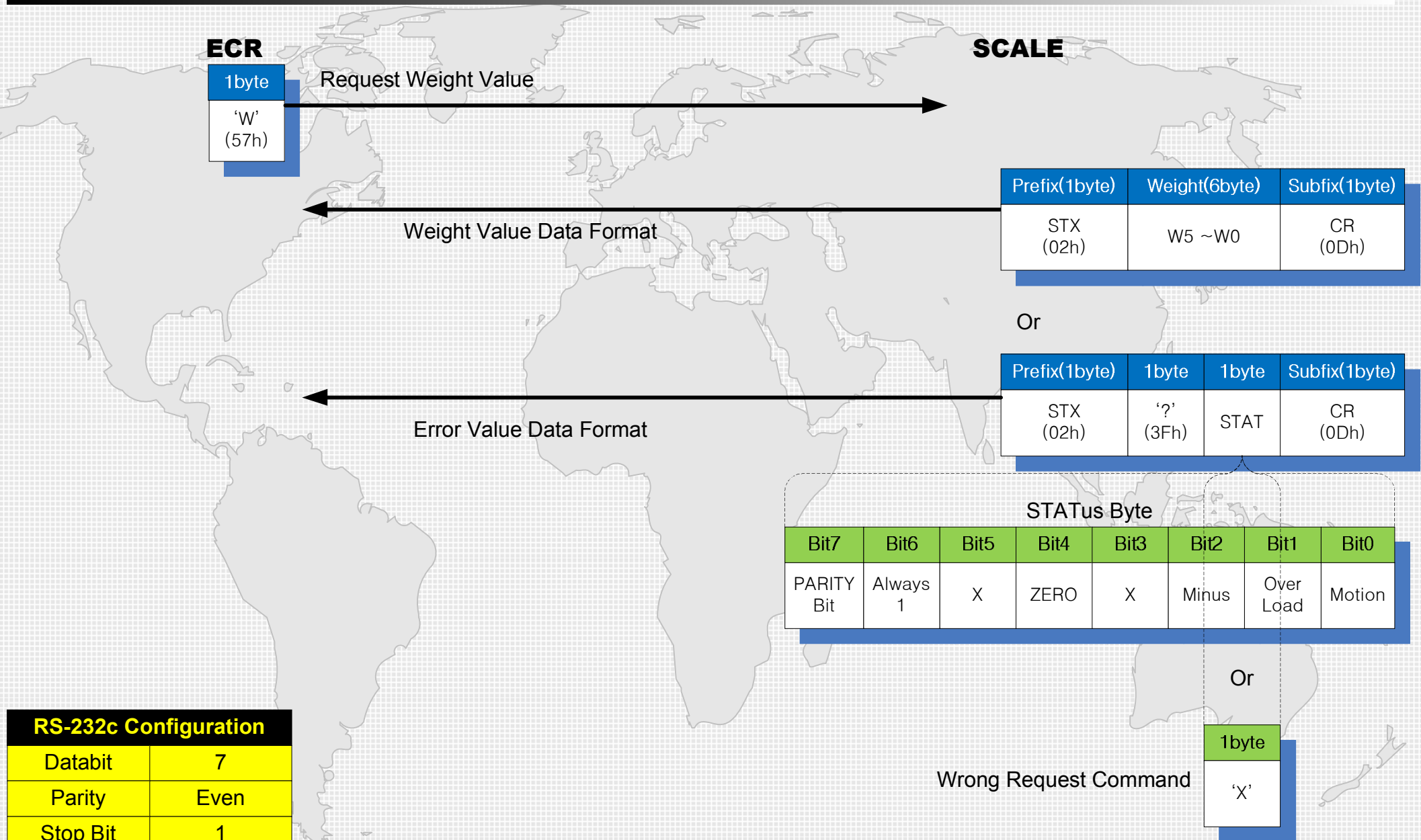
ECR Type#0, #1



★ Response time : Typically 50ms, max 150ms

RS-232c Configuration	
Databit	7
Parity	Even
Stop Bit	1
Baudrate	9600bps

ECR Type#2



RS-232c Configuration	
Databit	7
Parity	Even
Stop Bit	1
Baudrate	9600bps

★ Response time : Typically 50ms, max 150ms

ECR Type#4

Unit of Weight

kg : 6Bh 67h
lb : 6Ch 62h
oz : 6Fh 7Ah
g : 67h 20h

ECR

SCALE

1byte	1byte
'W' (57h)	CR (0Dh)

Request Weight Value

Weight Value Data Format

Prefix(1byte)	1byte	1byte	1byte	1byte	1byte	1byte	1byte	1byte	1byte	Subfix(1byte)
LF (0Ah)	W4	W3	'.' (2Eh)	W2	W1	W0	UN1	UN2	CR (0Dh)	

Variable
Position

And

STATUS DATA Format

Prefix(1byte)	1byte	1byte	1byte	Subfix(2byte)
LF (0Ah)	'S' (53h)	B1	B2	CR (0Dh) ETX (03h)

Simplified Status Codes

B1	B2	Status Definition
'0'(30h)	'0'(30h)	OK
'1'(31h)	'0'(30h)	Motion
'2'(32h)	'0'(30h)	Scale at Zero
'0'(30h)	'1'(31h)	Under Capacity
'0'(30h)	'2'(32h)	Over Capacity

RS-232c Configuration

Databit	7
Parity	Even
Stop Bit	1
Baudrate	9600bps

★ Response time : Typically 50ms, max 150ms

페이지 6

CRS, NCR2170, SAMAUNG ER-5100, ER5115 and Many other ECRs

ECR Type#5

Unit of Weight

KG : 4Bh 47h
LB : 4Ch 42h
OZ : 4Fh 5Ah
G : 47h 20h

ECR

SCALE

1byte	1byte
'W' (57h)	CR (0Dh)

Request Weight Value

Weight Value Data Format

Prefix(1byte)	1byte	1byte	1byte	1byte	1byte	1byte	1byte	1byte	1byte	Subfix(1byte)
LF (0Ah)	W4	W3	'.' (2Eh)	W2	W1	W0	UN1	UN2	CR (0Dh)	

Variable
Position

And

STATUS DATA Format

Prefix(1byte)	1byte	1byte	Subfix(2byte)	
LF (0Ah)	B1	B2	CR (0Dh)	ETX (03h)

Simplified Status Codes

B1	B2	Status Definition
'0'(30h)	'0'(30h)	OK
'1'(31h)	'0'(30h)	Motion
'2'(32h)	'0'(30h)	Scale at Zero
'0'(30h)	'1'(31h)	Under Capacity
'0'(30h)	'2'(32h)	Over Capacity

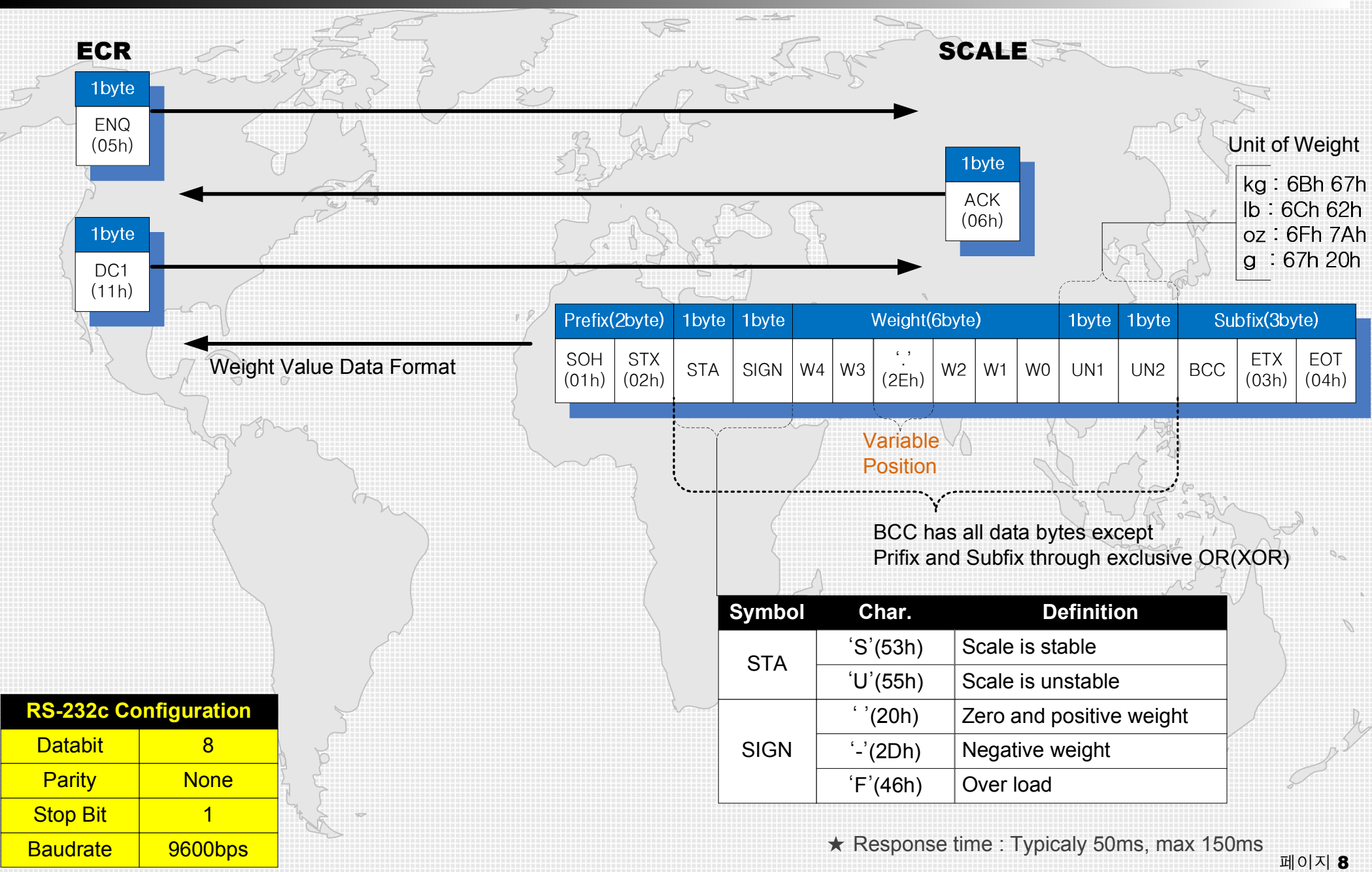
RS-232c Configuration

Databit	7
Parity	Even
Stop Bit	1
Baudrate	9600bps

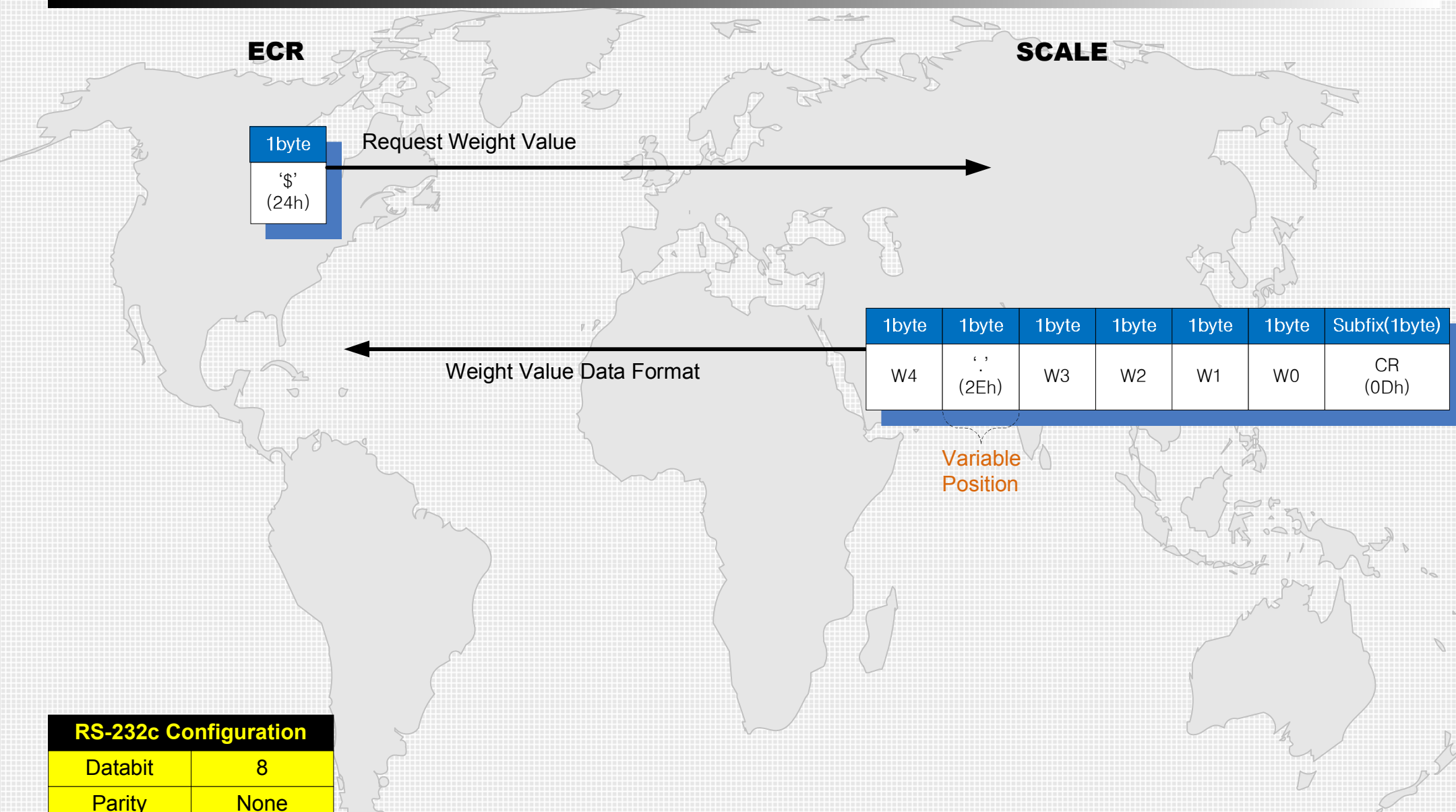
★ Response time : Typically 50ms, max 150ms

페이지 7

ECR Type#6



ECR Type#7



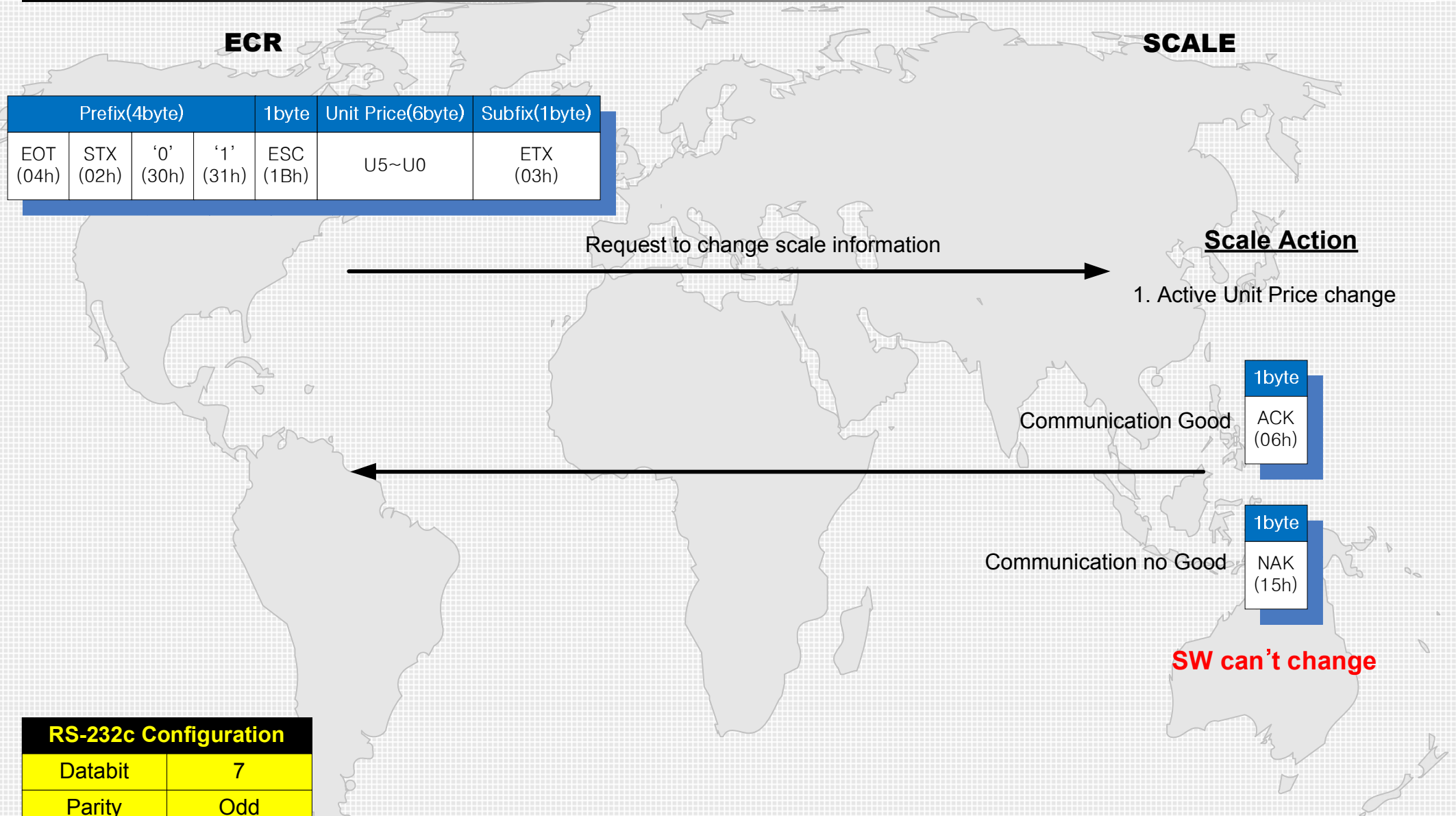
RS-232c Configuration

Databit	8
Parity	None
Stop Bit	1
Baudrate	9600bps

★ Response time : Typicly 50ms, max 150ms

ECR Type#12(Change Scale information – Unit Price)

Checkout-Dialogue#06

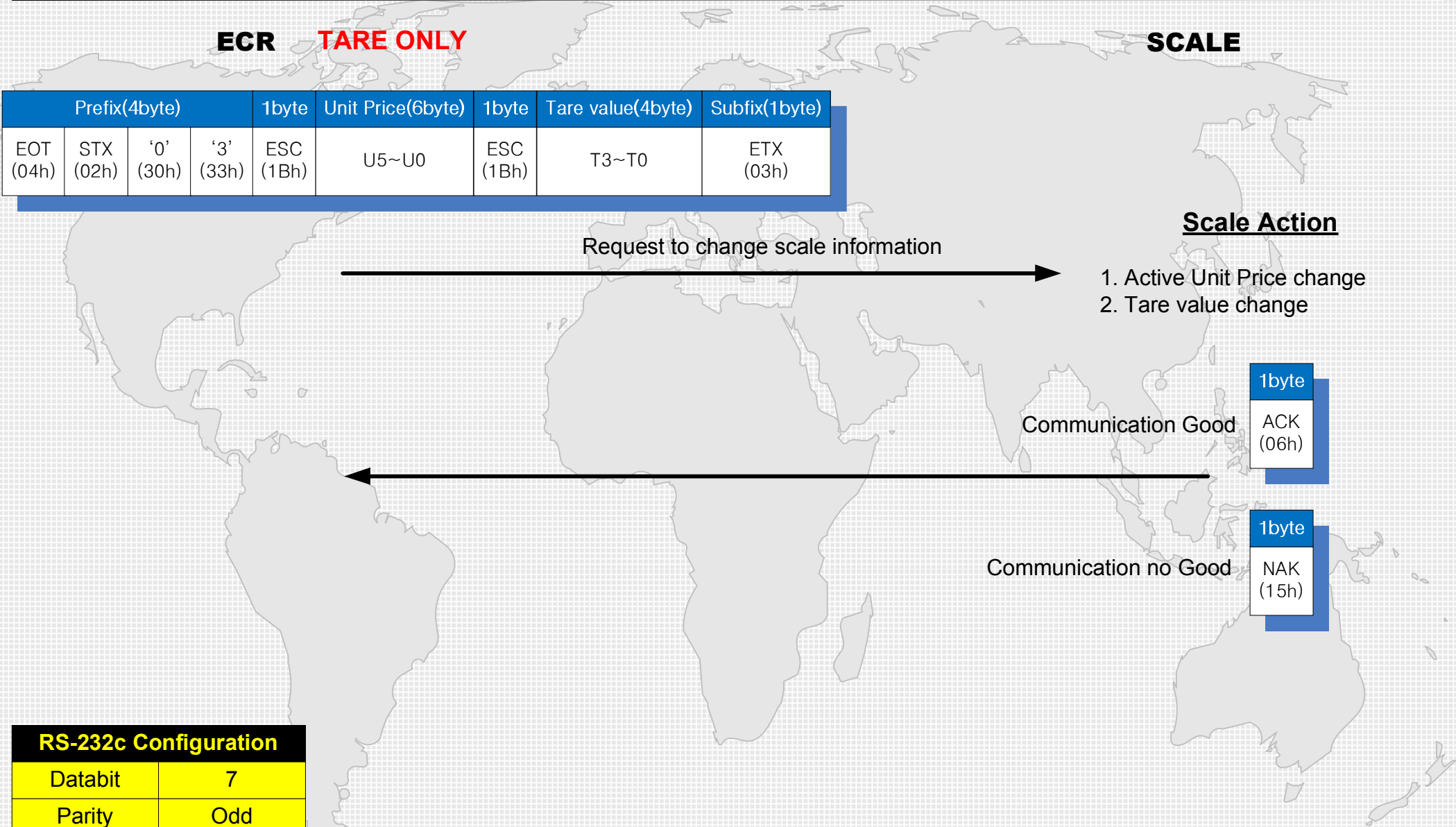


RS-232c Configuration	
Databit	7
Parity	Odd
Stop Bit	1
Baudrate	9600bps

★ Response time : Typically 50ms, max 150ms

ECR Type#12(Change Scale information – Unit Price, Tare)

Checkout-Dialogue#06



RS-232c Configuration	
Databit	7
Parity	Odd
Stop Bit	1
Baudrate	9600bps

★ Response time : Typaly 50ms, max 150ms

ECR Type#12(Change Scale information – Unit Price, PLU Name)

Checkout-Dialogue#06

ECR

SCALE

Prefix(4byte)				1byte	Unit Price(6byte)	1byte	Text(13byte)	Subfix(1byte)
EOT (04h)	STX (02h)	'0' (30h)	'4' (34h)	ESC (1Bh)	U5~U0	ESC (1Bh)	Txt12~Txt0	ETX (03h)

Scale Action

Request to change scale information

1. Active Unit Price change
2. Active PLU Name change (only 6byte)

Communication Good

1byte
ACK
(06h)

Communication no Good

1byte
NAK
(15h)

SW can't change

RS-232c Configuration

Databit	7
Parity	Odd
Stop Bit	1
Baudrate	9600bps

★ Response time : Typicly 50ms, max 150ms

ECR Type#12(Change Scale information – Unit Price, Tare, PLU Name)

Checkout-Dialogue#06

ECR

SCALE

Prefix(4byte)				1byte	Unit Price(6byte)	1byte
EOT (04h)	STX (02h)	'0' (30h)	'5' (35h)	ESC (1Bh)	U5~U0	ESC (1Bh)

(Continue)

Tare value(4byte)	1byte	Text(13byte)	Subfix(1byte)
T3~T0	ESC (1Bh)	Txt12~Txt0	ETX (03h)

Scale Action

Request to change scale information

1. Active Unit Price change
2. Tare Value change
2. Active PLU Name change (only 6byte)

Communication Good

1byte
ACK (06h)

Communication no Good

1byte
NAK (15h)

SW can't change

RS-232c Configuration

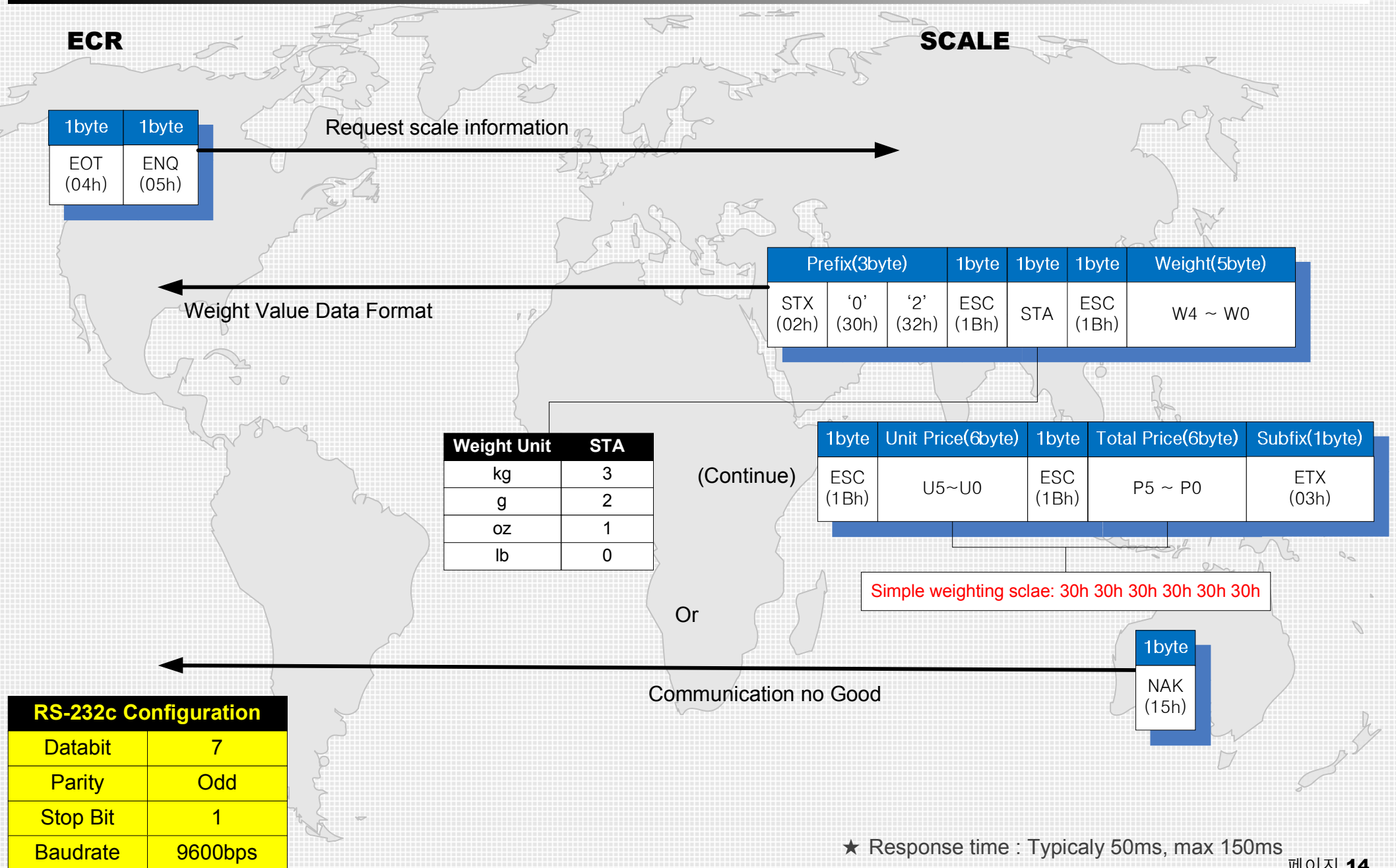
Databit	7
Parity	Odd
Stop Bit	1
Baudrate	9600bps

★ Response time : Typically 50ms, max 150ms

페이지 13

ECR Type#12(Request Scale information)

Checkout-Dialogue#06



ECR Type#12(Request for status information after receipt of NAK)

Checkout-Dialogue#06

ECR

SCALE

Prefix(4byte)				Subfix(1byte)
EOT (04h)	STX (02h)	'0' (30h)	'8' (38h)	ETX (03h)

Request Status information

Send Status information

Prefix(3byte)			1byte	Status(2byte)		Subfix(1byte)
STX (02h)	'0' (30h)	'9' (39h)	ESC (1Bh)	S1	S0	ETX (03h)

SW don't change

S1	S0	Description
'0'(30h)	'0'(30h)	There is no error present
'0'(30h)	'1'(31h)	GENERAL error on the scales
'0'(30h)	'2'(32h)	PARITY error, or more characters than permitted
'1'(31h)	'0'(30h)	Incorrect record number detected
'1'(30h)	'1'(31h)	No valid unit price
'1'(31h)	'2'(32h)	No valid tare value received
'1'(30h)	'3'(33h)	No valid text received
'2'(32h)	'0'(30h)	Scale still in motion (no equilibrium)
'3'(33h)	'0'(30h)	Scale in MIN range
'3'(33h)	'1'(31h)	Scale in underload range or negative weight display
'3'(33h)	'2'(32h)	Scale in overload range

★ Response time : Typically 50ms, max 150ms

RS-232c Configuration

Databit	7
Parity	Odd
Stop Bit	1
Baudrate	9600bps