

# **AMS0805-WAH**

## **Utility Software Guide**

Version 1.0



Amosense Co., Ltd.

17-2 Jamwon-dong, Seocho-gu

Seoul 137-902 Korea

Tel: +82-2-544-1351

Fax: +82-2-517-7183

\*Specification are subject to change without prior notification

## Revision History

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# 1 Introduction

This is the manual for version 1.0 of AMS0805-WAH Utility program included in the AMS0805-WAH SDK.

AMS0805-WAH Utility programs consist of three main components, AMSView for analyzing data, AMSClient for real-time data monitoring, and AMSUART for viewing raw data through either USB or UART ports.

You need to connect AMS0805-WAH demos to AMS0805-WAH evaluation board using the USB cable, setting Braudrate as 38400. We support both USB and UART communication interfaces. Install the USB driver to use the USB devices. Refer to the AMS0805-WAH USB Installation Guide for more detailed information.

## 2 AMSView Utility Program

### 2.1 Overview

AMSView Utility Program is a viewing program of data outputs from AMS0805-WAH.

### 2.2 User Interface

#### 2.2.1 Main Window

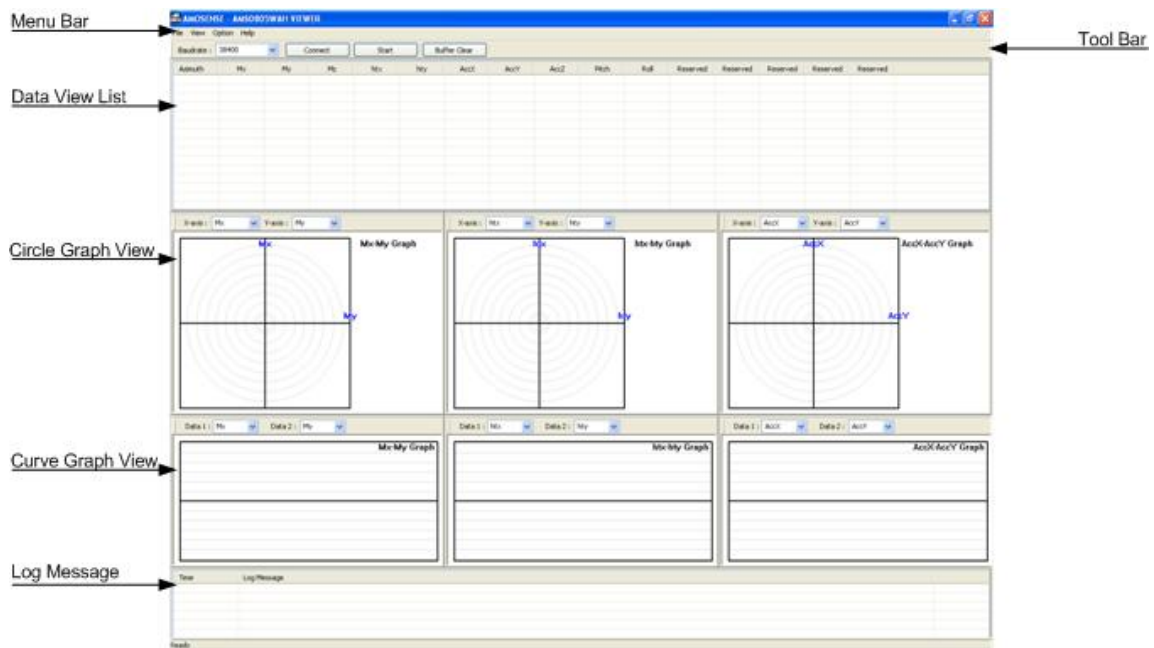


Figure 1: AMSView Main Window

Name	Description
Data View List	Data from AMS0805-WAH
Circle Graph View	Data in X-Y Graph
Curve Graph View	Data in a Curve Graph
Log Message	Display the events occurred in order

Table 1: Description of the view in AMSView

### 2.2.1.1 Data View List

List Header	Azimuth	Mx	My	Mz	Mx	My	AzCl	AzCl	AzCl	PkH	PkL	Reserved	Reserved	Reserved	Reserved	Reserved
Data	2707	3	110	-215	1	114	1	3	202	-6	-10	246	0	0	0	0
	2708	4	110	-216	1	114	2	4	201	-6	-10	246	0	0	0	0
	2709	3	110	-216	1	114	2	4	201	-6	-10	246	0	0	0	0
	2705	4	110	-217	1	114	2	4	201	-6	-10	247	0	0	0	0
	2706	2	110	-214	1	114	2	4	201	-6	-10	245	0	0	0	0
	2706	5	110	-216	1	114	2	4	201	-6	-10	246	0	0	0	0
	2707	3	110	-216	1	114	2	4	201	-6	-10	246	0	0	0	0
	2706	4	110	-215	1	115	2	4	201	-6	-10	246	0	0	0	0
	2706	3	110	-215	1	115	2	4	201	-6	-10	246	0	0	0	0
	2707	3	110	-216	1	114	2	4	201	-6	-10	247	0	0	0	0
	2707	4	110	-215	1	114	2	4	201	-6	-11	245	0	0	0	0
	2706	5	110	-215	1	114	2	4	201	-6	-11	246	0	0	0	0
	2707	4	110	-217	1	114	2	4	201	-6	-11	246	0	0	0	0
	2707	3	110	-215	1	114	2	4	201	-6	-10	246	0	0	0	0

Figure 2: Data View List

Name	Description
List Header	Data label
Data	Data outputs from AMS0805-WAH

Table 2: Description of the Data List View in AMSView

### 2.2.1.2 Circle Graph View

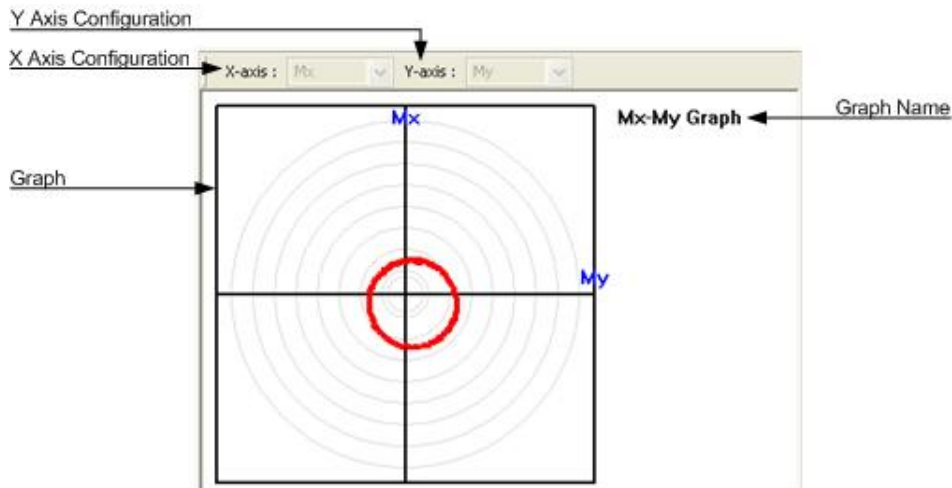


Figure 3: Circle Graph View

Name	Description
X Axis Configuration	Identify source of data in X axis
Y Axis Configuration	Identify source of data in Y axis
Graph Name	Name of the current graph
Graph	Circle Graph

Table 3: Description of the Circle Graph View in AMSView

### 2.2.1.3 Curve Graph View

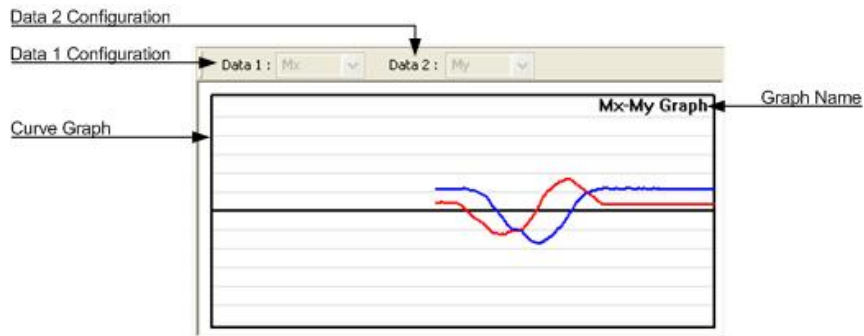


Figure 4: Curve Graph View

Name	Description
Data 1 Configuration	Identify source of data in Data 1
Data 2 Configuration	Identify source of data in Data 2
Graph Name	Name of the current graph
Curve Graph	Curve Graph <ul style="list-style-type: none"> <li>• Data 1 : Red</li> <li>• Data 2 : Blue</li> </ul>

Table 4: Description of the Curve Graph View in AMSView

### 2.2.1.4 Log Message

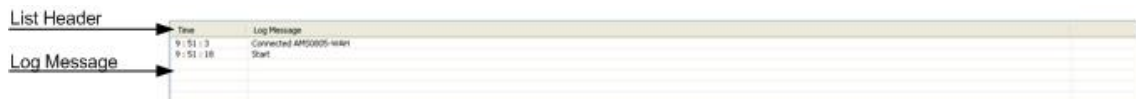


Figure 5: Log Message List

Name	Description
List Header	List Header <ul style="list-style-type: none"> <li>• Time : Time that log activities occurred</li> <li>• Log Message : Log activity message</li> </ul>
Log Message	Display the log activities

Table 5: Description of the Log Message View in AMSView

### 2.2.2 Rename Header Window

In Rename Header Window, you are asked to set the name of Header ranging from Header 1 to Head15. You can also set the Graph Buffer Size required for displaying the data. As a buffer size gets bigger, the more data get displayed. The speed of program, however, may get slower.

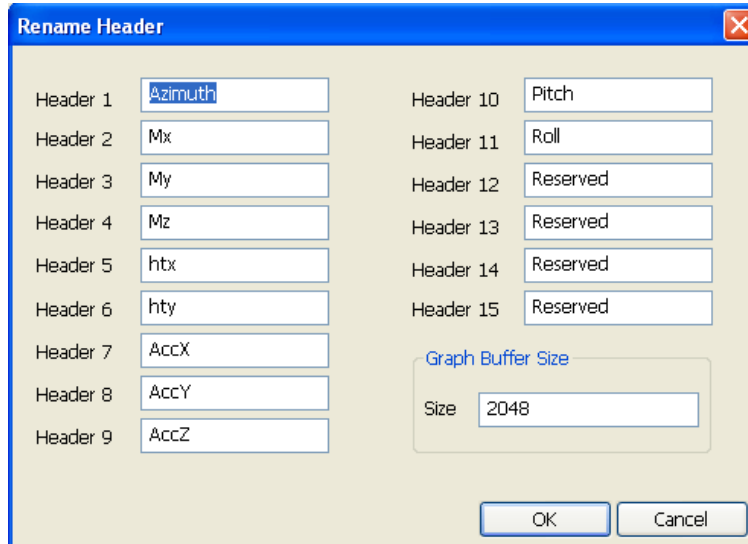


Figure 6: Rename Header Window

## 2.3 Menu Bar Items

### 2.3.1 File Menu

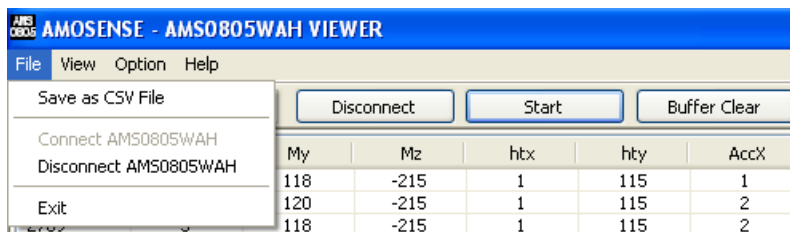


Figure 7: File Menu

- Save as CSV File : Save the contents as a CSV file type
- Connect AMS0805WAH : Connect AMS0805-WAH evaluation board
- Disconnect AMS0805WAH : Disconnect AMS0805-WAH evaluation board
- Exit: Terminate Program



### 2.3.2 Option Menu

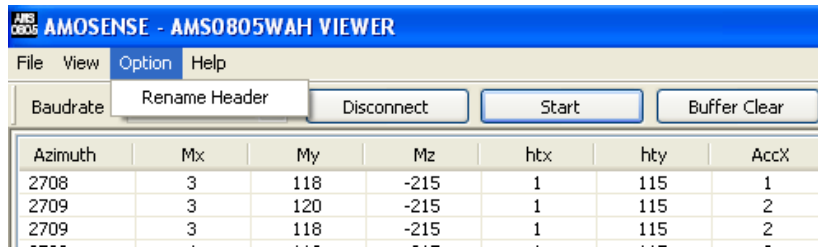


Figure 8: Option Menu

- Rename Header : Display Rename Header Window

### 2.4 Tool Bar Items

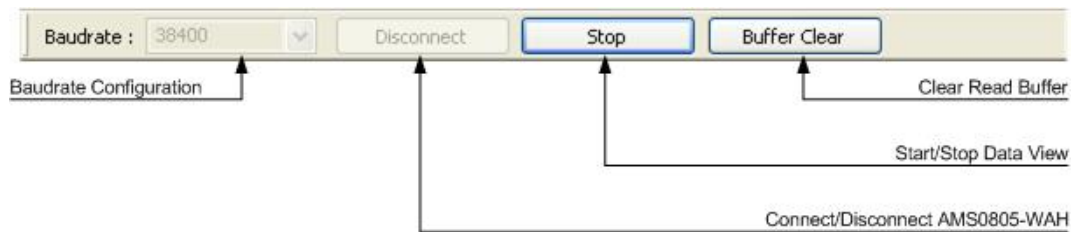


Figure 9: Tool Bar

- Baudrate Configuration : USB Baudrate configuration
- Clear Read Buffer : Clear all the data in Read Buffer
- Start/Stop Data View : Start/stop data view in Data View List and Graph
- Connect/Disconnect AMS0805-WAH : Connect/Disconnect AMS0805-WAH

### 3 AMSClient Utility Program

#### 3.1 Overview

AMSClient Utility Program displays data from AMS0805-WAH in real time.

#### 3.2 User Interface

##### 3.2.1 Main Window

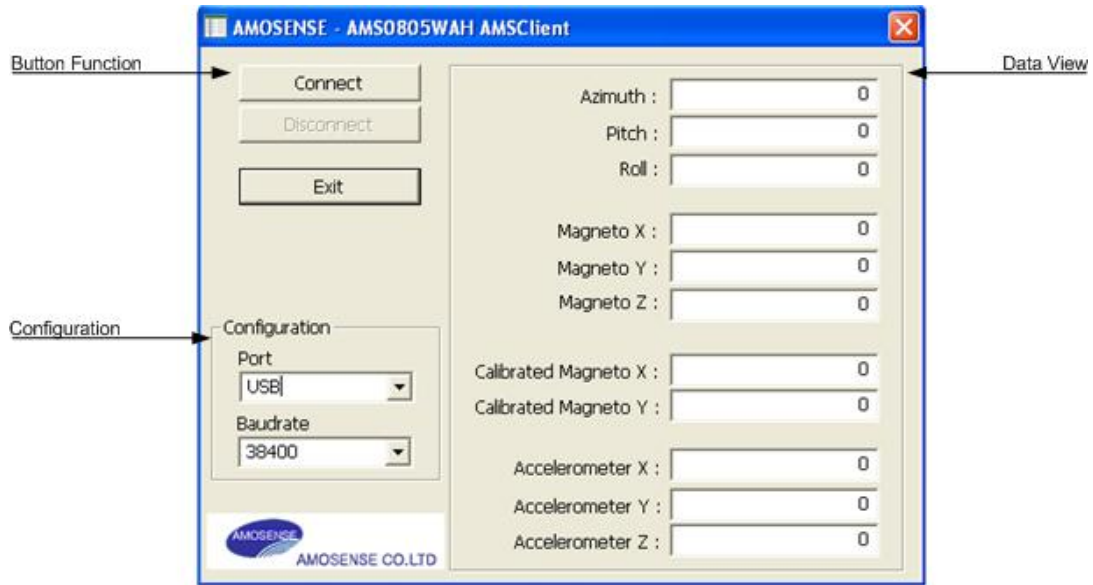


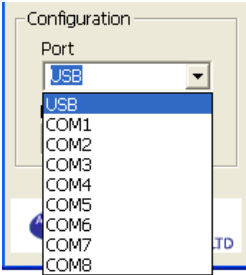
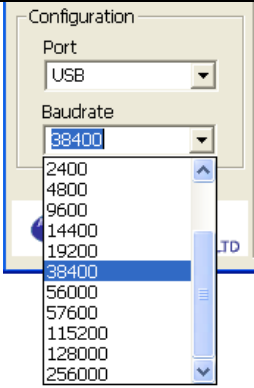
Figure 10: AMSClient Main Window

- Button Function

Name	Description
Connect	Connect AMS0805-WAH
Disconnect	Disconnect AMS0805-WAH
Exit	Terminate Program

Table 6: Description of the button function in AMSClient

- Configuration

Name	Port	Baudrate
<b>Description</b>	Specify a serial communication port type (USB or UART)	Specify a Braudrate setting.
<b>Screen shot</b>		

**Table 7: Description of the configuration in AMSClient**

- Data View : Display the data from AMS0805-WAH

## 4 AMSUART Utility Program

### 4.1 Overview

AMSUART Utility Program is a utility program for viewing raw data from the AMS0805-WAH.

### 4.2 User Interface

#### 4.2.1 Main Window

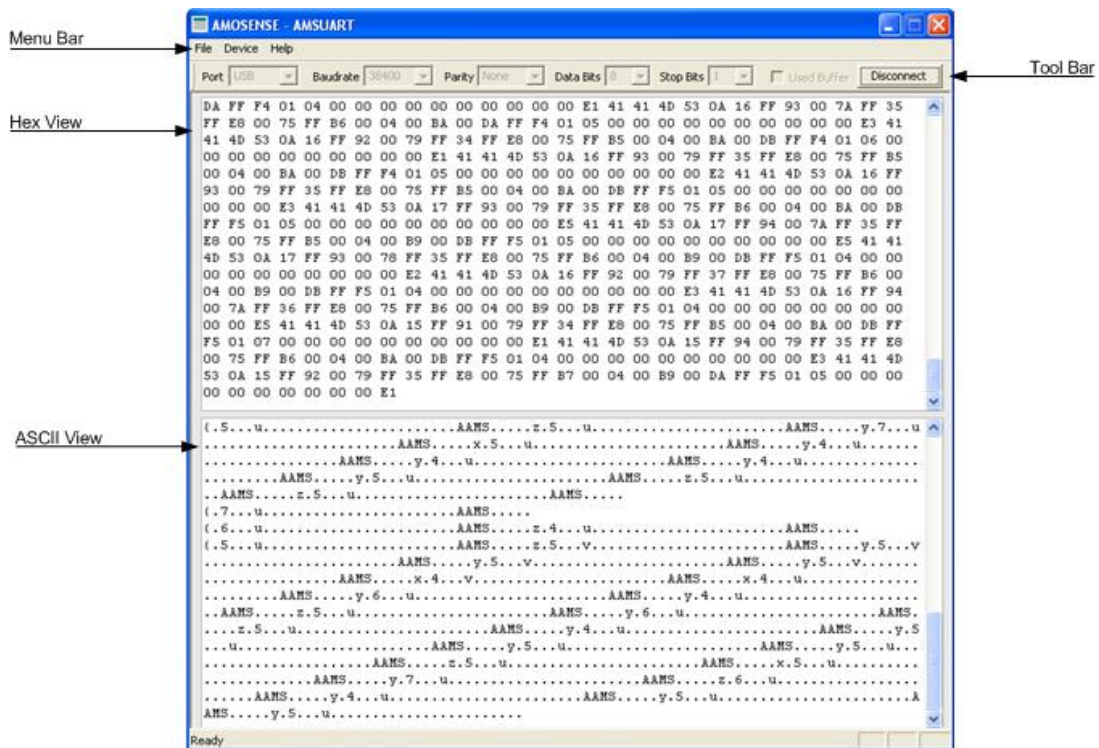


Figure 11: AMSUART Main Window

Name	Description
Hex View	Display Raw Data in Hex Format <ul style="list-style-type: none"> <li>The order of the Data: refer to the Appendix</li> </ul>
ASCII View	Display Raw Data in ASCII Format

Table 8: Description of the view in AMSUART

## 4.3 Menu Bar Items

### 4.3.1 File Menu

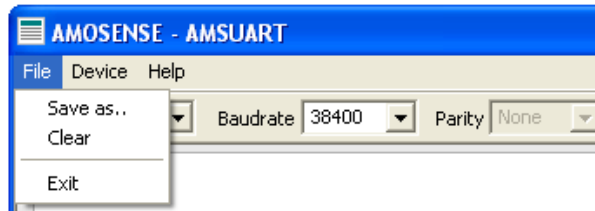


Figure 12: File Menu

- Save as : Save the current data as a CSV file type when using the used buffer
- Clear : Clear the current data. Delete all the data saved in buffer when using the used buffer
- Exit : Terminate Program

### 4.3.2 Device Menu

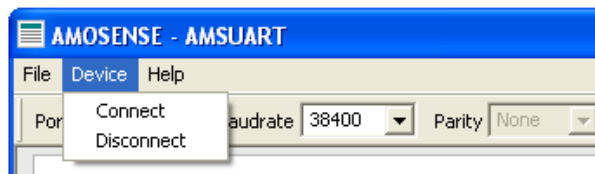


Figure 13: Device Menu

- Connect : Connect AMS0805-WAH
- Disconnect : Disconnect AMS0805-WAH

## 4.4 Tool Bar Items

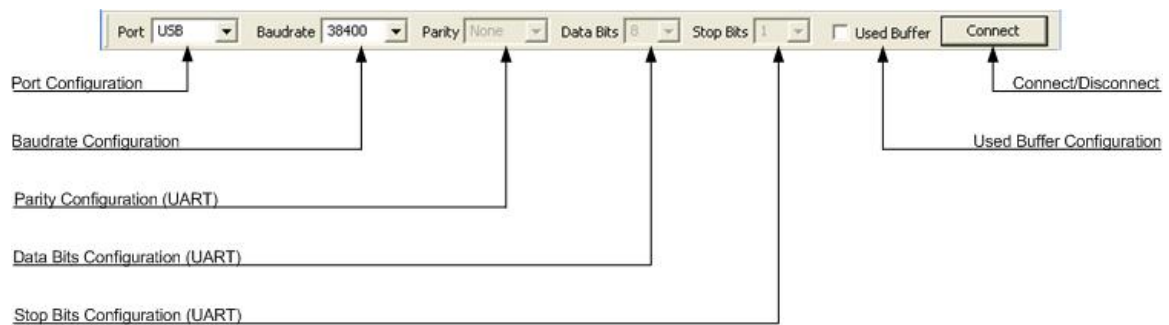


Figure 14: Tool Bar

- Port Configuration : USB/UART Port configuration
- Baudrate Configuration : Baudrate configuration (Default : 38400)
- Parity Configuration : When using a UART port, set Parity bits (Default : None)
- Data Bits Configuration : When using a UART port, set Data Bits (Default : 8)
- Stop Bits Configuration : When using a UART port, set Stop Bits (Default : 1)
- Used Buffer Configuration : You can specify to use used buffer
- Connect/Disconnect : Connect/Disconnect AMS0805-WAH

## 5 Troubleshooting

- When you see a warning message saying “**Failed to connect device**”  
Currently the AMS0805-WAH Evaluation board and PC are not connected by the USB cable. Please check the connection status again.
- When you see a warning message saying “**This application has to start because FTD2XX.dll was not found**”  
A USB driver is either not installed or improperly installed. Install a USB driver. See the AMS0805-WAH install guide for instructions.

## Appendix

### Data Format

A	M	S	Az	Mx	My	Mz	Htx	Hty	Ax	Ay	Az	Pc	Ro	Re1	Re2	Re3	Re4	Re5	Re6	Ck
---	---	---	----	----	----	----	-----	-----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	----

Index	Name	Byte	Description
1	A	1	Header 'A' (0x41)
2	M	1	Header 'M' (0x4D)
3	S	1	Header 'S' (0x53)
4	Az	2	Azimuth
5	Mx	2	Magneto X
6	My	2	Magneto Y
7	Mz	2	Magneto Z
8	Htx	2	Calibrated Magneto X
9	Hty	2	Calibrated Magneto Y
10	Ax	2	Accelerometer X
11	Ay	2	Accelerometer Y
12	Az	2	Accelerometer Z
13	Pc	2	Pitch
14	Ro	2	Roll
15	Re1	2	Reserved 1
16	Re2	2	Reserved 2
17	Re3	2	Reserved 3
18	Re4	2	Reserved 4
19	Re5	2	Reserved 5
20	Re6	2	Reserved 6
21	Ck	1	Check sum