

- The way taxi meter exchange data with external equipment adopts async. Serial communication, it uses HEX coding, ASCII characters and BIG5 characters
- Taxi meter only one way transmit data to external equipment through the key operation of the taxi meter
- Uses the RS-232 signal level to transmit data, the setting is as: Baud Rate= 115,200 bps , Stop bit= 1 , Data bits=8 , Parity Bit= N
- When Char[] is not full, fill it by null

1.2 Communication protocol

- Transmit the control command set

Abbreviati	HEX Coding	Function
STX	02h	Start of the characters
ETX	03h	Stop of the characters
DLE	10h	Transmission end

- Taxi meter output command format

STX (02h)	Command	Len	Data	ETX (03h)	DLE
1 byte	1 byte	4 byte	n byte	1 byte	1 byte

1.3 Taxi meter output data format

- Data format

UInt16 means unsigned integer ranges from 0 to 65,535 , 2 byte ;

UInt32 means unsigned integer ranges from 0 to 4,294,967,295 , 4 byte ;

Char means character , 1 byte ; English expressed as ASCII, Chinese expressed as BIG5

Float means the floating value , 4 byte

Data Output Command: C1h				
Description: after pressing "VACANCY" button, output the last occupation record every second				
Address	Attribute	Format	Unit	Description
00..03	Date/Time	UInt32		Unix-time
04..11	Meter Serial Number	Char[8]		Serial number for tracker (if 6 digits, fill first 32..37, leave 38..39 blank)
12..15	Passenger On Board Time	UInt32		Unix-time
16..19	Passenger Exit Time	UInt32		Unix-time
20..23	Passenger Travel Distance	UInt32	METER	
24..25	Passenger Travel Time	UInt16	SECOND	The time difference between passenger exit time and passenger on board time
26..27	Passenger Wait Time	UInt16	SECOND	Passenger Wait Time for Receipt Printout
28..29	Total Fare (16bit)	UInt16	Baht	Total fare for Receipt Printout
30..31	Car Speed	UInt16	KM/HR	Instant car speed
32..35	Passenger On Board Longitude (East Longitude)	Float		NC
36..39	Passenger On Board Latitude (North Latitude)	Float		NC
40..43	Passenger Exit Longitude (East Longitude)	Float		NC
44..47	Passenger Exit Latitude (North Latitude)	Float		NC
48..55	Taxi Meter Device No.	Char[8]		
56..59	Receipt No.	UInt32		
60..63	Total Fare (32bit)	UInt32	Baht	Total fare for Receipt Printout (32bit Positive Integer)
64..79	Driver Identification No.	Char[16]		
80..83	K Constant Setting in Taxi Meter	UInt32		
Data Output Command: C2h				
Description: After pressing "Occupied" button, output current status data every second				
Address	Attribute	Format	Unit	Description
00..03	Date/Time	UInt32		Unix-time
04..11	Meter Serial Number	Char[8]		Serial number for tracker (if 6 digits, fill first 32..37, leave 38..39 blank)
12..13	Car Speed	UInt16	KM/HR	Instant car speed
14..19	TBD			Not defined yet
20..23	Current Passenger Travel Distance	UInt32	METER	
24..25	Current Passenger Travel Time	UInt16	SECOND	
26..27	Current Passenger Wait Time	UInt16	SECOND	
28..29	Current Total Fare (16bit)	UInt16	Baht	
Data Output Command: B4h				
Description: After pressing "PRINT" button, output the record data of this trip (Output the record data of this trip while pressing "PRINT" button once)				
Address	Attribute	Format	Unit	Description
00..03	Date/Time	UInt32		Unix-time
04..11	Meter Serial Number	Char[8]		Serial number for tracker (if 6 digits, fill first 32..37, leave 38..39 blank)
12..15	Passenger On Board Time	UInt32		Unix-time
16..19	Passenger Exit Time	UInt32		Unix-time
20..23	Passenger Travel Distance	UInt32	METER	
24..25	Passenger Travel Time	UInt16	SECOND	The time difference between passenger exit time and passenger on board time
26..27	Passenger Wait Time	UInt16	SECOND	Passenger Wait Time for Receipt Printout
28..29	Total Fare (16bit)	UInt16	Baht	Total fare for Receipt Printout (Taiwan regulation)
30..31	Car Speed	UInt16	KM/HR	Instant car speed
32..35	Passenger On Board Longitude (East Longitude)	Float		NC
36..39	Passenger On Board Latitude (North Latitude)	Float		NC
40..43	Passenger Exit Longitude (East Longitude)	Float		NC
44..47	Passenger Exit Latitude (North Latitude)	Float		NC
48..55	Taxi Meter Device No.	Char[8]		
56..59	Receipt No.	UInt32		
60..63	Total Fare (32bit)	UInt32	Baht	Total fare for Receipt Printout (32bit Positive Integer)
64..79	Driver Identification No.	Char[16]		
80..83	K Constant Setting in Taxi Meter	UInt32		