

FBs-CMECAT

User Manual

EtherCAT Master Communication Module

Version 1.3

PLC1.ir

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Version	Date	Author	Description
V1.0	2018/03/19	Leaigo Chan	Draft
V1.1	2018/03/21	Leaigo Chan	More explanation on
			module
V1.2	2018/05/28	Leaigo Chan	Correct explanation on
			module
V1.3	2018/10/12	Leaigo Chan	Add synchronization mode
			to CMECAT specification

1. Overview

The CMECAT module is an EtherCAT master communication module for FBs-series PLC and can be mounted on the left side extension of the CPU module. Any FBs PLC can effectively control or exchange data with slave devices on the EtherCAT network with it.

EtherCAT is an Ethernet-based fieldbus system with advantage of short cycle times, low jitter for accurate synchronization and low hardware costs. EtherCAT is suitable for both hard and soft real-time computing requirements in automation technology.

The CMECAT module supports the control of the 9-axis (slave device) and supports 4 RPDOs and 4 TPDOs as data exchanges for each axis. PLC register R1000~R3047 are reserved for PDO use. The configuration tool, CMECAT Configurator, automatically allocates PLC registers to PDOs planned by the user. Users can find the mapping information through the view mapping page to facilitate the development of the PLC control program. A variety of ways to configure EtherCAT network allows users to be more flexible in testing and deployment. The SDO task function relieves the programming burden of using SDO operations in ladder programs.

2. Specification

item

	Characteristics
ce with	IEC 61158 Type 12
erCAT slaves	Delta ASDA-A2 Series
specifications	CoE (CiA 402 profile)

Table 1	CMECAT	Specification
TUDIC 1	CIVILCAI	Specification

Compliance with	IEC 61158 Type 12
Compatible EtherCAT slaves	Delta ASDA-A2 Series
EtherCAT master specifications	CoE (CiA 402 profile)
Physical layer	100BASE-TX
Baud	100 Mbps
Working mode	Full duplex
Synchronization mode	Free run (not support SM sync / DC sync)
Supported topology	Line
Max. slave device count	9
Configurable PDO per slave device	4 RPDO, 4 TPDO
Configurable objects per PDO	4 objects
Object size	8, 16 or 32 bits
Configuration mode	Offline/Online
Communication wire	CAT. 5 twisted pair or above
Voltage/current	5V, 150mA
Working temperature	0~60 °C

Storage temperature	-20∼80 °C

3. Installation and Wiring

The CMECAT communication module should be installed on the left side extension of the FBs PLC:



Figure 1 CMECAT top view

The CMECAT module uses a standard Ethernet cable. Network is setup like this:



Figure 2 CMECAT network connection topology

4. PLC Application Interface

Communication between PLC and CMECAT is achieved by using the registers of PLC. These registers for communication are divided into the following areas:

4.1 Communication interface area

R3500~R3699 are reserved for communication between CMECAT and the CMECAT Configurator software. Do not use the registers in this area in PLC programs.

4.2 SDO task data area

The range is 64 registers from D3830 to D3893. SDO tasks planned by the CMECAT Configurator are mapped to the corresponding read and write registers from this area, so users can easily perform SDO operations by reading and writing to the corresponding registers.

4.3 Process data area

A total of 2048 registers ranging from R1000 to R3047 are assigned automatically by the CMECAT Configurator software according to the actual PDO mapping. PDOs are used to exchange data with other nodes of the network through this register area. Registers that are not used for PDO in this area can be used for other purpose.

Item	Register
	R1000
Process data in (TPDO)	~
	R2023
	R2024
Process data out (RPDO)	~
	R3047

Table 2 Process data area

4.4 Module status area

Table 3 Module status area

Register	Function		
	Process data register count. This value is automatically set		
R17	according to the configuration and is not recommended		
	for modification.		
	EtherCAT network status		
D3800~D3813	52200	EtherCAT TX count (higher	
	D3800	word)	

	20001	EtherCAT TX count (lower	
	D3801	word)	
		EtherCAT RX count (higher	
	D3802	word)	
	D 2002	EtherCAT RX count (lower	
	D3803	word)	
		EtherCAT ERR count (higher	
	D3804	word)	
	D2005	EtherCAT ERR count (lower	
	D3805	word)	
	D3806	Cycle time	
	D3807	Slave count	
	02808	Higher byte: master status	
	D3808	Lower byte: slave 1 status	
	D2000	Higher byte: slave 2 status	
	D3809	Lower byte: slave 3 status	
	D3810	Higher byte: slave 4 status	
		Lower byte: slave 5 status	
	D3811	Higher byte: slave 6 status	
		Lower byte: slave 7 status	
	D3812	Higher byte: slave 8 status	
		Lower byte: slave 9 status	
	D3813	Link status	
	SDO task status		
D3806~D3007	BITO ~ 31 represent status of the 32 SDO tasks		
16050 05050	0: OK		
	1: Error		

4.5 PLC block ladder reserved registers

Register	Description
D3000~D3007	Internal use
D3100~D3107	Internal use
M1000~M1002	Internal use
M1006~M1007	Internal use
T200~T201	Internal use

Table 4	PIC block ladder reserved registers
Table 4	PLC DIOCK IAUGEI TESEI VEG TEgisters

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M1003	Internal use
M1004	Initialize from slave eeprom,
M1004	then start network
M100F	Initialize from flash memory,
M1005	then start network

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5. LED Indicators

RUN LED (green) and ERR LED (red) operates as follow:

Indicator State	Operation State
double flash	INIT
single flash	PRE-OPERATIONAL
blinking	SAFE-OPERATIONAL
flickering	OPERATIONAL

Table 5 RUN led modes

Indicator State	Error State
off	No error
single flash	Error packet count: 1~256
on	Error packet count: > 256
double flash	ESI file configuration error
triple flash	Flash memory configuration error
4 flashes	Other error





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6. CMECAT Configurator Software

This software has the following features:

- The establishment and modification of CMECAT module configuration. The configuration can be saved as a file for ease of copy.
- The SDO task service which reads or writes control objects in a single slave device by simply accessing PLC registers makes performing SDO operations a breeze.
- Firmware update of CMECAT through PLC serial port.

etti C	MECAT Configurator
	Module Configuration
	Firmware Update
	Comm. Port Setup
	About
	Exit

Figure 4 CMECAT Configurator main page

Table 7 Main page description

Item	Description
Module Configuration	EtherCAT master configuration
Firmware Update	Firmware update
Comm. Port Setup	PC serial port setting
About	Software information
Exit	End the application

6.1 PLC connection

The software must be connected to the PLC through serial port to perform online operation. After the communication line is connected, press the *Comm. Port Setup* button to setup the PC serial port. The operation screen is as shown below.

Comm. Setup		×
Baud Rate:	115200 🗸	
Com Port:	COM8	•
🗸 ок	Cancel Test	
	a	

Figure 5 Communication port setup

After the connection is set successfully, press *Test* to confirm that the settings are correct, as shown in the following figure.

Information	×	
() T	est OK !	
	確定]

Figure 6 Serial port test OK

6.2 Configuration setup

Click on *Module Configuration* automatically obtains CMECAT module status. If the module has been initialized, it will jump to the master page directly; if the module has not been initialized, the following window will pop up. There are two options here:

- 1. Initialize CMECAT module
- 2. Fatek configuration file offline viewer



Figure 7 Select initial action

6.2.1 Module initialization

If users choose to initialize the CMECAT module, here are four ways to choose from, as shown below.

📸 Choose Init Method 🛛 🔀
Please decide how to initialize CMECAT:
Initialize From Slave EEPROM
Initialize From ESI File
🔘 Initialize From Flash Memory
Initialize From Fatek Cfg File
Select

Figure 8 Select initialization method

6.2.1.1 Initialize from slave EEPROM

The slave device's basic set values are stored in the EEPROM, and the CMECAT module can directly query and retrieve the set values, thereby initializing the CMECAT module.

6.2.1.2 Initialize from ESI file

The ESI (EtherCAT Slave Information) file is an official definition file defined by the ETG (EtherCAT Technology Group). It can be loaded into the CMECAT Configurator to initialize CMECAT module.

6.2.1.3 Initialize from flash memory

CMECAT can save the current configuration to the internal flash memory. In the future, the module can directly access the settings and initialize itself.

6.2.1.4 Initialize from Fatek configuration file

The purpose of Fatek configuration file is similar to the idea of an ESI file but for a Fatek EtherCAT master module. The information of the CMECAT service such as SDO task is also included. Users can use the CMECAT Configurator to load the content and write it into CMECAT.



6.2.2 EtherCAT master page

After the CMECAT module initialization is completed, the master page is as follows.

CMECAT Configurator							×
. • • • • • • • • • • • • • • • • • • •					•		G
Master Status	Field	bus Status					
State : 4	Тх	Count : 1546	3	Sla	ve Cour	nt: 4	
Error : None	Ra	Count: 1546	3	Cy	de Time	: 0	
COM port : OK	En	r Count: 0					5
Slave List							
Nmae	Config Addr	State	Link	Topology	SM#	FMMU#	
slave	0x1001	SAFE-OP	ОК	LINE	4	2	^
slave	0x1002	SAFE-OP	OK	LINE	4	2	
slave	0x1003	SAFE-OP	OK	LINE	4	2	
slave	0x1004	SAFE-OP	OK	END	4	2	
	1. 1505	a I II			_	00110	115000
Ready C:\Users\Baron\De	sktop\ESItes	t\asda_all_mo	ode.ect	g		COM8	115200

Figure 9 EtherCAT master page

The description of each icon is as follows.

Table 8 Master page description

lcon	Description
	Check bus status
\$	View and edit process data
—	View mapping between process data and PLC
	registers
	View and edit SDO task data
	Start EtherCAT network
	Stop EtherCAT network
t	Save current configuration to internal flash
	Save current configuration to file
C	Reset and initialize module

6.2.2.1 EtherCAT bus status

Click to display the current status of the master station, bus status and list of slave devices, as shown below.

CMECAT Config	urator				84 ·	<u>+</u>		ال
Master Statu	JS	Fieldb	us Status					
State :	4	Tx (Count: 1546	3	Sla	ve Cour	nt: 4	
Error :	None	Rx	Count: 1546	3	Cy	cle Time	: 0	
COM port	: ОК	Err	Count: 0					5
- Slave List							6	
								1
Nmae	Cont	fig Addr	State	Link	Topology	SM#	FMMU#	
slave	Ux	(1001	SAFE-OP	OK	LINE	4	2	
slave	0x	1002	SAFE-OP	OK	LINE	4	2	
slave	0x	1004	SAFE-OP	OK	END	4	2	
eady C	:\Users\Baron\Deskto	p\ESItest	asda all mo	ode.ect	a		COM8	115200

Figure 10 EtherCAT bus status

Table 9	EtherCAT	bus status	description
---------	----------	------------	-------------

Group	ltem	Description			
	Status	Master status			
		8 : operational			
		4 : safe-operational			
Master Status		2 : pre-operational			
	Error	Master error, show None if no error			
	COM port	COM port status, show OK if no error			
	Tx Count	Tx packet count			
Fieldbus	Rx Count	Rx packet count			
Status	Err Count	Err packet count			
refresh)	Slave Ciunt	Slave device count on bus			
	Cycle Time	Cycle time			
Slave List	Name	Slave name			

Config Addr	Configured address of slave device
State	Slave device state
Link	Link state
Topology	Link topology
	LINE: intermediate device
	END: end device
SM #	SyncManager count in slave device
FMMU #	FMMU count in slave device

The information on this page is for review only and cannot be edited.

6.2.2.2 Process data mapping



Click on 🔯 to display the current status of each station's

Process Data mapping, users can freely modify the mapping content, as shown below.

CMECAT Conf	igurator					×
Sla Op	ve Name : eration Mode :	slave Profile Po	sition	Pos Con	Addr: 1 fig Addr: 0x1001	
PDO	Assignment					
s	ync Manager		SM-PDO Mapp	ing		
	SM Size	Туре	OD Index	Size	Name	
	SM2 96	Out	0x1601	96	RxPDO 1	
	SM3 96	In				
PDO	Content					
P	DO-Object Map	ping				
	OD Index (DD SubIndex	Size		Name	
	0x6040	0x 0	16	(ctrl word	
	0x607A	0x 0	32	1	target pp	
	0x6071	0 X 0	32	1	target pv	
	0,0071	0.0	10		unger u	
Ready	C:\Users\Bar	on\Desktop\	ESItest\asda	_all_mode	.ecfg	COM8 115200

Figure 11 Process data mapping

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Group	Item	Description				
	Slave Name	Slave device name				
	Operation	Drop-down menu to set the current				
(press and	Mode	operation mode (pp, pv, tq, etc)				
to switch slave	Pos Addr	Position address of slave device				
devices)	Config Addr	Configured address of slave device				
	Sync	The current SyncManager configuration				
PDO Assignment	Manager	status of the slave station, read only.				
(Directly click on	SM-PDO	The configuration status of all PDOs				
the item to view)	Mapping	under a SyncManager, can be modified,				
		press 🖬 to make effective.				
PDO Content	PDO-Object	The configuration status of all objects				
(Directly click on	Mapping	under a PDO, can be modified, press				
the item to view)		to make effective.				

Table 10 Process data page description

Right click on any item or blank space to open the editing options, there are five ways: add, delete, modify, move up, move down.

6.2.2.1 Edit SM-PDO Mapping

To add a PDO under the SyncManager, right-click on the blank to open the menu. Only the *Add* option allowed.



Figure 12 Add PDO

After selecting *Add*, the editing window will pop up. After the editing is completed, click *OK*. Remember to click again to have the new value take effect.

PDO X
Output
Enter 16-bit hex number OK Cancel

Figure 13 Input new PDO

To delete, modify, move up, and move down PDO, first select the item and then right click to open the menu.

CMECAT	Config	jurato	or			-	-	×
	Ø							
	Slave Oper	e Nam ation I	e : Mode :	slave Vot set		Po Co	os Addr: 1 onfig Addr: 0x1001	
	PDO A	ssignn	nent					
	Syr	nc Mar	nager		SM-PDO Map	ping		
		SM	Size	Туре	OD Index	Size	Name	
		SM2	48	Out	0x1A01	48	TxPDO 1	Add
	U	SM3	48					Delete
								Modify
								Move Up
	L							Move Down
	PDO C	onten	t					
	PD	0-Obj	ect Map	ping				
	0	D Ind	ex	OD SubIndex	Size		Name	
	0	x6041		0x 0	16		stat word	
	0:	x6064	ł	0x 0	32		actual pp	
Ready								COM8 115200

Figure 14 Delete, modify and move PDO

If select *Modify*, an edit window will pop up. Each field displays the current setting value. After the editing is completed, click OK. Remember to click **again to make** the new value take effect.

M PDO X
Input
1A01
Enter 16-bit hex number
OK Cancel

Figure 15 Input PDO content

6.2.2.2.2 Edit PDO-Object Mapping

To add an object under the PDO, right-click on the blank to open the menu. Only the *Add* option allowed.

CMECAT	Configur	ator						×
	Ø	Ě						
	Slave N Operati	ame : on Mode	slave • Not set		F	Pos Addr : Config Add	1 dr: 0x1001	
	PDO Assi	gnment						
	Sync I	Manager		SM-PDO	Mapping			
	SM	Size	Туре	OD Ind	ex Size		Name	
	SM	2 48	Out	0x1A01	1 48		TxPDO 1	
	SM	3 48	In					
	PDO Con	tent						
	PDO COI	Deinet N						
	FDUN	JUJECC II						
	OD I	ndex	OD SubIndex	Size		Nam	e	
	0x6)41)64	0x 0 0x 0	32		actual	DD	
							Add	
							Delete	
							Modify	
							Move Up	2
							Move Down	
Ready								COM8 115200

Figure 16 Add object



After selecting *Add*, the editing window will pop up. After the editing is completed, click *OK*. Remember to click again to have the new value take effect.

obj 🗙	J
Index (16-bit hex number)	
Sub Index (decimal)	
Size (decimal)	
OK Cancel	

Figure 17 Input new object

To delete, modify, move up, and move down object, first select the item and then right click to open the menu.

CMECAT C	onfigurator					<u> </u>	٢
	ð						
	Slave Name : Operation Mode	slave • Not set		Pro Co	os Addr : 1 onfig Addr : 0x	1001	
P	DO Assignment						
	Sync Manager		SM-PDO Map	ping			
	SM Size	Туре	OD Index	Size	Nam	e	
	SM2 48	Out	0x1A01	48	TxPDC	01	
	SM3 48	In					
P	DO Content						
	PDO-Object M	apping					
	OD Index	OD SubIndex	Size		Name		
	0x6041	0x 0	16		stat word		
	0x6064	0x 0	32		actual pp	Add	
						Delete	
						Modify	
						Move Up	
						Move Down	
Ready						COM8 115200	æ

Figure 18 Delete, modify and move object

If select *Modify*, an edit window will pop up. Each field displays the current setting value. After the editing is completed, click OK. Remember to click **again to make** the new value take effect.

📷 OBJ 🛛 🗶	J
Index (16-bit hex number) 6064	
Sub Index (decimal) 0	
Size (decimal) 32	
OK Cancel	

Figure 19 Input object content

6.2.2.3 PLC register mapping

Click to display the mapping of the control objects to the PLC registers. This is generated by CMECAT automatically. Users can write ladder programs according to its contents. Reading and writing PLC registers is equivalent to accessing the control objects of the slaves. The information on this page is read-only.

ctri	CMECAT Conf	igurator						x
	?						<mark>-}</mark> [()
#	Name	Object Name	OD Index	OD Subidx	Process Data	PLC Reg	Reg Cnt	-
1	slave	ctrl word	0x6040	0x 0	Out	R2024	1	
1	slave	target pp	0x607A	0x 0	Out	R2025	2	
1	slave	target pv	0x60FF	0x 0	Out	R2027	2	
1	slave	target tq	0x6071	0x 0	Out	R2029	1	
2	slave	ctrl word	0x6040	0x 0	Out	R2030	1	
2	slave	target pp	0x607A	0x 0	Out	R2031	2	
2	slave	target pv	0x60FF	0x 0	Out	R2033	2	
2	slave	target tq	0x6071	0x 0	Out	R2035	1	
3	slave	ctrl word	0x6040	0x 0	Out	R2036	1	
3	slave	target pp	0x607A	0x 0	Out	R2037	2	
3	slave	target pv	0x60FF	0x 0	Out	R2039	2	=
3	slave	target tq	0x6071	0x 0	Out	R2041	1	-
4	slave	ctrl word	0x6040	0x 0	Out	R2042	1	
4	slave	target pp	0x607A	0x 0	Out	R2043	2	
4	slave	target pv	0x60FF	0x 0	Out	R2045	2	
4	slave	target tq	0x6071	0x 0	Out	R2047	1	
1	slave	stat word	0x6041	0x 0	In	R 1000	1	
1	slave	actual pp	0x6064	0x 0	In	R1001	2	
1	slave	actual pv	0x606C	0x 0	In	R 1003	2	
1	slave	actual tq	0x6077	0x 0	In	R 1005	1	
2	slave	stat word	0x6041	0x 0	In	R 1006	1	
2	slave	actual pp	0x6064	0x 0	In	R 1007	2	
2	slave	actual pv	0x606C	0x 0	In	R 1009	2	
2	slave	actual tq	0x6077	0x 0	In	R1011	1	
3	slave	stat word	0x6041	0x 0	In	R1012	1	
3	slave	actual pp	0x6064	0x 0	In	R1013	2	
3	slave	actual pv	0x606C	0x 0	In	R1015	2	
2	slave	actual to	0v6077	02.0	In	D 1017	1	-
Rea	idy	C:\Users\Baron\Desktop	>\ESItest\as	da_all_mode	ectg	co	INI8 115200	d

Figure 20 PLC register map

Table 11PLC register map description

Group	Item	Description		
	#	Slave number		
	Name	Slave device name		
	Object Name	Object name		
	OD Index	Object's index		
PLC Register Mapping	OD Subidx	Object's sub index		
	Process Data	Input or output		
	PLC Reg	Corresponding PLC register		
	Reg Cnt	count of corresponding PLC		
		register		

6.2.2.4 SDO task settings

Click to display the current SDO task settings, so that SDO operations can be completed by accessing the PLC register. The CMECAT module supports 32 SDO tasks. As shown below.

CME	CAT	Configurate	or						X
-	ן						•		C
	#	Pos Addr	Index	Sub Index	Mode	PLC Reg	Status		
	0	1	0x6060	0x 0	Write 1byte	D3892	ОК		
	1	2	0x6060	0x 0	Write 1byte	D3890	OK		
	2	3	0x6060	0x 0	Write 1byte	D3888	OK		
	3	4	0x6060	0x 0	Write 1byte	D3886	OK		
	4	1	0x6061	0x 0	Read 1byte	D3830	OK		
	5	2	0x6061	0x 0	Read 1byte	D3832	OK		
	6	3	0x6061	0x 0	Read 1byte	D3834	OK		
	7	4	0x6061	0x 0	Read 1byte	D3836	OK		
	8	1	0x6081	0x 0	Read 4byte	D3838	OK		
	9	1	0x6081	0x 0	Write 4byte	D3884	OK		
	10	2	0x6081	0x 0	Read 4byte	D3840	OK		
	11	2	0x6081	0x 0	Write 4byte	D3882	OK		
	12	3	0x6081	0x 0	Read 4byte	D3842	OK		
	13	3	0x6081	0x 0	Write 4byte	D3880	OK		
	14	4	0x6081	0x 0	Read 4byte	D3844	OK		
	15	4	0x6081	0x 0	Write 4byte	D3878	OK		
Ready		C:\Use	ers\Baron\[Desktop\ESIte	st\asda_all_mo	de.ecfg		COM8 11	.5200

Figure 21 SDO task

Table 12	SDO task description
----------	----------------------

Group	ltem	Description
	#	SDO task number
	Pos Addr	Slave position address
	Index	Object's index
SDO Task	Sub Index	Object's sub index
	Mode	Input or output, data size
	PLC Reg	Corresponding PLC register
	Status	SDO task status



6.2.2.4.1 Edit SDO task data

To add a SDO task, right-click on the blank to open the menu. Only the *Add* option allowed.

CME	CAT	Configurate	or					×
]							
	#	Pos Addr	Index	Sub Index	Mode	PLC Reg	Status	
	0	1	0x6060	0x 0	Write 1byte	D3892	ОК	
	1	1	0x6061	0x 0	Read 1byte	D3830	OK	
	2	1	0x6081	0x 0	Write 4byte	D3890	OK	
	3	1	0x6081	0x 0	Read 4byte	D3832	OK	
							Add	<u> </u>
							Add	
							Delete	
							Modity	
							Move Up	
							Move Down	
Ready							COM8 1	15200

Figure 22 Add SDO task

After selecting *Add*, the editing window will pop up. After the editing is completed, click *OK*. Remember to click again to have the new value take effect.

📫 SDO 🛛 🗶
Position Address

Mode

Index (16-bit hex number)
Sub Index (8-bit hex number)
Data Size (bits)

OK Cancel

Figure 23 Input new SDO task



To delete, modify, move up, and move down PDO, first select the item and then right click to open the menu.

CME	CAT	Configurato	or						×
-]						•		\bigcirc
	#	Pos Addr	Index	Sub Index	Mode	PLC Reg	Status		
	0	1	0x6060	0x 0	Write 1byte	D3892	OK		
	1	1	0x6061	0x 0	Read 1byte	D3830	OK		
	3	1	0x6081	0x 0	Read 4byte	D3890	Ad Del Ma Ma	d lete odify ive Up ive Down	
Ready								COM8 11	.5200

Figure 24 Delete, modify and move SDO task

If select *Modify*, an edit window will pop up. Each field displays the current setting value. After the editing is completed, click OK. Remember to click **again to make** the new value take effect.

SDO X
Position Address
1
Mode
Write
Index (16-bit hex number)
6081
Sub Index (8-bit hex number)
00
Data Size (bits)
32 🔻
OK Cancel

Figure 25 Input SDO task content

For more information on how to manipulate SDO operations in a ladder program, please refer to the operation manual.

6.2.2.5 Start / stop EtherCAT network

Click or to switch all slave devices to operational state or pre-operational state •

6.2.2.6 Save current configurations

Users can save all the internal settings of the current CMECAT

module. There are two options: Click 🔁 to store in the flash

memory in the CMECAT, or click 📙 to save as the Fatek

configuration file.

6.2.2.7 Reset CMECAT Module

Click U to clear the internal settings of the CMECAT module.

The CMECAT Configurator software will guide the user to reinitialize the module. $\ensuremath{^\circ}$

6.3 Firmware update

Click the *Firmware Update* button to enter the firmware update operation screen. *File Name* is the firmware file to be updated, as shown in the following figure.

Firmware	update		2	3
File Name:	C:\Users\Baron\Desktop\CodeGen\CMECAT\v1_0_2\CMECAT.os			
	Start	Set up Comm		

Figure 26 Firmware update

6.3.1 Select firmware image file

Click Line to open the file selection window and press OK to display

the following screen. The firmware version information in the corresponding file will be displayed on the screen.



Figure 27 Firmware information

6.3.2 Start firmware update

Click Start to start firmware update.

6.4 End application

Click Exit to end CMECAT Configurator software.