GTEC UPS MODEL:

# AP160N – ZP120N - MATRIX

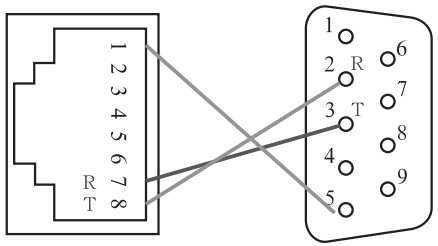
## CMC Card

## USER MANUAL

www.gtec-power.eu

2、RS232 Signal

It is necessary to prepare a communication cable for connection between CMC and the computer.
Please refer to the following for the details of the pin assignment of the communication cable.



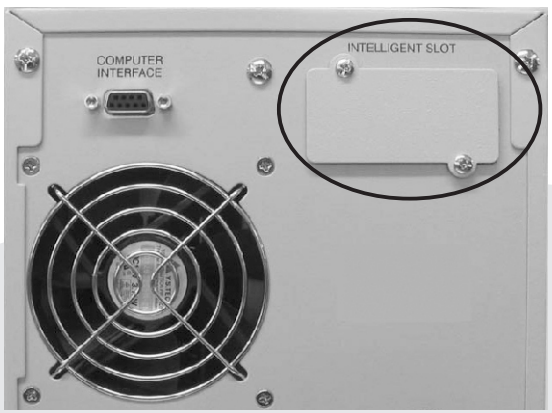

RJ45 Plug　　DB-9 Connector (Female)

Attention:

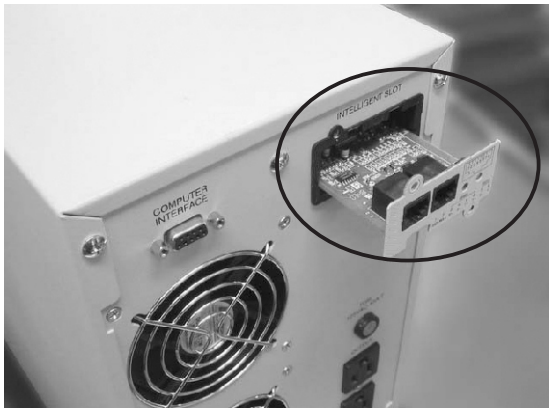
1. The RS485/RS232 converter is an optional accessory and users can purchase the converter in market locally. Note: It is recommended power source type for the RS485/RS232 converter is using by external DC adopter. It must have 4-wire and full-duplex features.
2. In case, the connector for RS485/RS232 converter is not the standard DB-9 type it requests another additional converter to connect with the COM port of computer.

## HARDWARE INSTALLATION

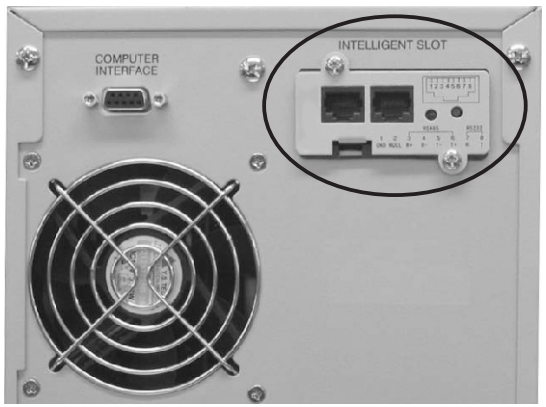
1、Open the cover of the Intelligent Slot of the UPS, shown as below:




2、Insert the CMC into the Intelligent Slot.




3、Lock the screws of the CMC bracket.




4、Connect the CMC(s) and the computer according to the “TOPOLOGY” diagram.

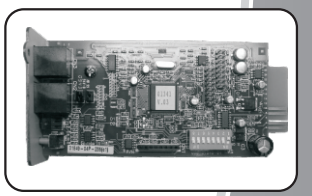
## SOFTWARE INSTALLATION

It must use a Modbus software to monitor all UPS with CMC installed.
Please reference the Modbus protocol document to communicate with the UPS. Regarding communicating configuration for Modbus software, please contact with UPS supplier for Modbus protocol documentation.
For 2-wired Modbus communication, please add two jumpers in J17 and J18, near the RJ45 connector.





# CMC card



## User Guide

CMC for online UPS
CMC for online UPS
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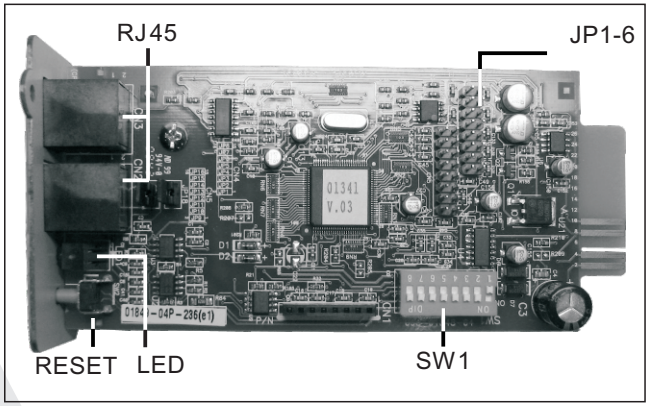
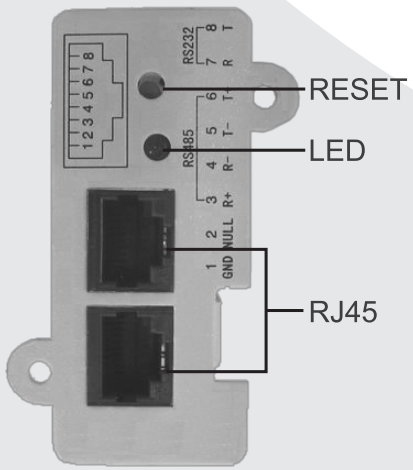
CMC (Central Monitor Card) is an optional accessory, it gives an easy and simple way to achieve remote monitoring & controlling of all the UPS at the same time.

## APPEARANCE



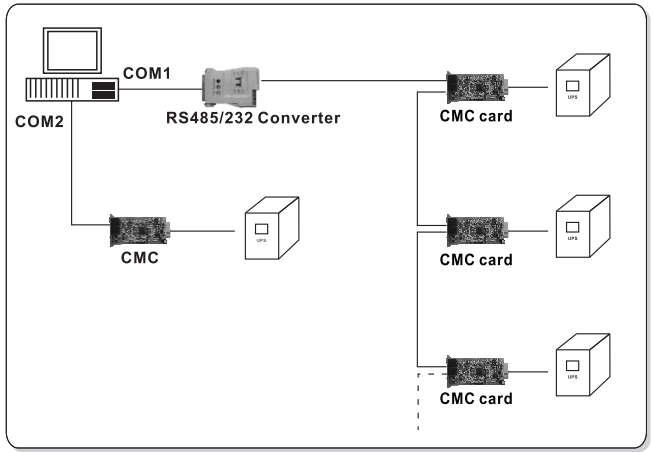

## FEATURES

- Converts the UPS RS232 signal new RS232 signal with specified address.
- Converts the UPS RS232 signal into RS485 signal (4-wire, full-duplex).
- Provides a pair of RJ45 interface.






## TOPOLOGY

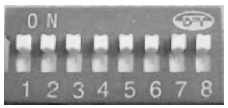



## CONFIGURATION

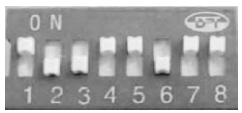
1、Address Setting（SW1）

Range: 0 ~ 255

Description: As an eight byte binary system, Pin-1 of SW1 is low byte , Pin-8 of SW1 is high byte. DIP switches set to “ON” means “0” ,and DIP switches set to “OFF” means “1” .



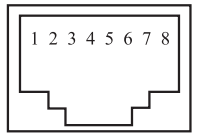

Example: If you want to set the CMC number as 38 (in decimal), its equivalent binary number is 00100110. Please refer to the SW1 setting on the right:




*Notes: The setting of CMC number can not be duplicated in the same group.*



## RJ-45 PIN ASSIGNMENT



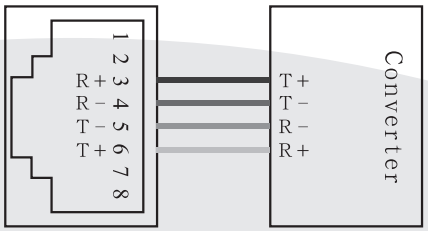

| Pin | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Define | GND | NULL | R+ | R- | T- | T+ | R | T |
| Signal | | | RS485 | | | | RS232 | |

| Comm. Method | JP17 | JP18 | PIN Definition | Remark |
|---|---|---|---|---|
| 4 Wires | X | X | RJ45 To RS485 converter<br>T+ (PIN 6) ------ R+<br>T- (PIN 5) ------- R-<br>R+(PIN 3) ------- T+<br>R-(PIN4) --------- T- | |
| 2 Wires | J | J | RJ45 To RS485 converter<br>D+(PIN 6 or PIN 3) ----- D-<br>D- (PIN 5 or PIN 4) ----- D+ | This method is adding jumper pin on JP17 & JP18 to make T+/R+ as D+ and T-/R- as D-. |

Note:
X means no jumper on the connector
J means a jumper on the connector

## COMMUNICATION MODE

1、RS485 Signal

It is commonly known that most of computers can only receive RS232 signal. Therefore, it is needed to have a RS485↔RS232 CONVERTER to transform RS485 signal into RS232 signal for the computer.

Following diagram shows the wirings between RJ45 port of CMC and the RS485↔RS232 converter.