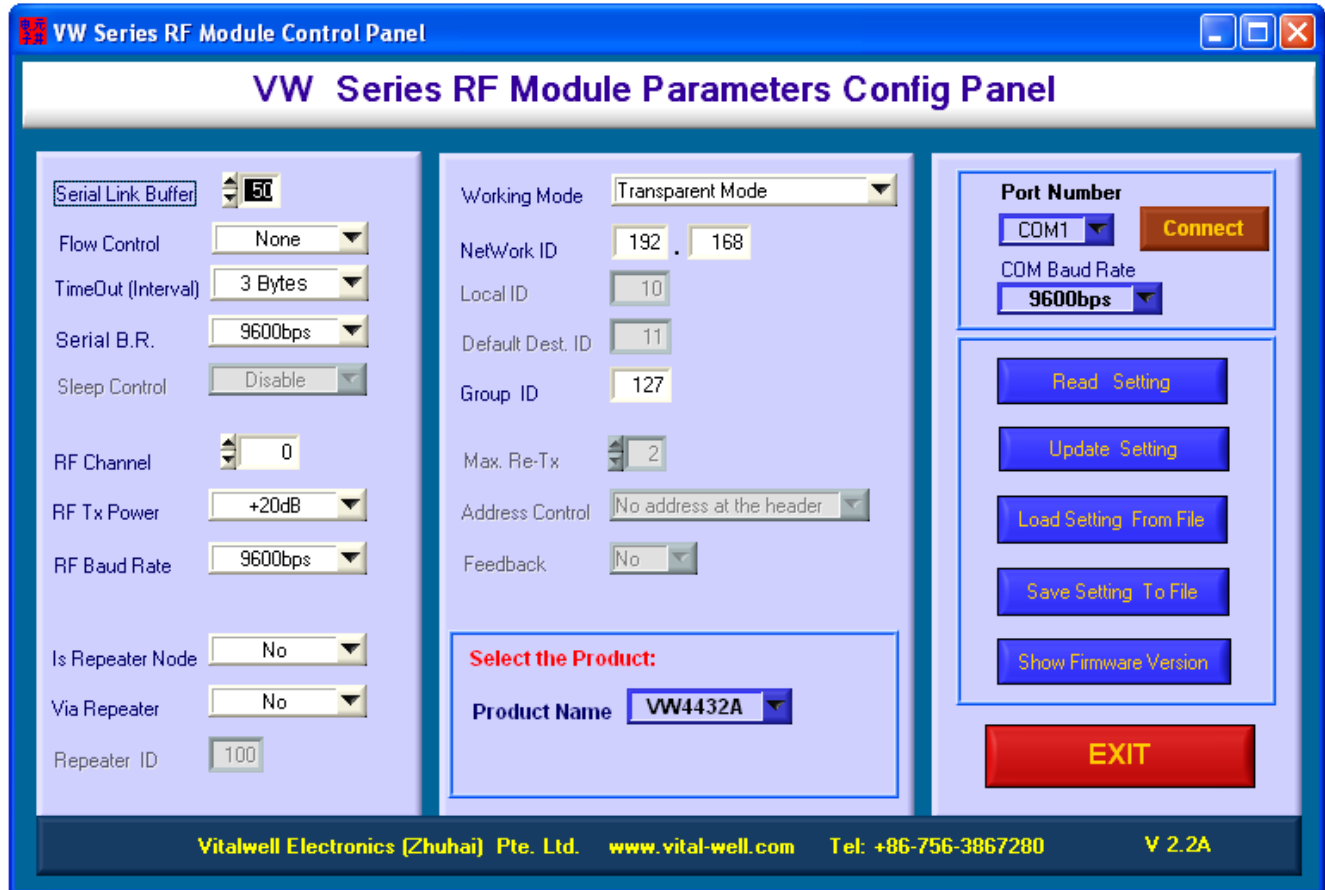# VW Series RF Module Parameters Config Panel

USER　MANUAL (V2.2)

1) Interface

2) Download and install

Download the software：
http://www.vital-well.com/webfile/software/VWConfig_en.zip

Size ： about 11 MB.

Installation: After download it, unzip it, click "setup.exe"

O/S : Windows Xp

And, USB driver (PL2303 USB <->serial driver)：

http://www.vital-well.com/webfile/software/PL-2303_Driver_Installer.zip

3) Items List

a) Serial Link Buffer:

Set the maximum frames size that will be given to the Modem. When this size is reached, the data in the FIFO will be immediately sent out via RF link (If flow control is enabled, a Xoff code will be sent out from the modem).

Value Range: 1~50, Default: 50

b) Flow Control

Flow control type: None or Xon/Xoff

If Radio Baud Rate <= Serial Baud Rate, by enabling Xon/Xoff, large txt file can still be continued be transferred between modules.

c) Timeout (Interval)

Set the value of the time-out on the serial link .

When the above defined serial FIFO is not full filled, after this time out (the idle time counts on bytes), the data in the FIFO will still be sent out via RF link.

d) Serial B.R.

Set the module's serial link baud rates.
Range: 1200bps ~57600bps

This new setting will be applied from the next power up.

e) Sleep Control

Sleep mode is only applied to VW1100A/2500A-232T series modem.

When enabled, the module will be controlled by I/O0 (PIN 5)
I/O0 = 0: active
I/O0 =1: Sleep Mode (power down mode)

And: I/O1 (PIN 6, output) will be used to indicate the working status:
I/O1 = 0: indicate a active status
I/O1 = 1: indicate a power down mode

When in sleep mode, the current consumption < 4 uA

f) Rf Channel
Set the RF working Channel.

g) RF Tx Power

Set the RF transmitting power.

h) Rf Baud Rate

Set the RF air baud rate.

i) Is Repeater Node

Decide the node type. When in repeater mode, it will forward any message it received (function as a router itself). It can be used to extend the linkage range.

Note: when node is repeater, the repeater's working mode must be transparent mode.

j) Via Repeater

Decide if via repeater.

k) Repeater Node ID

Set the repeater node ID if "Via Repeater" is enabled.

l) Working Mode

Set the working modes:
Transparent Mode (default), Transparent Secured Mode, Addressed Mode, Addressed Secured Mode and Linkage Range test mode.

In Linkage Range test mode, after Power on, the module itself will automatically transmit a pre-defined string once a second. When received, the LED will blink to indicate a receive status. It can be used to test the linkage range without a host.

For details of the normal working modes, please refer the modules' user manual.

m) NetWork ID

Set the network ID. To be linkable, modules must be in the same network (have the same network ID).

n) Local ID

Set the local ID (used in address modes). This ID together with the network ID forms a full device address.

o) Default Dest. ID

Set the default destination ID (used in address modes).   When no address is giving at the sending time, message will be send to this default ID.

p) Group ID

Set the group ID (used in transparent mode). Any module with the same group ID will receive the others' sending messages. (It can be used to broadcast messages)

q) Max Re-Tx

Set the number of recoveries counts in case of radio conflicts (Used for Addressed Secured /Transparent Secured Mode).

r) Address Control

When working in address modes,

 When sending, user can control the methods to define the destination address: by default or decode on the fly;

When receiving, user can select to show the sender's address or only payload.

s) Feedback

When in secured mode, the linkage result (Pass or fail) can be sent back to host when request.

t) Product Name

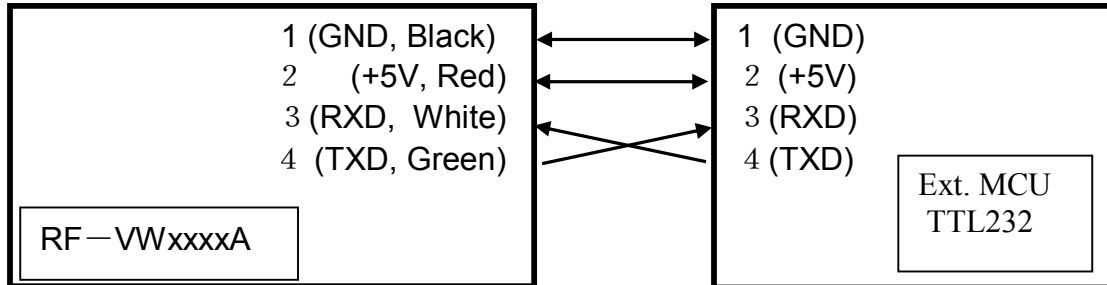Choose the product: VW1100A, VW2500A, VW4432A

Note: Please set this first according your product before set other settings.

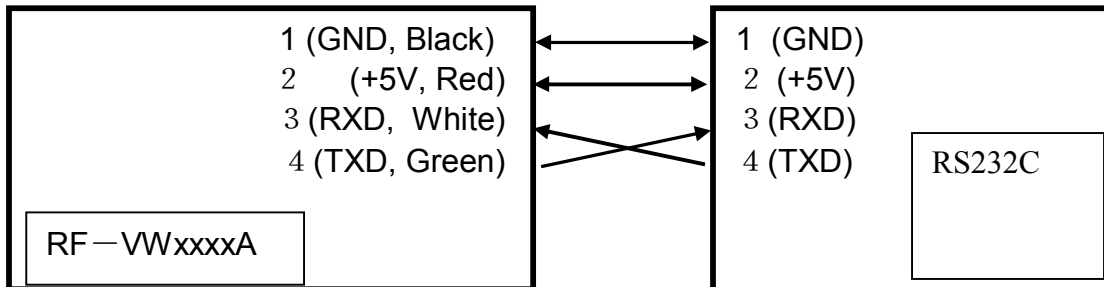## Appendix: Typical application circuit for VW Series RF modems:

Default Settings:
Serial baud rate :   9600bps, 8N1
Rf baud rate: 9600bps
Mode: Transparent Mode

1. VWxxxxA -232T Typical application circuit

```
┌─────────────────────────┐        ┌─────────────────────────┐
│  1 (GND, Black)  ◄──────►  1 (GND)                         │
│  2    (+5V, Red) ◄──────►  2 (+5V)                         │
│  3 (RXD,  White) ◄──┐ ┌──► 3 (RXD)                         │
│  4 (TXD, Green)  ◄──┘ └──► 4 (TXD)                         │
│                                    ┌──────────────┐        │
│  ┌──────────────┐                  │  Ext. MCU    │        │
│  │ RF－VWxxxxA   │                  │  TTL232      │        │
│  └──────────────┘                  └──────────────┘        │
└─────────────────────────┘        └─────────────────────────┘
```

Note: VWxxxxA -232T's interface voltage level is TTL. When connect to a PC, a external voltage converter, for example, Max232 can be used.

2. VWxx00A-232C Typical application circuit

```
┌─────────────────────────┐        ┌─────────────────────────┐
│  1 (GND, Black)  ◄──────►  1 (GND)                         │
│  2    (+5V, Red) ◄──────►  2 (+5V)                         │
│  3 (RXD,  White) ◄──┐ ┌──► 3 (RXD)                         │
│  4 (TXD, Green)  ◄──┘ └──► 4 (TXD)   ┌──────────────┐      │
│                                      │   RS232C     │      │
│  ┌──────────────┐                    │              │      │
│  │ RF－VWxxxxA   │                    └──────────────┘      │
│  └──────────────┘                                          │
└─────────────────────────┘        └─────────────────────────┘
```

3. VWxx00A-485 Typical application circuit

```
┌─────────────────────────┐        ┌─────────────────────────┐
│  1 (GND, Black)  ◄──────►  1 (GND)                         │
│  2    (+ 5V, Red)◄──────►  2 (+5V)                         │
│  3    (A,  White) ◄─────►  3 (A)                           │
│  4    (B, Green)  ◄─────►  4 (B)                           │
│                                    ┌──────────────┐        │
│  ┌──────────────┐                  │   RS485      │        │
│  │ RF－VWxxxxA   │                  │              │        │
│  └──────────────┘                  └──────────────┘        │
└─────────────────────────┘        └─────────────────────────┘
```