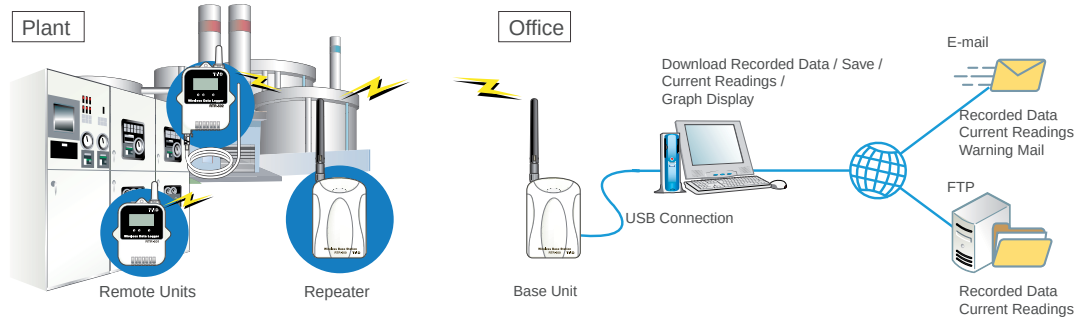


## Register as a Base Station or a Repeater

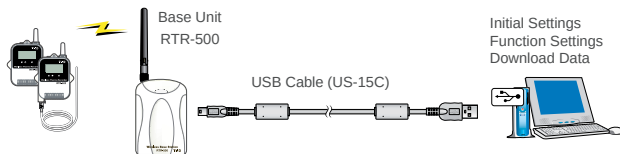


### Application Examples

- \* For recording and monitoring temperature and humidity in factories and buildings
- \* For temperature and humidity management in blood and pharmaceutical storage at hospitals
- \* For temperature management of refrigerated and frozen goods at supermarkets and convenience stores
- \* For management of illuminosity to prevent deterioration of exhibits in art museums and other exhibit forums

### As a Base Unit

The RTR-500 can be registered as a Base Unit so that it can download recorded data from Remote Units via wireless communication and then by connecting it to a PC with a USB cable, the data can be easily downloaded to your computer. Easy USB connection means this type of Base Unit is perfect for on-site use. Downloading recorded data from one Remote Unit at full logging capacity into the Base Unit takes only about 2 minutes.



### Automatically Download and Send Data

At the set interval, the RTR-500 will communicate via wireless communication with the target Remote Unit(s) and collect recorded data or current readings and send the received data via FTP or e-mail to a set location.

### Send Warning Report E-Mails

If and when a measurement exceeds an Upper or Lower Limit or if an abnormality occurs in a Remote Unit the RTR-500 will go into "Warning" mode whereby a warning report will be issued via e-mail to up to four specified e-mail addresses.

### Simultaneous Management of Multiple Remote Units

Up to 20 Groups can be registered to an RTR-500 Base Unit. Up to 32 Remote Units can be registered to each Group. With just one RTR-500 it is possible to simultaneously manage up to 640 Remote Units.

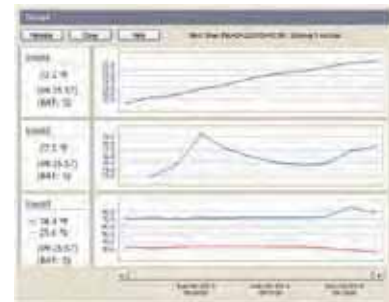
### Download Data by Manual Operation

Besides Auto-Downloading, it is also possible to download recorded data by carrying out a few simple manual operations. This enables the User to download recorded data from Remote Units whenever necessary. Compared with our previous models, the RTR-500 series provides vastly improved communication time. At a recording interval of ten minutes, you can download one day of data in only five seconds. To download one Remote Unit at full logging capacity will take about two minutes for an RTR-501/502/503 unit and about four minutes for an RTR-574.

### Monitor Current Readings on Computer Display

It is possible to monitor and view current readings for groups of Remote Units registered to a RTR-500 Base Unit.

Monitoring Graph Window



### As a Repeater

If you ever wish to expand the wireless communication range the RTR-500 can also be used as a Repeater. When using as a Repeater, it is necessary to use two AA alkaline batteries or purchase the optional AC adaptor (AD-0638 / AD-0638-C) as a power source. When the Repeater is used about five minutes a day, battery life expectancy is about six months. The wireless communication range, if unobstructed and direct, is about 150 meters (500ft).

**Note:** \* When downloading recorded data from a Remote at full logging capacity, it is necessary to add 2 minutes for every Repeater in the route. If from an RTR-501/502/503 it will take an extra 2 minutes; for RTR-574 it will take an extra 4 minutes for each Repeater.

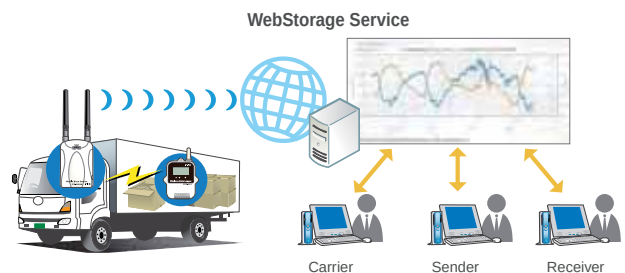
\* The package does not include batteries or AC Adaptor. Battery life varies depending upon the battery performance, the communication environment, settings and the frequency of communication.

### "T&D WebStorage Service" an online service provided by T&D Corporation

Wouldn't it great if it were possible to share recorded data via the Internet; making it possible to process and manage the data from distant places or allow a number of people in different places to view the same data simultaneously? T&D WebStorage Service makes that dream a reality!

RTR-500GSM, RTR-500 and RTR-500W are all compatible with our revolutionary WebStorage Service. By having your data sent to our WebStorage Service it can then be accessed via an Internet browser from anywhere, anytime, and by any number of people.

<http://www.webstorage-service.com/services/>



By sending measurement records for items in transit to our WebStorage Service all concerned parties can keep track of important data in an easy-to-read graph.

# Wireless Data Logging System RTR-500 Series

## Product Specifications

### Mobile Base Station RTR-500GSM

| UNIT                        |                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Compatible Devices          | Remote Units:<br>RTR-501/502/503, RTR-501L/502L/503L<br>Repeater: RTR-500                                                                                                                                                                                                                                                                 |
| Features and Functions      | 1. Auto-downloading of Recorded Data (E-mail or FTP),<br>2. Automatic Sending of Current Readings (E-mail or FTP),<br>3. Warning Monitoring (SMS, E-mail or Contacts)<br>4. SMS Remote Control<br>- Stop and Start Functions 1, 2, 3, above<br>- Request Immediate Download of Data to Set Address                                        |
| Types of Warning Monitoring | Remote Unit Measurement Warnings,<br>Remote Unit Wireless Communication Error Warnings,<br>Remote Unit Battery Level Warnings,<br>Remote Unit Sensor Abnormality Warnings,<br>Base Unit External Power Loss Warnings (only when batteries are installed),<br>Base Unit Battery Level Warnings / Base Unit External Contact Input Warnings |
| Power                       | AA Alkaline Batteries x 4<br>External Power (DC8 - 34V)<br>AC Adaptor (AD-0605 / AD-0607)                                                                                                                                                                                                                                                 |
| Current Consumption         | At most 2A (5V, with GSM in operation)                                                                                                                                                                                                                                                                                                    |
| Communication Interfaces    | USB (with PC)<br>Optical Communication (with Remote Unit)                                                                                                                                                                                                                                                                                 |
| LED Display                 | POWER: Green / ERR: Orange / ALM: Red                                                                                                                                                                                                                                                                                                     |
| Battery Life                | 10 days* of continued use if monitoring is carried out every 10 minutes (when not using GPS).                                                                                                                                                                                                                                             |
| Dimensions                  | H 96 mm x W 65 mm x D 39 mm (Excluding protrusions)<br>Antenna Length : 109mm                                                                                                                                                                                                                                                             |
| Weight                      | About. 220 g (including batteries)                                                                                                                                                                                                                                                                                                        |
| Operating Environment       | Temperature: 10 to 55°C (-10 to 55°C when external power connected)<br>Humidity: 20 to 80%RH (No condensation)                                                                                                                                                                                                                            |
| Other                       | Not waterproof, moistureproof, or dustproof.<br>The SIM card must adhere to the following conditions:<br>1. Compatible with GSM.<br>2. Able to use SMS (Short Message Service) and GPRS (General Packet Radio Service).<br>3. The card has been activated.                                                                                |

\* Battery life varies depending upon the frequency of communication, the measuring environment, and the quality of the batteries being used.

### Short Range Radio Communication

|                               |                                                                                                                                                  |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| RF Power                      | FCC model 7mW<br>CE model 5mW                                                                                                                    |
| Radio Standard Specifications | FCC Part15 Section247 / IC RSS-210 (Frequency Range: 902 to 928MHz )<br>ETSI EN 300 220 (Frequency Range: 869.7 to 870MHz)                       |
| Transmission Range            | About 150meters (500ft) if direct and unobstructed.                                                                                              |
| Communication Time            | When downloading 1 Remote Unit at full logging capacity:<br>About 2 min.<br>* The same amount of time will be necessary for each added Repeater. |

### Cellular Phone Communication

|                                                                      |                                                                                                                         |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Band                                                                 | GSM850/GSM1900(PTCRB Certified) GPRS(General Packet Radio Service)<br>GSM900/GSM1800 GPRS(General Packet Radio Service) |
| Data Transfer Protocol                                               |                                                                                                                         |
| Auto-Downloading of Recorded Data / Auto-Sending of Current Readings | FTP (PASV mode also supported)<br>SMTP (SMTP-AUTH, POP-before SMTP)<br>* SMTP-AUTH supports LOGIN only                  |
| Warning Monitoring Function                                          | SMS / SMTP (SMTP-AUTH, POP-before SMTP)<br>* SMTP-AUTH supports LOGIN only                                              |

### Contacts (Warning Output / Input)

|                                      |                                                                                                  |
|--------------------------------------|--------------------------------------------------------------------------------------------------|
| Output Terminal<br>Open Drain Output | Voltage when OFF: DC less than 30V<br>Current when ON: less than 0.1A<br>Resistance when ON: 15Ω |
| Input Terminal                       | Internal Pull-up: 3V 100kΩ<br>Maximum Input Voltage: 30V                                         |

### GPS Communication (Option)

|               |                                                                                                                                                       |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| GPS Interface | Connector: Mini DIN 6 Pin Female<br>Communication Standard: ANSI / EIA/TIA-232-E<br>Geographic Coordinate System: WSG84<br>Power Supply: 5V MAX 100mA |
| Other         | Attach geographical positioning info to Current Readings                                                                                              |

### Wireless Base Station RTR-500

| UNIT                        | As a Base Unit                                                                                                                                                                                                                             | As a Repeater                                                       |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Compatible Devices          | Remote Units:<br>RTR-501/502/503, RTR-501L/502L/503L<br>RTR-574<br>Repeater: RTR-500                                                                                                                                                       | Base Unit:<br>RTR-500GSM<br>RTR-500<br>RTR-500NW/500AW<br>RTR-500DC |
| Features and Functions      | When connected to a PC with "RTR-500 for Windows" running:<br>1. Auto-downloading of Recorded Data (E-mail or FTP),<br>2. Automatic Sending of Current Readings (E-mail or FTP),<br>3. Warning Monitoring (E-mail)                         | -                                                                   |
| Types of Warning Monitoring | Remote Unit Measurement Warnings,<br>Cumulative Illuminance/Amount of UV Light Warnings (RTR-574),<br>Remote Unit Wireless Communication Error Warnings,<br>Remote Unit Battery Level Warnings,<br>Remote Unit Sensor Abnormality Warnings | -                                                                   |
| Power                       | USB bus power                                                                                                                                                                                                                              | AA alkaline batteries x 2<br>AC adaptor (AD-0638 / AD-0638-C)       |
| Operating Voltage           | 2.5V to 7.0V                                                                                                                                                                                                                               |                                                                     |
| Current Consumption         | Approx. 50mA (Wireless Communication)                                                                                                                                                                                                      |                                                                     |
| Communication Interfaces    | USB (with PC)<br>Optical Communication (with Compatible Remote Units other than RTR-574)                                                                                                                                                   |                                                                     |
| LED Display                 | Blinking: During Wireless Communication or PC Communication<br>Lamp ON: Connected PC via USB                                                                                                                                               |                                                                     |
| Battery Life                | -                                                                                                                                                                                                                                          | About 6 months*                                                     |
| Dimensions                  | H 96mm x W 65mm x D 25mm (excluding protrusions)<br>Antenna Length : 109mm                                                                                                                                                                 |                                                                     |
| Weight                      | Approx. 71g (Batteries not included)                                                                                                                                                                                                       |                                                                     |
| Operating Environment       | Temperature: -10 to 60°C (-30 to 60°C when external power connected)<br>Humidity: 20 to 80%RH (No condensation)                                                                                                                            |                                                                     |
| Other                       | Not waterproof, moistureproof, or dustproof                                                                                                                                                                                                |                                                                     |

\* When used for wireless communication five minutes a day. Battery life varies depending upon the measuring environment, the communication frequency, and the quality of the battery being used.

### Short Range Radio Communication

|                               |                                                                                                                                                                                                              |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RF Power                      | FCC model 7mW<br>CE model 5mW                                                                                                                                                                                |
| Radio Standard Specifications | FCC Part15 Section247 / IC RSS-210 (Frequency Range: 902 to 928MHz )<br>ETSI EN 300 220 (Frequency Range: 869.7 to 870MHz)                                                                                   |
| Transmission Range            | About 150meters (500ft) if direct and unobstructed.                                                                                                                                                          |
| Communication Time            | When downloading one Remote Unit at full logging capacity:<br>About 2 min. (Remote Units excluding RTR-574)<br>About 4 min. (RTR-574)<br>*The same amount of time will be necessary for each added Repeater. |

### Network Communication

#### Data Transfer Protocol

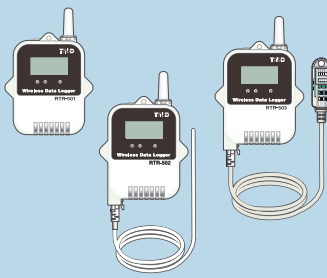
When connected to a PC as a Base Unit with "RTR-500 for Windows" running:

|                                                                      |                                                                                                                  |
|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Auto-Downloading of Recorded Data / Auto-Sending of Current Readings | FTP (PASV mode also supported)<br>SMTP (SMTP-AUTH, POP-before SMTP)<br>* SMTP-AUTH supports PLAIN, LOGIN and MD5 |
| Warning Monitoring Function                                          | SMTP (SMTP-AUTH, POP-before SMTP)<br>* SMTP-AUTH supports PLAIN, LOGIN and MD5                                   |

## System Setup

### Remote Unit

Wireless Data Loggers  
(Sensor Included)

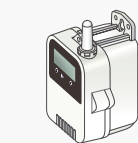


Power

Lithium Battery  
inserted into a tube  
(LS14250 (SAFT))  
**Included**

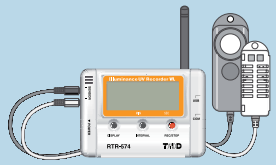


**RTR-500A1**  
External Power  
Adaptor Kit  
**Sold Separately**



**RTR-500B1 \***  
Large Capacity  
Battery Adaptor Kit  
**Sold Separately**

\* When using RTR-500B1 it is necessary  
to purchase Lithium Battery (LS26500).



Power

AA Alkaline Battery x1  
**Included**

### Base Unit RTR-500GSM



Power

AA Alkaline  
Battery x 4  
**Included**  
or  
AC Adaptor  
**Sold Separately**  
AD-0605 or  
AD-0607  
or  
External Power Cable  
BC-0201  
**Included**

Software

USB Cable (US-15C)

Install

### Purchase Extra Items Separately for RTR-500GSM

We do not handle or sell these items.

SIM Card  
**Required item**  
for operation



External Output / Input  
Compatible Connector



External Power  
Supply



Voltage : DC 8-34V  
Current : MAX 2A

GPS Receiver



### Base Unit / Repeater RTR-500



Power

Use as a Repeater  
AA Alkaline  
Battery x2  
**Not Included**  
AC Adaptor  
**Sold Separately**  
AD-0638  
or  
AD-0638-C

Software

USB Cable (US-15C)

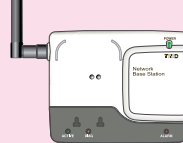
Install  
Connect



Initial Settings  
Function Settings

\* It is not possible to  
simultaneously connect  
more than one Base Unit  
to a PC.

### Base Unit RTR-500NW RTR-500AW



Power

AC Adaptor  
**Sold Separately**  
AD-0638  
or  
AD-0638-C

Software

USB Cable (US-15C)

LAN Cable for 500AW (LN-20W)

Install  
Connect

Connect



Some devices such as a hub, wireless  
LAN access point, server, and so  
on are sold separately and may  
be necessary to connect to a local  
network. T&D does not manufacture or  
sell these items.

### Base Unit RTR-500DC



Power

AAA Alkaline  
Battery x2  
**Not Included**  
Nickel Hydride  
Battery x2  
**Not Included**  
AC Adaptor  
**Sold Separately**  
AD-0638 or  
AD-0638-C

Software

USB Cable (US-15C)

Install  
Connect



Initial Settings  
Function Settings

Web Site  
T&D Online



### Caution regarding safety

For safe operation carefully read instructions before using this unit.

Colors in the photos in this catalog may be different from real product colors. The specifications and designs of the products in this catalog are true as of March 2011. Specifications are subject to change without notice. Microsoft® and Windows® are registered trademarks of Microsoft Corporation USA and other countries. GSM is a trademark of GSM MOU Association. All registered trademarks, company names, product names and logos mentioned herein are the property of T&D Corporation or of their respective owners.

■ Distributor



T&D Corporation



2011. 06. 16304590005D

**DISTRAME S.A.** - Parc du Grand Troyes - Quartier Europe Centrale - 40, rue de Vienne - 10300 SAINTE-SAVINE  
Tél. : +33 (0)3 25 71 25 83 - Fax : +33 (0)3 25 71 28 98 - E-mail : [infos@distrame.fr](mailto:infos@distrame.fr) - Site internet : [www.distrame.fr](http://www.distrame.fr)