Mobile Base Station
RTR500BM Features and Specs
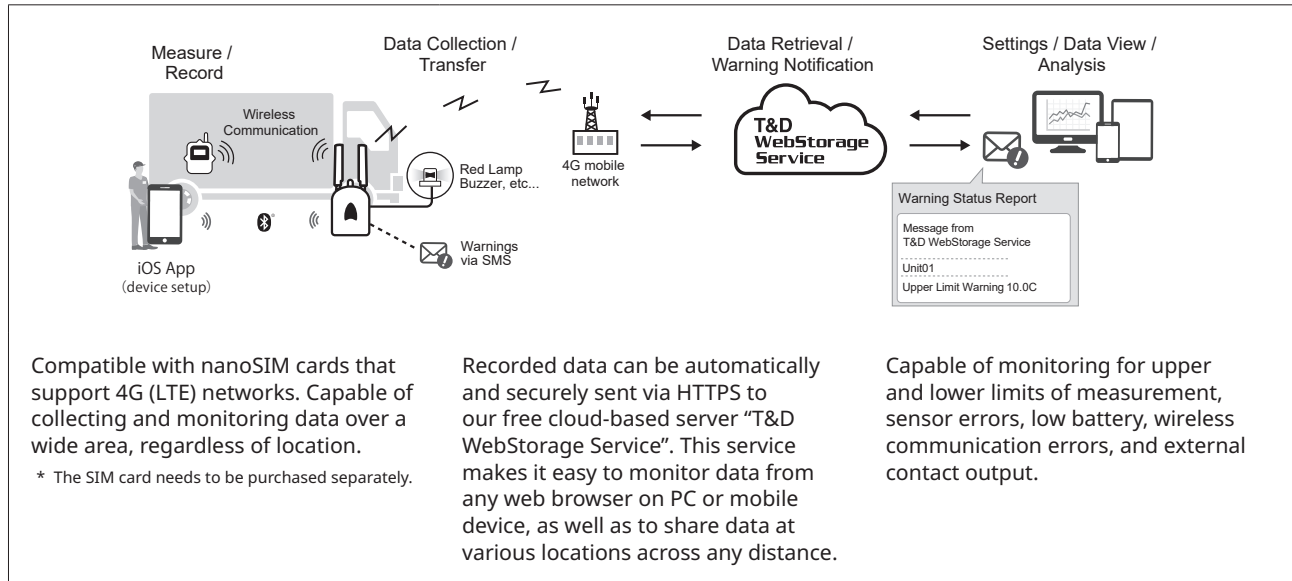
Data Transfer	Data Monitoring	Warning Monitoring	Warning Notification
4G Mobile Communication	T&D's Cloud Service, Internet	Set Limit Exceeded, Sensor Error, Communication Error etc...	E-mail, SMS, External Contact Output

This mobile base station is designed for use with 4G cellular networking in cases where PCs and LAN networks are non-existent or impractical. It collects data from nearby data loggers via wireless radio communication and then automatically sends it via mobile networking communication to our free cloud-based server "T&D WebStorage Service".

Compatible with nanoSIM cards that support 4G (LTE) networks. Capable of collecting and monitoring data over a wide area, regardless of location.

 * The SIM card needs to be purchased separately.

Recorded data can be automatically and securely sent via HTTPS to our free cloud-based server "T&D WebStorage Service". This service makes it easy to monitor data from any web browser on PC or mobile device, as well as to share data at various locations across any distance.

Capable of monitoring for upper and lower limits of measurement, sensor errors, low battery, wireless communication errors, and external contact output.

Initial Settings via Bluetooth® or USB

Initial settings can be made either on a mobile device using Bluetooth or on a PC using USB.

Remote Settings

By using our mobile app, it is also possible to make settings remotely over the cloud, such as the device name, recording interval, warning conditions, additional device registration, etc.

Extension Possible for Wireless Communication

The communication range between logger and base is about 150 meters (500 ft), but this can be easily extended by adding a repeater unit.

Choice of Power Supply

The RTR500BM will run for about 2 days* solely off 4 AA alkaline batteries, but for use over longer periods use the supplied AC adaptor or an external power source (DC9-38V).

 * Actual battery life is not guaranteed.

Various Warning Notifications

When a warning condition is detected, a notification can be sent via e-mail* and/or SMS* to up to 4 recipients each. By connecting a buzzer or lamp to the contact output terminal of the RTR500BM, you can set up an on-site alarm.

 * Email recipients can be set in the "T&D WebStorage Service" and SMS recipients in the "RTR500BM for Windows" software.

Register up to 20 Data Loggers

It is possible to manage up to 20 separate data loggers (remote units) from one RTR500BM. And for easy management you can create up to 4 groups, and up to 5 repeaters can be added to each group.

Communication DLL specs for the RTR500B Series, as well as, file formats for Current Readings Files and Recorded Data Files (XML) are available free of charge to our customers. With these it is possible to develop and create your own applications and systems.

T&D

RTR500BM Specifications

	RTR500BM
Compatible Devices	Remote Units: RTR501B / 502B / 503B / 505B / 507B 　　　　　　　RTR-501 / 502 / 503 / 507S / 574 / 576 / 505-TC / 505-Pt / 505-V / 505-mA / 505-P (*1) 　　　　　　　(Including L Type and S Type) Repeaters: RTR500BC, 　　　　　　RTR-500 (*1)
Maximum Number of Registrations	Remote Units: 20 units Repeaters: 5 units x 4 groups
Communication Interfaces	Short Range Wireless Communication 　For US: Frequency Range: 902 to 928MHz 　　　　　　RF Power: 7mW 　　　　　　Transmission Range: About 150 meters (500 ft) if unobstructed and direct 　For EU: Frequency Range: 869.7 to 870MHz 　　　　　　RF Power: 5mW 　　　　　　Transmission Range: About 150 meters if unobstructed and direct LTE Communication 　For US: LTE-FDD: B2/B4/B12 　　　　　WCDMA: B2/B5 　For EU: LTE-FDD: B1/B3/B5/B7/B8/B20 　　　　　LTE-TDD: B38/B40/B41 　　　　　WCDMA: B1/B5/B8 　　　　　GSM: 900/1800MHz Bluetooth 4.2 (Bluetooth Low Energy) For Settings USB 2.0 (Mini-B connector) For Settings Optical Communication (proprietary protocol)
Communication Time	Data Download Time (for 16,000 readings) 　Via wireless communication: Approx. 2 min. 　An additional 30 seconds should be added for each Repeater. (*2) 　Does not include communication time from Base Unit to server over LTE.
External Alarm Input/Output Terminal (*3)	Input Terminal: Contact Input 　Internal Pull-up: 3V 100kΩ 　Maximum Input Voltage: 30V Output Terminal: Photo Mos Relay Output 　OFF-State Voltage: AC/DC 50V or less 　ON-State Current: 0.1 A or less 　ON-State Resistance: 35Ω
Communications Protocol (*4)	HTTP, HTTPS, FTP, SNTP, SMS
Power	AA Alkaline Battery LR6 x4 AC Adaptor (AD-05A3 or AD-05C1) External Battery (DC 9-38V) with the Connection Adaptor (BC-0204)
Battery Life (*5)	Expected battery life with only AA alkaline batteries: 　Approx. 2 days under the following conditions (only one Remote Unit and no Repeaters, downloading data once 　a day, sending current readings at 10-min interval)
Dimensions	H 96 mm x W 66 mm x D 38.6 mm (excluding antenna) Antenna Length (Cellular/Local): 135 mm
Weight	Approx. 135 g
Operating Environment	Temperature: -10 to 60 °C Humidity: 90 %RH or less (without condensation)
Accessories	AA Alkaline Battery LR6 x4, Antenna CSR-0011 x2 (Cellular/Local), USB Mini-B Cable US-15C, AC Adaptor AD-05A3 or AD-05C1, Registration Code Label, Manual Set (Warranty Included)
GPS Interface (*6)	Connector: SMA Female Power Supply: 3.3V
SIM Card (*7) (*8)	nano SIM Card that supports 4G/LTE data communication (with a minimum speed of 200Kbps)

*1: RTR-500 Series loggers and Repeaters do not have Bluetooth capability.
*2: When using RTR500BC as Repeater. Depending upon conditions it may take up to an additional 2 minutes.
*3: In order to use the external terminal, please purchase the optional alarm connection cable (AC0101).
*4: Client Function
*5: Battery life depends on several factors, including number of warning reports sent, ambient temperature, radio environment, frequency of communication, and quality of the battery being used. All estimates are based on operations carried out with a new battery and are in no way a guarantee of actual battery life.
*6: In order to use the GPS function (to attach geographical positioning info to current readings data), please purchase a compatible GPS antenna (SMA Male Connector).
*7: In order to enable sending of warning messages by SMS, a SIM card with SMS functionality is required.
*8: Please prepare a contracted SIM card separately. For the supported SIM cards, contact your local T&D distributor.
The specifications listed above are subject to change without notice.