

User Manual

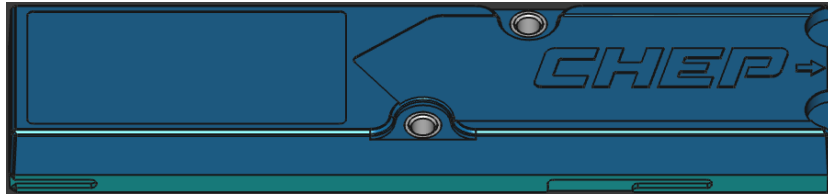
Assert Tracker

ULTRA Scout Halo

CHEP

2901 Tasman Drive Suite 101 Santa Clara, CA 95054

CHEP ULTRA Scout Halo Asset Tracker User Guide



CHEP ULTRA Scout Halo Asset Tracker

Global location tracking device

Key benefits

Helps track the pallets and goods loaded on Asset by providing real time location and environment sensing data.

Customer can use the data generated to get more insight into their supply chain flow and take actions to improve the efficiency of operation.

Device can be controlled and configured using BRIX platform and APIs provided. Customer need to get license to BRIX platform to access data from the devices.

Customer can visualize the device and hence Asset of their asset on BXB Enterprise application call BRIX.

Customizable User Interface and interface data visualization tool on BRIX can be used by customer to generate information as relevant to their specific use case.

How is it used



Use CHEP ULTRA Scout Asset Tracker location tracking Platform and API to Track your valuable assets Track your shipments

How it works



Device ID	Device Name	Device Type	Device Status	Device Location	Device Battery	Device Signal	Device Temperature	Device Motion	Device Magnetometer
1	Device 1	Device Type 1	Device Status 1	Device Location 1	Device Battery 1	Device Signal 1	Device Temperature 1	Device Motion 1	Device Magnetometer 1
2	Device 2	Device Type 2	Device Status 2	Device Location 2	Device Battery 2	Device Signal 2	Device Temperature 2	Device Motion 2	Device Magnetometer 2
3	Device 3	Device Type 3	Device Status 3	Device Location 3	Device Battery 3	Device Signal 3	Device Temperature 3	Device Motion 3	Device Magnetometer 3
4	Device 4	Device Type 4	Device Status 4	Device Location 4	Device Battery 4	Device Signal 4	Device Temperature 4	Device Motion 4	Device Magnetometer 4
5	Device 5	Device Type 5	Device Status 5	Device Location 5	Device Battery 5	Device Signal 5	Device Temperature 5	Device Motion 5	Device Magnetometer 5
6	Device 6	Device Type 6	Device Status 6	Device Location 6	Device Battery 6	Device Signal 6	Device Temperature 6	Device Motion 6	Device Magnetometer 6
7	Device 7	Device Type 7	Device Status 7	Device Location 7	Device Battery 7	Device Signal 7	Device Temperature 7	Device Motion 7	Device Magnetometer 7
8	Device 8	Device Type 8	Device Status 8	Device Location 8	Device Battery 8	Device Signal 8	Device Temperature 8	Device Motion 8	Device Magnetometer 8
9	Device 9	Device Type 9	Device Status 9	Device Location 9	Device Battery 9	Device Signal 9	Device Temperature 9	Device Motion 9	Device Magnetometer 9
10	Device 10	Device Type 10	Device Status 10	Device Location 10	Device Battery 10	Device Signal 10	Device Temperature 10	Device Motion 10	Device Magnetometer 10

CHEP Pallet Tracker is intended for enterprise customers wanting to track their assets. Customers with BRIX enterprise license will get access to **Device management** application to configure the device operation rules like logging frequency, ping transmit frequency and can choose the sensor to use like temperature, motion and magneto meter etc. Device can report sensor data every 5min. to once in 3day. More reports per day.

CHEP ULTRA Scout Asset Tracker reports its current location on the scheduled interval along with sensor data. Each communication report from tracker to BRIX is called “Ping” and BRIX uses these “Ping” to create the journey using its preoperatory Asset journey algorithm. Customer can login on **Asset tracking application** module in the BRIX and visualize the complete journey on the map. Please in-between each “Ping” CHEP ULTRA Scout Asset Tracker is in the sleep State.



Customer can monitor 1000s of devices in a comprehensive view on BRIX dashboard and can take corrective actions. Scout Asset tracker uses Wi-Fi to determine its location. Customer can monitor the # of times each tracker has used Wi-Fi. Customer can see the data

for only the devices allocated to its own account only but once the customer cancels its account, tracker data will no longer be visible even though device will continue to work & report data.

Connectivity

CHEP ULTRA Scout Asset Tracker comes Wi-Fi provided the credentials for access are sent to device thru profile configuration.

User can not originate the connection to CHEP ULTRA Scout Asset Tracker unless device wakes-up and contacts the cloud application over Wi-Fi. When tracker is not connected to network, it continues to store the data off-line into its memory. Onboard memory on device can store the data worth of 2 years.

Location tracking technologies

CHEP ULTRA Scout Asset Tracker acquires location using Wi-Fi. Logic is built into the device to attempt Wi-Fi only.

Wi-Fi triangulation technology calculates the location of the device based on the location of the nearby Wi-Fi access points.

This product is connected to the cloud platform through Wi-Fi and will go into sleep mode after uploads the location information. It will go into sleep mode within few seconds after waking up, unless it is woken up again.

Technical specifications

Overview

Scout-Short provides location and environment sensing data for Brambles platform.

Dimension

- Enclosure: 156.3mm x 35.4mm x16.6mm

Serial Number

- Series: 1YYXX44NNNNNNNNN

Operation the device

- Device is always powered operating based on set profile parameters.

LED Indications

- Green LED when Power-ON
- Red LED when Power-OFF
- Flashing Red LED for device failure
- Blue LED when firmware upgrade

Operating Voltage

- 5V/2A via USB

Tracking

- Wi-Fi MAC IDs capture for location triangulation.
- BLE beacon scan

Physical Aspects

- Enclosure Material: ABS + PC

Certifications

- TBD

Sensors

- Temperature (Resolution: 0.1°C, Accuracy: ±1.5°C, Range: -40 to +125°C)
- Accelerometer 3-axis, ±16G
- Magnetometer 3-axis, ±50 Gauss

Communication

- Wi-Fi and BLE

Configuration Update

- Key parameters can be configured through BRIX
- Publish Interval: 60 minutes to 24 hours
- Log Interval: 60 minutes to 24 hours

Data transmission and storage

- Streams sensor data to BRIX cloud real-time
- Offline logging of sensor data on built-in memory for up to 2 years when no network connectivity

Operating Temperature

- -40°C to +60°C

*Device performance degrades significantly at negative temperature

Built-in Antenna

- Wi-Fi: PCB antenna, gain -2.5dBi
- Bluetooth: Chip antenna, gain 2.8dBi
-

Capabilities and Durability

- Device aware of its state when in
 - CHEP SC | Non-CHEP | Transit
- Periodic capture of sensor data based on log frequency.
- Secure log file transmission over Wi-Fi
- Efficient power management with smart logic for location determination
- Over the air firmware upgrade: Wi-Fi
- Publish based on event triggers.
 - Accelerometer: Impact and movement trigger
 - Temperature: Out of bound condition

Security

- Encrypted communication between device & cloud
- Encrypted bootloader and application firmware
- Encrypted flash
- X.509 Public/Private key for device authentication
- SSL/TLS v1.2 based security over network.



Danger: Don't put devices in Microwave

Devices should never be put in microwave, it will damage the device permanently and can lead to a fire or explosion.



Warning: Always put devices in dormant mode for Air shipment

Federal Aviation laws require all cellular devices must turn off cellular function for the entire flight duration. To comply, we must put devices in Dormant mode before shipment by air.



Warning: Never throw devices in the fire

Under any scenario, do not throw devices in fire. Devices are not designed to withstand excessive heat and if thrown into fire, may explode.



Caution: Always use specified torque to mount the device

Device is designed to withstand a specified mounting torque without cracking. Never apply more than the specified torque to mount/unmount devices and always use specific screw for fastening.



Caution: Always attach the devices flushed to pallet edge

Device must be mounted from the front and right at the edge (flushed) of the pallet. This allows the internal antenna to get maximum cellular signal for better communication.

ISED Notice

This device complies with innovation, Science and Economic Development Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en

CAN ICES-3(B)/NMB-3(B)

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

ISED Radiation Exposure Statement

This EUT is compliance with SAR for general population/uncontrolled exposure limits in ICESDRSS-102 and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528 and IEC 62209. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body. This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter

Cet appareil est conforme aux limites d'exposition DAS incontrôlée pour la population générale de la norme CNR-102 d'industrie Canada et a été testé en conformité avec les méthodes de mesure et procédures spécifiées dans IEEE 1528 et IEC 62209. Cet appareil doit être installé et utilisé avec une distance minimale de 20 cm entre l'émetteur et votre corps. Cet appareil et ses antennes ne doivent pas être co-localisés ou fonctionner en conjonction avec tout autre antenne ou transmetteur.

Hereby, CHEP declares that the radio equipment type Asset Tracker is in compliance with Directive 2014/53/EU and UK Radio Equipment Regulation 2017(RER 2017(SI 2017/1206)).
The full text of the EU and UK declaration of conformity is available at the following internet address:
CHEP.COM

For this device, it should keep at least 20cm separation distance and the prohibition of operating to a person.

Operating Frequency Range	The maximum RF Output Power
Bluetooth LE 2402 - 2480 MHz	4.3 dBm EIRP
Wi-Fi 2412 - 2472 MHz	17.5 dBm EIRP

FCC Caution.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

RF warning for Mobile device:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Importer:

CHEP Germany

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CHEP UK Ltd

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