

HID® BEEKSLR001

Install Guide

PLT-05768, A.O

1. Overview

This BEEKs™ LR Install Guide covers the basics of the BLE long-range beacon setup and provisioning of equipment with Bluzone Cloud account and project. The BEEKSLR001 family of long-range beacons (+20 dBm Tx max) are intended for environments that require higher beacon transmission strength than the standard BEEKS001 family of beacons (+5 dBm Tx max). This install guide is intended for install technicians.

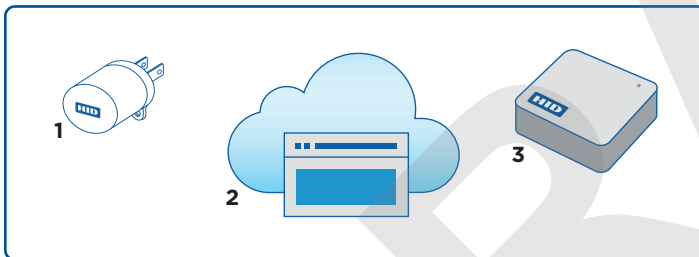
BEEKs™ Bluetooth Low-Energy (BLE) beacons are among the most advanced beacons in the industry. Being fully Apple iBeacon and Google Eddystone compatible, BEEKs beacons may be used for any standard beacon application that provides location based promotional or way-finding services to smartphone users. BEEKs beacons are available in multiple form factors and sensor configurations.

When combined with HID Global's end-to-end IoT ecosystem, which includes BluFi™ BLE to WiFi gateways and the Bluzone™ cloud services, BEEKs can be centrally managed remotely through the cloud to transfer new messages, firmware updates, and battery status checks. Their unique design allows BEEKs to broadcast reliably even in densely populated WiFi environments.

The BLE radio enables the Beacon to transmit condition monitoring, proximity messaging, way finding, and asset location. Bluzone allows you to control the transmitting capabilities of the Beacon. The Beacon provides the ability to transmit in iBeacon, Eddystone, or sBeacon format.

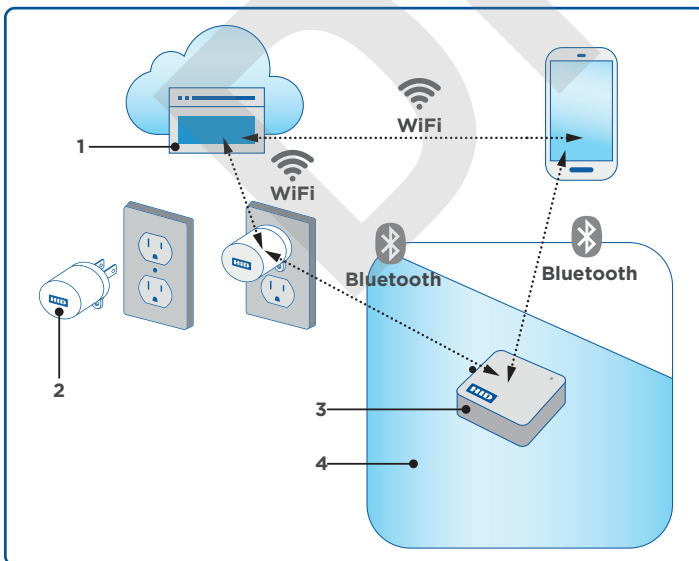
The BEEKs Beacons link to ID64 with a QR code printed/labeled on the outer casing.

2. System components



ITEM	DESCRIPTION
1	BluFi™ model BluFi-AC00 - Bluetooth to WiFi Gateway.
2	Bluzone - Cloud Fleet Management and Condition Monitoring dashboard.
3	BEEKs™ model BEEKSLR001-XX Bluetooth Low Energy Beacons.

3. Terminology



ITEM	DESCRIPTION
1	Bluzone - Secure cloud-based SaaS to centrally manage BEEKs via BluFi gateways. Additionally, monitor, store, and analyze performance data collected from deployed BEEKs fleet.
2	BluFi Gateway - Receives data from BEEKs over Bluetooth and sends to Bluzone Cloud.
3	BEEKs LR - Sends data to BluFi. Data type is dependent on specific model/configuration.
4	Asset - Equipment to be monitored or tracked

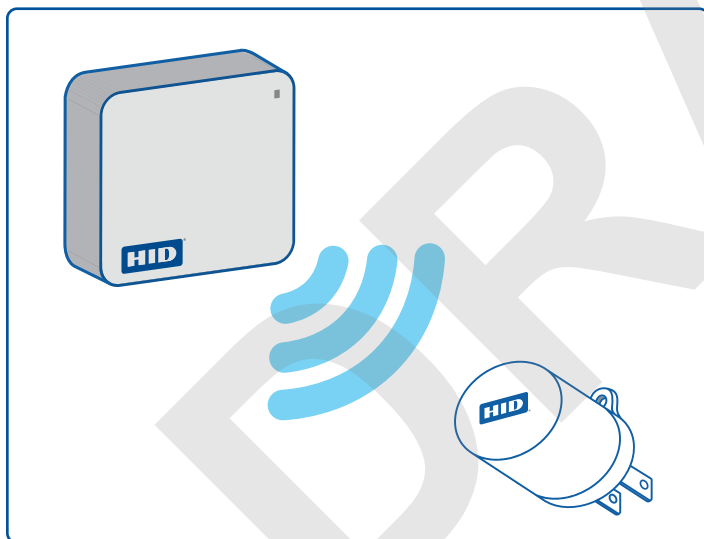
4. Best practices

- Maximum of 15 – 20 beacons per BluFi for best results
- Maximum 20 – 30 meters from beacon to BluFi for best results (distance will decrease for increased interference/ blockages)
- Network troubleshooting
 - 2.4 GHz WiFi only
 - HTTPS port 443 must be open
 - DHCP required
 - 1 Mbps upload speed required
 - Captive WiFi portals not compatible
 - Compatible certificate formats: .pem, .der
 - BluFi MAC address whitelisting may be required on some networks

5. Sensor locations

Beacons should be mounted to a clean, flat, rigid surface in the environment to be monitored.

The BEEKs LR may be placed on a flat, stable surface or mounted with the VHB adhesive. To maximize Bluetooth coverage, orient the beacon such that the top (side with HID logo) faces the BluFi gateway.



6. Prerequisites

- An active Bluzone account
- Mobile device with the Bluzone mobile app installed
- Additional installation guides are available and can be found at: <https://hid.gl/HID-BluFi-installation>

7. Specifications

BLE Beacons model number BEEKSLR001	
Different Configurations based on environments and use case	
BEEKSLR001-Lite	Asset location and way-finding. VHB tape-mount.
BEEKSLR001-Temperature	Temperature monitoring only. VHB tape-mount.
BEEKSLR001-Industrial	Status/ process monitoring, sends basic motion and temperature data. VHB tape-mount.
Operating temperature	-13°F to +170°F (-25°C to +77°C)
Storage temperature	-22°F to +170°F (-30°C to +77°C)
Specifications	
Standard Protocol	Bluetooth Low Energy 4.2
Frequency range	2400-2483.5 MHz
No of channels	40
Modulation	GFSK
Mode of operation	Half duplex
Bluetooth max output power	+20 dBm max
Antenna	+5 dB Directional Patch Antenna

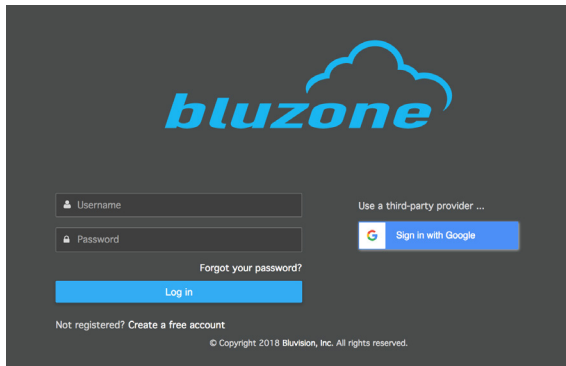
Name	BEEKSLR001-Lite	BEEKSLR001-Temperature	BEEKSLR001-Industrial
Length x width	2.48" x 2.36" x 0.86" (63 mm x 60mm x 22mm)		
Weight	3.3 oz (93.5 g)		
Housing material	Polycarbonate and ABS		
Data rates	1Mbit/s		
Battery type	3.6V / 7200mAh - Primary Lithium		
Battery duration	Up to 5 yrs	Up to 3 yrs	Up to 3 yrs

8. Initial setup

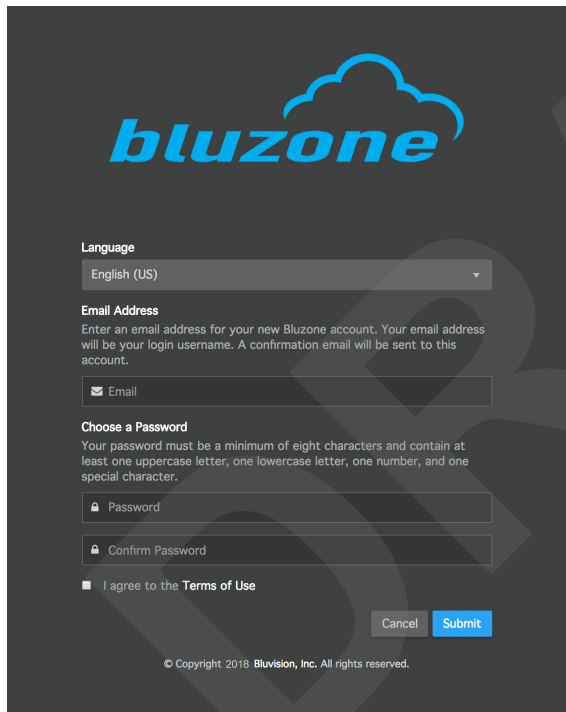
For more detailed information, visit <https://hid.gl/HID-BEEKs-installation>

8.1. Account setup

1. Visit bluzone.io and register a new account. Verify your email by clicking on the link emailed to you.



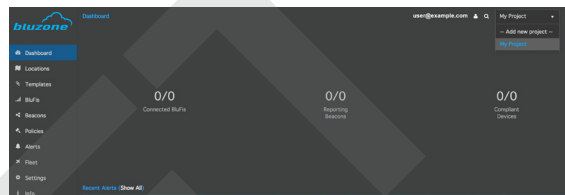
The login screen features the Bluzone logo at the top. Below it are input fields for 'Username' and 'Password'. A 'Log in' button is positioned below the password field. To the right, there is a link 'Use a third-party provider ...' and a 'Sign in with Google' button. A 'Forgot your password?' link is located below the password field. At the bottom, there is a link 'Not registered? Create a free account' and a copyright notice: '© Copyright 2018 Bluvision, Inc. All rights reserved.'



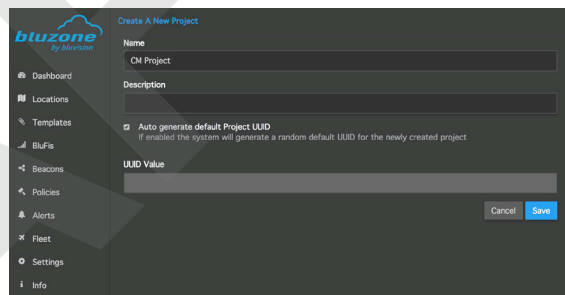
The registration screen features the Bluzone logo at the top. Below it, there is a 'Language' dropdown menu set to 'English (US)'. The 'Email Address' section asks for an email address and includes a confirmation email link. Below this is an 'Email' input field. The 'Choose a Password' section includes instructions on password requirements and fields for 'Password' and 'Confirm Password'. A checkbox for 'I agree to the Terms of Use' is present. 'Cancel' and 'Submit' buttons are at the bottom. A copyright notice is at the very bottom: '© Copyright 2018 Bluvision, Inc. All rights reserved.'

8.2. Project setup

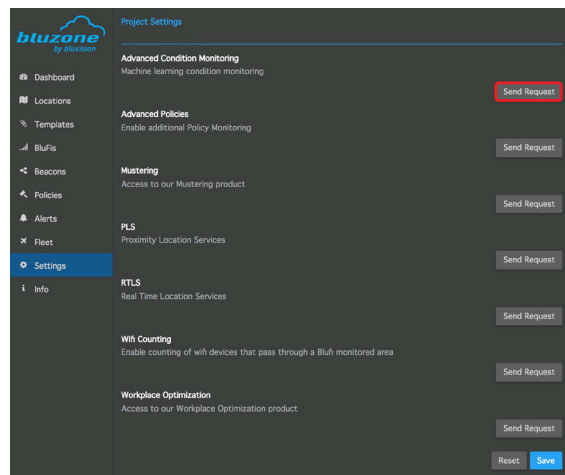
1. Use the dropdown menu in the top right portion of the screen to create a new project.
2. Go to **Settings** and send a Product Activation request for your use case, for example RTLS or Status Monitoring, depending on the SaaS model you have purchased. Your product features will be activated within 24 hours.



The dashboard shows a sidebar with navigation links: Dashboard, Locations, Templates, BLUFs, Beacons, Policies, Alerts, Fleet, Settings, and Info. The main area displays three metrics: '0/0 Connected BLUFs', '0/0 Reporting Beacons', and '0/0 Capable Devices'. A 'Recent Alerts (Show All)' link is at the bottom.



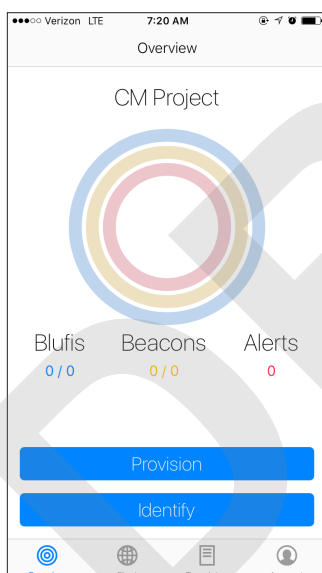
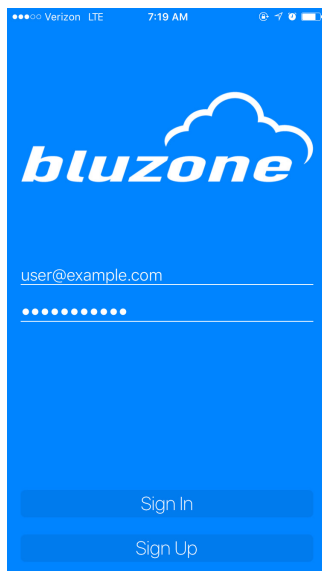
The 'Create A New Project' screen has a sidebar with the same navigation links as the dashboard. The main form includes a 'Name' field (pre-filled with 'CM Project'), a 'Description' field, a checkbox for 'Auto generate default Project UUID' (checked), and a 'UUID Value' field. 'Cancel' and 'Save' buttons are at the bottom right.



The 'Project Settings' screen shows a sidebar with navigation links. The main area lists various features with 'Send Request' buttons: 'Advanced Condition Monitoring', 'Advanced Policies', 'Mustering', 'PLS', 'RTLS', 'WiFi Counting', and 'Workplace Optimization'. 'Reset' and 'Save' buttons are at the bottom right.

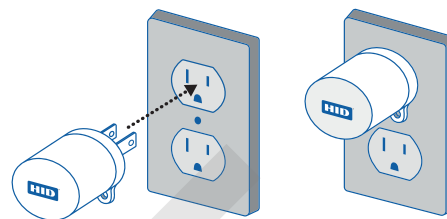
8.3. Bluzone mobile app setup

1. Download the Bluzone mobile app from either Google Play or the App Store.
2. Login to your account with Bluzone credentials.

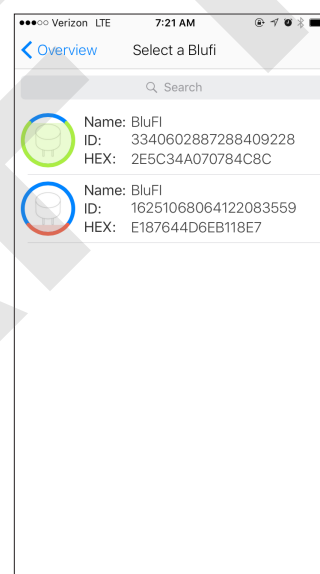


8.4. BluFi provisioning

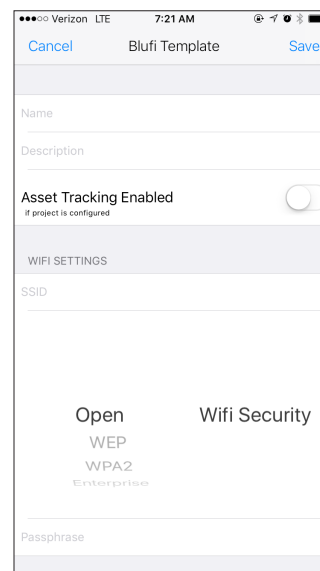
1. Plug the BluFi into a power source for initial setup.



2. In the Bluzone app, tap **Provision > BluFi**
3. Hold the mobile device close to the BluFi and select the device with highest signal strength (swipe down to refresh the list).

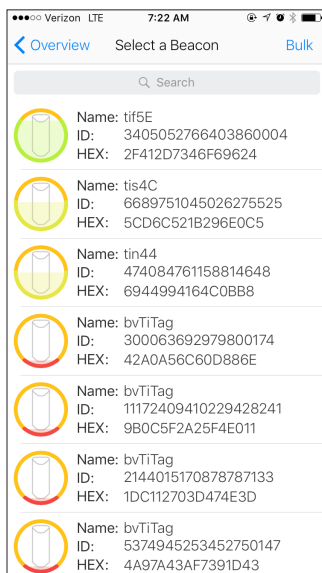


4. Follow each step within the Bluzone app as instructed to define location and picture of the installation place (optional).
5. When prompted for a Template, create a new Template with your WiFi SSID and password.

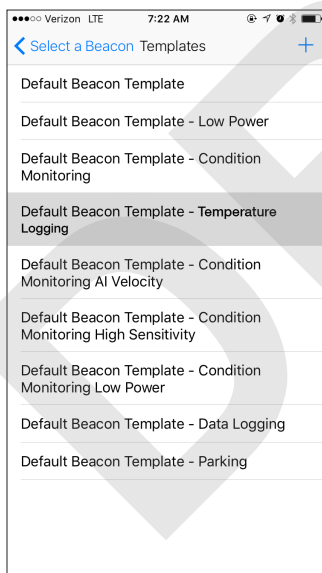


8.5. BEEK provisioning

1. Place BEEK close to BluFi (don't install on assets yet).
2. For each beacon, hold the mobile device close to the BEEK and select the device with highest signal strength (swipe down to refresh list). Continue the steps for each BEEK.



3. When prompted for a Template, select the template corresponding to your use case.



4. Assign the beacon a name that coincides with the asset on which it is installed. It is also good practice to use a label-maker to place a label on the beacon that matches this name.

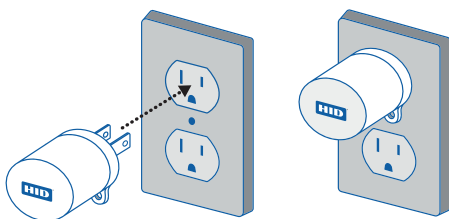
9. BEEKs and BluFi installation

For more detailed information, visit <https://hid.gl/HID-BEEKs-installation>

9.1. BluFi installation

1. BluFi should be installed within 100ft (30m) of monitored assets (shorter distances required for environments with obstructions).

AC BluFi Option



9.2. BEEKs location

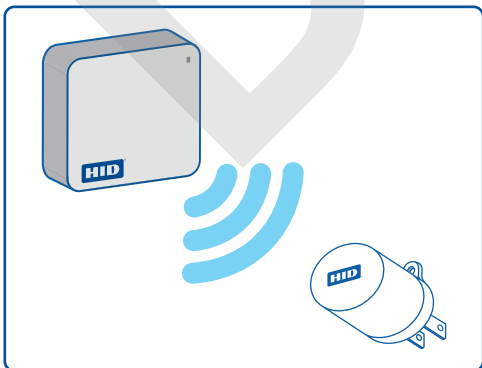
1. Place beacons near the desired assets (don't install yet).
2. In Bluzone console, go to **BluFi** > **{BluFi Name}** > **Statistics** and scroll down to the Scan Map.
3. Verify that each beacon sees at least one BluFi. (-75 dBm or higher is desired). Move BluFi's if necessary.

ID	Name	RSSI	Last Seen
2672254365204632149	Motor 1	-56	5/25/2018 7:58:03 AM
7090781048516653832	Pump 2	-49	5/25/2018 7:58:03 AM
113515182452571707	Generator 1	-51	5/25/2018 7:57:58 AM
3000369297800174	Motor 2	-47	5/25/2018 7:58:00 AM
12861443448209847646	Pump 1	-51	5/25/2018 7:58:02 AM

9.3. BEEKs installation

Beacons should be mounted to a clean, flat, rigid surface in the environment to be monitored.

The BEEKs LR may be placed on a flat, stable surface or mounted with the VHB adhesive. To maximize Bluetooth coverage, orient the beacon such that the top (side with HID logo) faces the BluFi gateway.



9.4. Policy creation

Now you are ready to use the beacon for your use case. Start creating policies as described in our on-line manual hid.gl/On-line-manual

10. Regulatory

For more detailed information, visit <https://hid.gl/HID-BEEKs-installation>

SRD Model: BEEKSLR001

RF Specifications

Standard Protocol: BLE 4.2

Frequency Band: 2400-2483.5 MHz

No of RF channels: 40

RF output power: **TBD dBm e.i.r.p.**

Modulation: GFSK

ITU emissions code: **TBD**

Antenna: PCB, **TBD** dBi

Communication Regulation

The following is a list that applies:

US FCC – United States Compliance

FCC ID: SL6-BEEKSLR001

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.

IMPORTANT: Changes or modifications to this product not authorized by HID, could void the FCC Certification and negate your authority to operate this product.

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.

Canada ISED – Canadian Compliance

24824-BEEKSLR001

This device complies with Industry 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 d'Industrie 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'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Australia/ New Zealand Compliance

This product conforms to Australia and New Zealand Radio Requirements.



European Union Compliance

Conformite Européenne (European Community)



Hereby, HID Global declares that this Radio Equipment SRD Model number BEEKSLR001 is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: www.hidglobal/certifications

This product operates at the following frequencies:

- 2.4 GHz band with an RF output power of less than **TBD** dBm e.i.r.p.

Czech

Společnost HID Global tímto prohlašuje, že toto radiové zařízení, číslo modelu BEEKS001, odpovídá požadavkům směrnice 2014/53/EU. Úplný text EU Prohlášení o shodě je k dispozici na následující internetové adrese: www.hidglobal/certifications

Tento výrobek používá následující frekvence:

- frekvenční pásmo 2,4 GHz, přičemž výstupní RF výkon je nižší než TBDdBm EIRP

Greek

Δια του παρόντος, η HID Global δηλώνει ότι ο παρών ραδιοεξοπλισμός με αριθμό Μοντέλου BEEKS001 βρίσκεται σε συμμόρφωση με την Οδηγία 2014/53/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης για την Ευρωπαϊκή Ένωση είναι διαθέσιμο στην ακόλουθη διαδικτυακή διεύθυνση: www.hidglobal/certifications

Το παρόν προϊόν λειτουργεί στις ακόλουθες συχνότητες:

- Ζώνη των 2,4 GHz με ισχύ εξόδου ραδιοσυχνοτήτων (RF) μικρότερη από **TBD**dBm e.i.r.p. (ισοδύναμη ιστροπικά ακτινοβολούμενη ισχύς)

Dutch

Hierbij verklaart HID Global dat deze radioapparatuur modelnummer BEEKS001 in overeenstemming is met Richtlijn 2014/53/EU. De volledige tekst van de Europese conformiteitsverklaring is te vinden op de website: www.hidglobal/certifications

Dit product werkt op de volgende frequenties:

- 2,4 GHz-band met een RF-uitgangsvermogen van minder dan **TBD** dBm e.i.r.p.

Danish

HID Global erklærer hermed, at dette radioudstyr modelnummer BEEKS001 er i overensstemmelse med direktiv 2014/53/EU. Den fulde tekst i EU-overensstemmelseserklæringen kan læses her: www.hidglobal/certifications

Dette produkt fungerer ved følgende frekvenser:

- 2,4 GHz-bånd med en RF-udgangseffekt på mindre end **TBD** dBm e.i.r.p.

Estonian

Käesolevaga kinnitab HID Global, et see raadioseadmestik mudelinumbriga BEEKS001 on vastavuses direktiiviga 2014/53/EL. Kogu EL-i vastavusdeklaratsiooni tekst on saadaval järgmisel internetiaadressil: www.hidglobal/certifications

See toode töötab järgmistel sagedustel.

- 2,4 GHz ribalaiusel raadiosagedusliku väljundvõimsusega vähem kui **TBD** dBm e.i.r.p.

Maltese

Hawnhekk, HID Global tiddikjara li dan it-Tagħmir tar-Radju bin- numru tal-mudell BEEKS001 huwa konformi mad-Direttiva 2014/53/UE. It-test sħiħ tad-dikjarazzjoni ta' konformità tal-UE hu disponibbli f'dan l-indirizz fuq l-Internet: www.hidglobal/certifications

Dan il-prodott jopera fil-frekwenzi li eġġjin:

- 2.4 GHz band b'RF output power ta' inqas minn **TBD** dBm e.i.r.p.

German

Hiermit erklärt HID Global, dass dieses Funkgerätmodell Nr. BEEKS001 der Richtlinie 2014/53/EU entspricht. Der vollständige Text der EU-Konformitätserklärung steht unter der folgenden Internetadresse zur Verfügung: www.hidglobal/certifications

Dieses Produkt arbeitet mit den folgenden Frequenzen:

- 2,4-GHz-Band mit einer HF-Ausgangsleistung von weniger als **TBD** dBm EIRP

Finnish

HID Global vakuuttaa täten, että tämä radiolaite, mallinnumero BEEKS001, vastaa direktiiviä 2014/53/EU. EU-vaatimustenmukaisuusvakuutuksen koko teksti on saatavissa seuraavasta Internet-osoitteesta: www.hidglobal/certifications

Tämä tuote toimii seuraavilla taajuuksilla:

- 2,4 GHz:n kaista, RF-lähtöteho alle **TBD** dBm EIRP

Swedish

Härmed intygar HID Global att denna radioutrustning modell nummer BEEKS001 överensstämmer med direktiv 2014/53/EU. Den fullständiga texten med intyg om överensstämmelse för EU finns på följande internetadress: www.hidglobal/certifications

Den här produkten fungerar på följande frekvenser:

- 2,4 GHz-vband med en RF-uteffekt på mindre än **TBD** dBm e.i.r.p.

French

Par la présente, HID Global déclare que cet équipement radio Modèle BEEKS001 est conforme à la directive 2014/53/UE. Le texte intégral de la déclaration de conformité de l'UE est disponible sur le site Internet: www.hidglobal/certifications

Ce produit fonctionne aux fréquences suivantes:

- dans la bande de 2,4 GHz avec une puissance de sortie RF inférieure à **TBD** dBm PIRE

Italian

Con il presente documento, HID Global dichiara che la presente apparecchiatura radio modello BEEKS001 è conforme alla direttiva 2014/53/UE. Il testo completo della dichiarazione UE di conformità è disponibile su Internet al seguente indirizzo: www.hidglobal/certifications

Questo prodotto funziona alle seguenti frequenze:

- Banda a 2,4 GHz con potenza di uscita RF inferiore a **TBD** dBm EIRP

Polish

Firma HID Global deklaruje niniejszym, że to urządzenie radiowe, model numer BEEKS001, spełnia wymogi określone w Dyrektywie 2014/53/UE. Pełny tekst deklaracji zgodności UE jest dostępny pod następującym adresem internetowym: www.hidglobal/certifications

Ten produkt działa na następujących częstotliwościach:

- w paśmie 2,4 GHz z równoważną mocą wyjściową RF wypromieniowaną izotropowo (EIRP) mniejszą niż **TBD** dBm.

Croatian

Ovime tvrtka HID Global izjavljuje da je ova radijska oprema model BEEKS001 u skladu s Direktivom 2014/53/EU. Cjelokupan tekst europske izjave o sukladnosti dostupan je na sljedećoj internetskoj stranici: www.hidglobal/certifications

Ovaj proizvod radi pri sljedećim frekvencijama:

- pri frekvenciji od 2,4 GHz s izlaznom RF snagom manjom od **TBD** dBm e.i.r.p

Lithuanian

Šiuo „“ deklaruoja, kad šis radijo įrangos modelis HID Global, kurio numeris BEEKS001, atitinka Direktyvą 2014/53/EB. Visą ES atitikties deklaracijos tekstą galite rasti šiuo interneto adresu: www.hidglobal/certifications

Šis gaminytis veikia tokiais dažniais:

- 2,4 GHz dažnio diapazonas, RD išvesties galia yra mažesnė nei **TBD** dBm EIRP.

Slovenian

Družba HID Global izjavlja, da je ta radijska oprema, številka modela BEEKS001, v skladu z Direktivo 2014/53/EU. Celotno besedilo izjave EU o skladnosti je na voljo na naslednjem spletnem naslovu: www.hidglobal/certifications

Ta izdelek deluje pri naslednjih frekvencah:

- 2,4 GHz z izhodno močjo RF manj kot **TBD** dBm e.i.m.o. (EIRP)

Hungarian

A HID Global ezúton nyilatkozta, hogy ez az BEEKS001 típuszámú rádióberendezés megfelel a 2014/53/EU irányelvnek. Az EU megfélelősségi nyilatkozat teljes szövege elérhető a következő internetes címen: www.hidglobal/certifications

A termék a következő frekvenciákon üzemel:

- 2,4 GHz-es sáv, mely esetében RF kimeneti teljesítménye kevesebb, mint **TBD** dBm EIRP

Latvian

Ar šo uzņēmums HID Global apliecina, ka šī radioiekārta, modeļa numurs BEEKS001, atbilst Direktīvas 2014/53/ES prasībām. Pilnu ES atbilstības deklarācijas tekstu var skatīt vietnē www.hidglobal/certifications

Šis izstrādājums darbojas ar šādām frekvencēm:

- 2,4 GHz josla; radiofrekvences izvades jauda ir mazāka par **TBD** dBm (ekvivalentā izotropiski izstarotā jauda).

Slovak

Spoločnosť HID Global týmto vyhlasuje, že toto rádiové zariadenie, model BEEKS001, je v súlade so smernicou 2014/53/EÚ. Úplné znenie vyhlásenia o zhode so smernicami EÚ je k dispozícii na stránke: www.hidglobal/certifications

Toto zariadenie pracuje pri nasledujúcich frekvenciách:

- 2,4 GHz pásmo s RF výstupným výkonom nižším ako **TBD** dBm EIRP

Romanian

Prin prezenta, HID Global declară că acest echipament radio număr model BEEKS001 ste în conformitate cu Directiva 2014/53/UE. Textul complet al declarației de conformitate UE poate fi găsit la următoarea adresă de internet: www.hidglobal/certifications

Acest produs funcționează la următoarele frecvențe:

- în banda 2,4 GHz cu o putere de ieșire RF de mai puțin de **TBD** dBm E.I.R.P.

Portuguese

Por este meio, a HID Global declara que este modelo de equipamento de rádio, número BEEKS001, está em conformidade com a Diretiva 2014/53/UE. O texto completo da declaração de conformidade da UE está disponível no seguinte endereço da Internet: www.hidglobal/certifications

Este produto opera nas frequências seguintes:

- 2,4 GHz com uma potência de saída de RF inferior a **TBD** dBm e.i.r.p.

Spanish

Por la presente, HID Global declara que este equipo de radio, modelo número BEEKS001 cumple la Directiva 2014/53/EU. El texto completo de la Declaración de Conformidad CE está disponible en la siguiente dirección de internet: www.hidglobal/certifications

Este producto opera en las siguientes frecuencias:

- Banda de frecuencia de 2,4 GHz con una potencia de salida de RF (PIRE) de menos de **TBD** dBm.