

# HID® BEEKs Badge BVCARD01 Install Guide

PLT-05423, Rev. A.0

## Overview

The BEEKs™ Install Guide covers the basics of the BLE beacon setup and provisioning of equipment with Bluzone Cloud account and project. This install guide is intended for install technicians.

BEEKs™ Badge, personal BLE Beacons, worn as badges can provide valuable insight on individual location in numerous different applications.

The BEEKs Combo Badge is designed to optionally hold a standard ISO card in portrait format for visual identification of the bearer. The ISO card may contain printing and/or RFID, but is not mandatory for the operation of the BEEKs Combo Badge. The ISO card is affixed by peel and stick into the cavity of the BEEKs Combo badge and permanently glued into position.

When combined with HID Global's end-to-end IoT ecosystem, that 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.

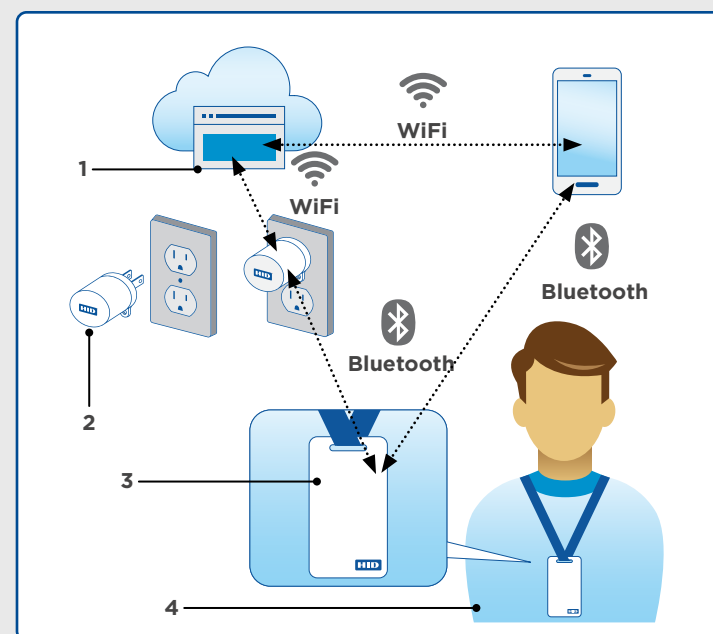
The BEEKs Beacons link to ID64 with a QR code printed/ labeled on the outer casing.

## System components



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

## Terminology

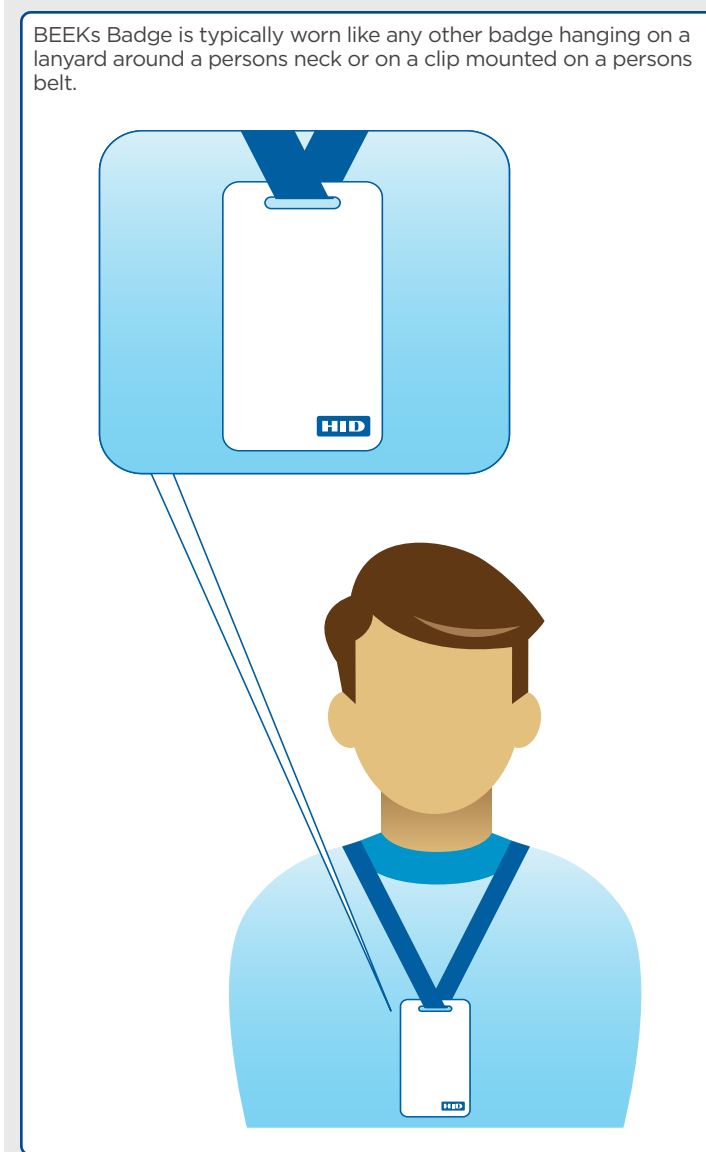


| ITEM | DESCRIPTION  |
|------|--|
| 1    | Bluzone – Secure cloud-based SaaS to centrally manage BEEKs via BluFi gateways. Additionally, monitor, store and analyze performance data collected from deployed BEEKs fleet. |
| 2    | BluFi Gateway – Receives data from BEEKs over Bluetooth and sends to Bluzone Cloud.  |
| 3    | BEEKs Badge – Sends data to BluFi.   |
| 4    | Person wearing the badge   |

## 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 in case of increased interference/blockages). For RTLS applications, the BEEKs Badge signal must be received by at least three BluFis in the vicinity.
- 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

## BEEKs locations



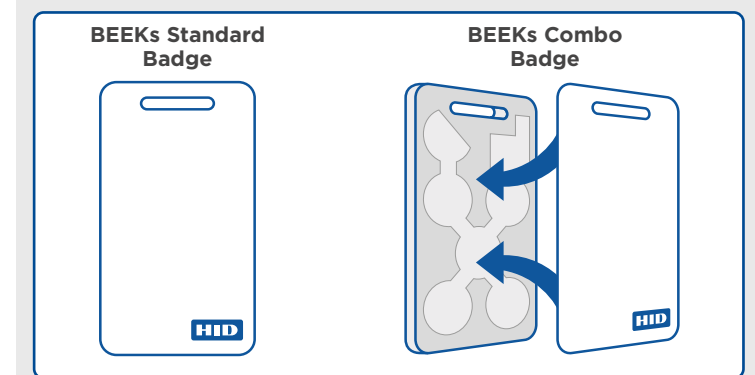
## Pre-requisites

- Set up Bluzone account
- Download Bluzone mobile app
- Additional installation guides are available and can be found at: <https://hid.gl/HID-BluFi-installation>

## Specifications

| BEEKs Badge - Model BVCARD01       |  |
|------------------------------------|--|
| Different configurations available |  |
| Standard                           | Combo                                      |
| Operating temperature              | -22°F to +170°F (-30°C to +77°C)           |
| Storage temperature                | -22°F to +170°F (-30°C to +77°C)           |
| <b>Specifications</b>              |  |
| Standard Protocol                  | Bluetooth Low Energy 4.2                   |
| Frequency range                    | 2400-2483.5 MHz                            |
| No of channels                     | 40   |
| Modulation                         | GFSK                                       |
| Mode of operation                  | Half duplex                                |
| RF max output power                | +5dBm (<10mW)                              |
| Antenna                            | 0 dBm single antenna, omnidirectional      |
| Bluetooth sensitivity              | -97dBm                                     |
| Transmission Power                 | -40dBm to -5dBm (3m to 150m line of sight) |

| Name             | BEEKs Standard Badge                           | BEEKs Combo Badge                                     |
|------------------|--|---|
| Part No.         | BVBBN4W  | BVBBN4WC  |
| Length x width   | 2.14 in x 3.39 in x 0.10 in (54 x 86 x 2.5 mm) | 2.19 in x 3.43 in x 0.15 in (55.84 x 87.30 x 3.94 mm) |
| Weight           | 0.5 oz (14 g)                                  |   |
| Housing material | Polycarbonate                                  |   |
| Data rates       | 1Mbit/s  |   |
| Battery type     | Six CR2016 rated at 90mAh Total 540mAh         |   |
| Battery duration | Up to 4 years                                  |   |

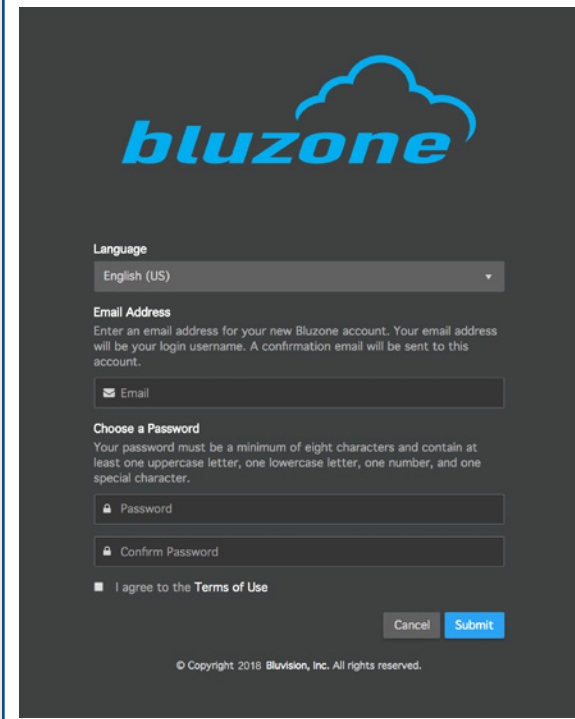
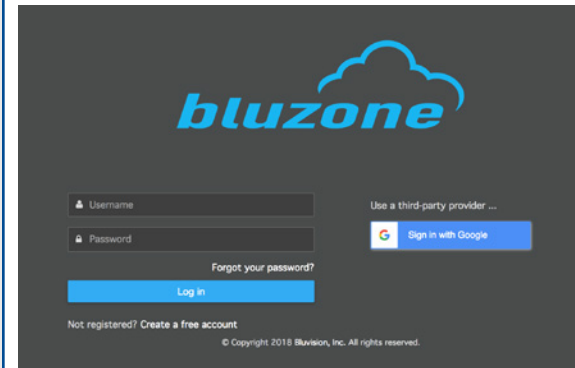




# 1 Initial setup

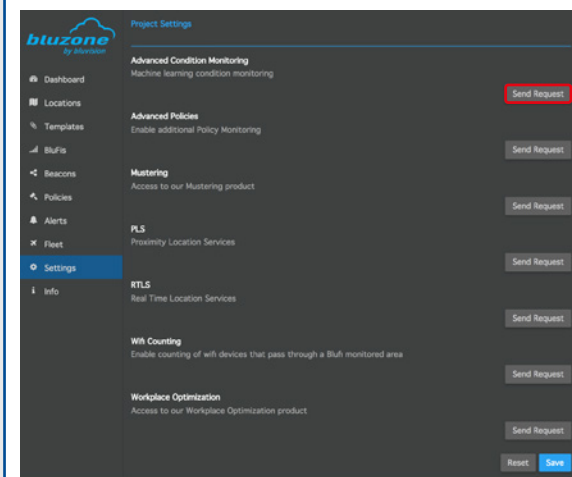
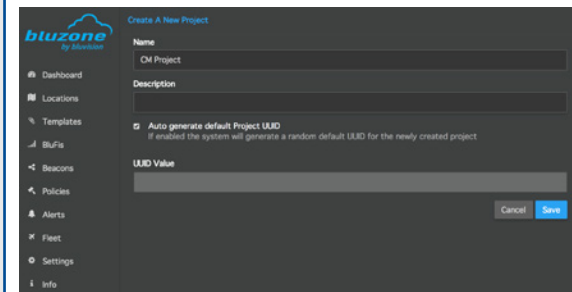
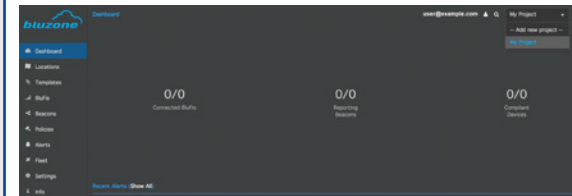
## 1. Account setup

1. Visit [bluzone.io](https://bluzone.io) and register a new account. Verify your email by clicking on the link emailed to you.



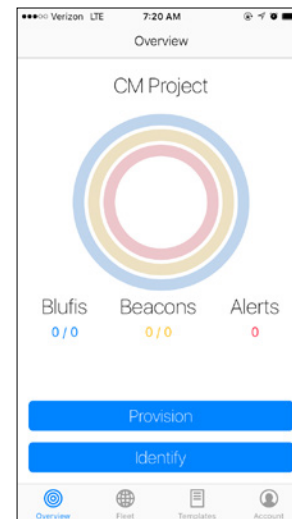
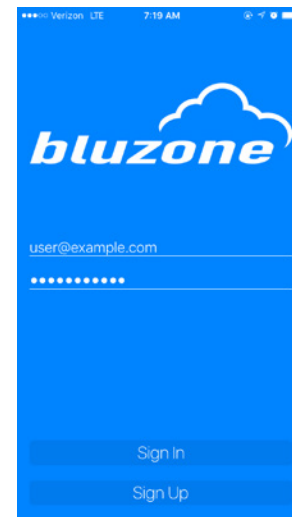
## 2. Project set up

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 e.g. RTLS, Status Monitoring or Advanced Condition Monitoring, depending on the SaaS model you have purchased. Your product features will be activated within 24 hours.



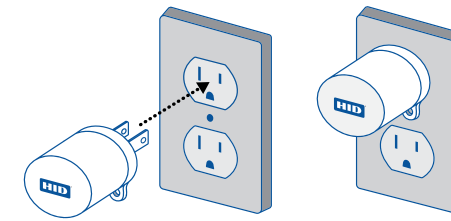
## 3. Bluzone mobile app setup

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



## 4. BluFi provisioning

1. In order to communicate with the Bluzone cloud and perform its location and duress functions, the BEEKs badge need to be in range of a properly configured BluFi set. See <https://hid.gl/HID-BluFi-AC-installation> for details.
2. Plug BluFi into power source for initial setup.



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



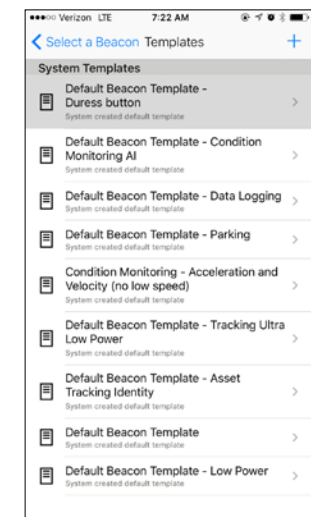
5. Follow each step within Bluzone app as instructed to define location and picture of the installation place (optional).
6. When prompted for Template, create a new Template with your WiFi SSID and password.

## 5. BEEK provisioning

1. Place BEEK close to BluFi.
2. For each beacon, hold mobile phone close to BEEK and select 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 e.g. "Default Beacon Template - Duress Button" for the BEEKs Duress Badge.



Optionally, assign the beacon a name that coincides with the owner of the badge. You may alternatively also assign keep the random number name for enhanced privacy.

The badge owner can at any any time slide a visual badge in form of a printed ISO card into the card holder of the BEEKs Badge. The ISO card can be removed and reinserted into the badge at any time and is not mandatory for the duress and RTLS functions.

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



## 2 BEEKs and BluFi installation

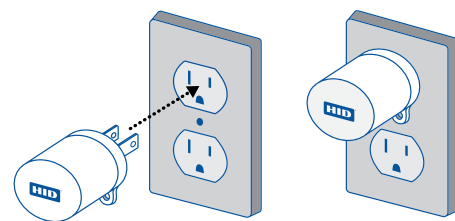
For more detailed information, visit <https://hid.gl/HID-BEEKs-installation>

### 1. BluFi installation

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

Depending on the desired accuracy of the location services, one BEEKs must be able to communicate with multiple BluFis at the same time to enable triangulation. For small rooms, one BluFi per room may be enough to show a BEEK in that room for location and duress functions.

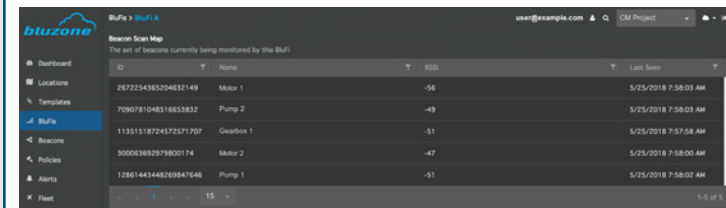
#### AC BluFi Option



### 2. BEEKs connection

BEEKs Badges are typically worn on a lanyard around a person's neck or on a belt clip. To test the badge, place it near a properly installed BluFi.

1. In Bluzone console, go to **BluFi > {BluFi Name} > Statistics** and scroll down to the Scan Map.
2. Verify that each beacon sees at least one BluFi. (-75 dBm or higher is desired).



### 3. Policy creation

The beacon is now ready to use.

Start creating policies and location setup as described in the on-line manual [hid.gl/On-line-manual](https://hid.gl/On-line-manual)

### 3 Regulation Information

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

#### SRD Model: BVCARD01

RF Specifications  
 Standard Protocol: BLE 4.2  
 Frequency Band: 2400-2483.5 MHz  
 No of RF channels: 40  
 RF output power:+5dBm  
 Modulation: GFSK  
 Antenna: PCB, 0 dBi

#### Communication Regulation The following is a list that applies:

##### US FCC – United States Compliance FCC ID: SL6-BVCARD02

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.

##### ISED - Canada Compliance

IC:24824-BVCARD02

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.

##### Singapore Compliance

Complies with  
**IMDA Standards**  
**DA108684**

Size 17mmx  
 9mm

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 BVCARD01 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](http://www.hidglobal/certifications)

This product operates at the following frequencies:

- 2.4 GHz band with an RF output power of less than +5dBm e.i.r.p

##### Czech

Společnost HID Global tímto prohlašuje, že toto radiové zařízení, číslo modelu BVCARD01, odpovídá požadavkům směrnice 2014/53/EU. Úplný text EU Prohlášení o shodě je k dispozici na následující internetové adrese: [www.hidglobal/certifications](http://www.hidglobal/certifications)

Tento výrobek používá následující frekvence:

- frekvenční pásmo 2.4 GHz, přičemž výstupní RF výkon je nižší než +5dBm EIRP

##### Greek

Δια του παρόντος, η HID Global δηλώνει ότι ο παρών ραδιοεξοπλισμός με αριθμό Μοντέλου BVCARD01 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](http://www.hidglobal/certifications)

Το παρόν προϊόν λειτουργεί στις ακόλουθες συχνότητες:

- Ζώνη των 2.4 GHz με ισχύ εξόδου ραδιοσυχνοτήτων (RF) μικρότερη από +5dBm

e.i.r.p. (ισοδύναμη ιστροπικά ακτινοβολούμενη ισχύς)

##### Dutch

Hierbij verklaart HID Global dat deze radioapparatuur modelnummer BVCARD01 in overeenstemming is met Richtlijn 2014/53/EU. De volledige tekst van de Europese conformiteitsverklaring is te vinden op de website: [www.hidglobal/certifications](http://www.hidglobal/certifications)

Dit product werkt op de volgende frequenties:

- 2.4 GHz-band met een RF-uitgangsvermogen van minder dan +5 dBm e.i.r.p.

##### Danish

HID Global erklærer hermed, at dette radioudstyr modelnummer BVCARD01 er i overensstemmelse med direktiv 2014/53/EU. Den fulde tekst i EU-overensstemmelseserklæringen kan læses her: [www.hidglobal/certifications](http://www.hidglobal/certifications)

Denne produkt fungerer ved følgende frekvenser:

- 2.4 GHz-bånd med en RF-udgangseffekt på mindre end +5dBm e.i.r.p.

##### Estonian

Käesolevaga kinnitab HID Global, et see raadioseadmestik

mudelinumbriga BVCARD01 on vastavuses direktiiviga 2014/53/EL. Kogu EL-i vastavusdeklaratsiooni tekst on saadaval järgmisel internetiaadressil: [www.hidglobal/certifications](http://www.hidglobal/certifications)

See toode töötab järgmistel sagedustel.

- 2.4 GHz ribalaiusel raadiosagedusliku väljundvõimsusega vähem kui +5 dBm e.i.r.p.

##### Maltese

Hawnhekk, HID Global tiddikjara li dan it-Tagħmir tar-Radju bin-numru tal-mudell BVCARD01 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](http://www.hidglobal/certifications)

Dan il-prodott jopera fil- frekwenzi li eġġjin:

- 2.4 GHz band b'RF output power ta' inqas minn +5 dBm e.i.r.p.

##### German

Hiermit erklärt HID Global, dass dieses Funkgerätmodell Nr.

BVCARD01 der Richtlinie 2014/53/EU entspricht. Der vollständige Text der EU-Konformitätserklärung steht unter der folgenden Internetadresse zur Verfügung:

[www.hidglobal/certifications](http://www.hidglobal/certifications)

Dieses Produkt arbeitet mit den folgenden Frequenzen:

- 2.4 GHz-Band mit einer HF-Ausgangsleistung von weniger als +5dBm EIRP

##### Finnish

HID Global vakuuttaa täten, että tämä radiolaitte, mallinumero BVCARD01, vastaa direktiivillä 2014/53/EU. EU-

vaatimustenmukaisuusvakuutuksen koko teksti on saatavissa seuraavasta Internet-osoitteesta: [www.hidglobal/certifications](http://www.hidglobal/certifications)

Tämä tuote toimii seuraavilla taajuuksilla:

- 2.4 GHz:n kaista, RF- lähtöteho alle +5 dBm EIRP

##### Swedish

Härmed intygar HID Global att denna radioutrustning modell nummer BVCARD01 överensstämmer med direktiv 2014/53/EU. Den fullständiga texten med intyg om överensstämmelse för EU finns på följande internetadress: [www.hidglobal/certifications](http://www.hidglobal/certifications)

Den här produkten fungerar på följande frekvenser:

- 2.4 GHz-band med en RF-uteffekt på mindre än +5dBm e.i.r.p.

##### French

Par la présente, HID Global déclare que cet équipement radio Modèle BVCARD01 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](http://www.hidglobal/certifications)

Ce produit fonctionne aux fréquences suivantes:

- dans la bande de 2.4 GHz avec une puissance de sortie RF inférieure à +5dBm PIRE

##### Italian

Con il presente documento, HID Global dichiara che la presente apparecchiatura radio modello BVCARD01 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](http://www.hidglobal/certifications)

Questo prodotto funziona alle seguenti frequenze:

- Banda a 2.4 GHz con potenza di uscita RF inferiore a +5 dBm EIRP

##### Polish

Firma HID Global deklaruje niniejszym, że to urządzenie radiowe, model numer BVCARD01, spełnia wymogi określone w Dyrektywie 2014/53/UE. Pełny tekst deklaracji zgodności UE jest dostępny pod

następującym adresem internetowym: [www.hidglobal/certifications](http://www.hidglobal/certifications)

Ten produkt działa na następujących częstotliwościach:

- w paśmie 2.4 GHz z równoważną mocą wyjściową RF wypromieniowaną izotropowo (EIRP) mniejszą niż +5dBm.

## 4 Regulation Information

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

|   |  |   |
|---|--|---|
| <p><b>Croatian</b></p> <p>Ovime tvrtka HID Global izjavljuje da je ova radijska oprema model BVCARD01 u skladu s Direktivom 2014/53/EU. Cjelokupan tekst europske izjave o sukladnosti dostupan je na sljedećoj internetskoj stranici: <a href="http://www.hidglobal/certifications">www.hidglobal/certifications</a></p> <p>Ovaj proizvod radi pri sljedećim frekvencijama:</p> <p>•pri frekvenciji od 2.4 GHz s izlaznom RF snagom manjom od +5dBm e.i.r.p.</p> | <p><b>Hungarian</b></p> <p>A HID Global ezúton nyilatkozta, hogy ez az BVCARD01 típuszámú rádióberendezés megfelel a 2014/53/EU irányelvnek. Az EU megfelelőségi nyilatkozat teljes szövege elérhető a következő internetes címen: <a href="http://www.hidglobal/certifications">www.hidglobal/certifications</a></p> <p>A termék a következő frekvenciákon üzemel:</p> <p>•2.4 GHz-es sáv, mely esetében RF kimeneti teljesítménye kevesebb, mint +5 dBm EIRP</p>         | <p><b>Romanian</b></p> <p>Prin prezenta, HID Global declară că acest echipament radio număr model BVCARD01 ste în conformitate cu Directiva 2014/53/UE. Textul complet al declarației de conformitate UE poate fi găsit la următoarea adresă de internet: <a href="http://www.hidglobal/certifications">www.hidglobal/certifications</a></p> <p>Acest produs funcționează la următoarele frecvențe:</p> <p>•în banda 2.4 GHz cu o putere de ieșire RF de mai puțin de +5dBm E.I.R.P.</p>                  |
| <p><b>Lithuanian</b></p> <p>Šiuo „“ deklaruoja, kad šis radijo įrangos modelis HID Global liis, kurio numeris BVCARD01, atitinka Direktyvą 2014/53/EB. Visą ES atitikties deklaracijos tekstą galite rasti šiuo interneto adresu: <a href="http://www.hidglobal/certifications">www.hidglobal/certifications</a></p> <p>Šis gaminys veikia tokiais dažniais:</p> <p>•2.4 GHz dažnio diapazonas, RD išvesties galia yra mažesnė nei +5 dBm EIRP.</p>               | <p><b>Latvian</b></p> <p>Ar šo uzņēmums HID Global apliecina, ka šī radioiekārta, modeļa numurs BVCARD01, atbilst Direktīvas 2014/53/ES prasībām. Pilnu ES atbilstības deklarācijas tekstu var skatīt vietnē <a href="http://www.hidglobal/certifications">www.hidglobal/certifications</a></p> <p>Šis izstrādājums darbojas ar šādām frekvencēm:</p> <p>•2.4 GHz josla; radiofrekvences izvades jauda ir mazāka par +5 dBm (ekvivalentā izotropiski izstarotā jauda).</p> | <p><b>Portuguese</b></p> <p>Por este meio, a HID Global declara que este modelo de equipamento de rádio, número BVCARD01, 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: <a href="http://www.hidglobal/certifications">www.hidglobal/certifications</a></p> <p>Este produto opera nas frequências seguintes:</p> <p>•2.4 GHz com uma potência de saída de RF inferior a +5dBm e.i.r.p.</p>        |
| <p><b>Slovenian</b></p> <p>Družba HID Global izjavlja, da je ta radijska oprema, številka modela BVCARD01, v skladu z Direktivo 2014/53/EU. Celotno besedilo izjave EU o skladnosti je na voljo na naslednjem spletnem naslovu: <a href="http://www.hidglobal/certifications">www.hidglobal/certifications</a></p> <p>Ta izdelek deluje pri naslednjih frekvencah:</p> <p>•2.4 GHz z izhodno močjo RF manj kot +5dBm e.i.m.o. (EIRP)</p>                          | <p><b>Slovak</b></p> <p>Spoločnosť HID Global týmto vyhlasuje, že toto rádiové zariadenie, model BVCARD01, je v súlade so smernicou 2014/53/EÚ. Úplné znenie vyhlásenia o zhode so smernicami EÚ je k dispozícii na stránke: <a href="http://www.hidglobal/certifications">www.hidglobal/certifications</a></p> <p>Toto zariadenie pracuje pri nasledujúcich frekvenciách:</p> <p>•2.4 GHz pásmo s RF výstupným výkonom nižším ako +5dBm EIRP</p>                          | <p><b>Spanish</b></p> <p>Por la presente, HID Global declara que este equipo de radio, modelo número BVCARD01 cumple la Directiva 2014/53/EU. El texto completo de la Declaración de Conformidad CE está disponible en la siguiente dirección de internet: <a href="http://www.hidglobal/certifications">www.hidglobal/certifications</a></p> <p>Este producto opera en las siguientes frecuencias:</p> <p>•Banda de frecuencia de 2.4 GHz con una potencia de salida de RF (PIRE) de menos de +5dBm.</p> |