



# SERVICE MANUAL

NF-03 HF RFID READER

**NF-03**

Tentative Edition

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## **DIGI®**

The material contained in this document is proprietary and for information only and is subject to change without notice. Teraoka Weigh-System assumes no responsibility for any errors or damages arising from misinterpretation of any procedure.

Screen displays, operating procedures and supporting features might vary with different software version releases.

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Singapore 159088**

## ii) Safety Information

The operator of the equipment shall comply with the safety and warning indications and procedures outlined in this document. Teraoka Weigh-System Pte Ltd assumes no responsibility or liability for failure to comply with these requirements.

- Repair and servicing of product, shall only be carried out by trained and qualified personnel.

### Disclaimer:

Specifications are subject to change without notice. All dimensions shown are approximate. Please be aware that Teraoka has indicated that its hardware and software used in the product may require additional updates in the future as our product is continually under development. The need for such updates most likely applies to the Printer software.



### CAUTIONS:

**FOR PLUGGABLE EQUIPMENT, THAT THE SOCKET-OUTLET SHALL BE INSTALLED NEAR THE EQUIPMENT AND SHALL BE EASILY ACCESSIBLE.**

**POUR LE MATÉRIEL RACCORDÉ PAR PRISE DE COURANT, LE SOCLE DE PRISE DE COURANT DOIT ÊTRE  
INSALLÉ À PROXIMITÉ DU MATÉRIEL ET DOIT ÊTRE AISÉMENT ACCESSIBLE.**

**FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATING OF FUSE.**

**POUR NE PAS COMPROMETTRE LA PROTECTION CONTRE LES RISQUES D'INCENDIE,  
REPLACER PAR UN FUSIBLE DE MÊME TYPE ET DE MÊME CARACTÉRISTIQUES  
NOMINALES.**

**DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER. DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS**

**IL Y A DANGER D'EXPLOSION S'IL Y A REMPLACEMENT INCORRECT DE LA BATTERIE.  
REPLACER UNIQUEMENT AVEC UNE BATTERIE DU MÊME TYPE OU D'UN TYPE  
RECOMMANDÉ PAR LE CONSTRUCTEUR. METTRE AU RÉBUT LES BATTERIES USAGÉES  
CONFORMÉMENT AUX INSTRUCTIONS DU FABRICANT.**

## iii) Safety Regulations



### Federal Communication Commission Interference Statement

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 of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.

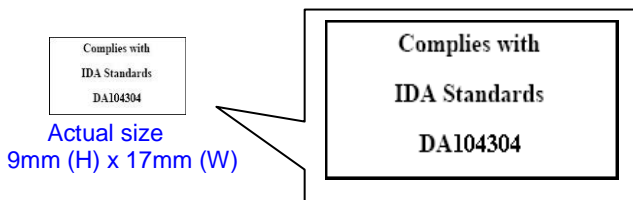
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.

**IDA Compliance Statement: (Singapore)**

This equipment registered to comply with IDA (Info-Communications Development Authority of Singapore) Standard under Dealer's Class License.



**Industry Canada statement:**

This device complies with Industry Canada's licence-exempt RSSs. 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;
- 2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

**Radiation Exposure Statement:**

This equipment complies with Canada 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.

**Déclaration d'exposition aux radiations:**

Cet équipement est conforme Canada limites d'exposition aux radiations dans un environnement non contrôlé. Cet équipement doit être installé et utilisé à distance minimum de 20cm entre le radiateur et votre corps.

## 1. General

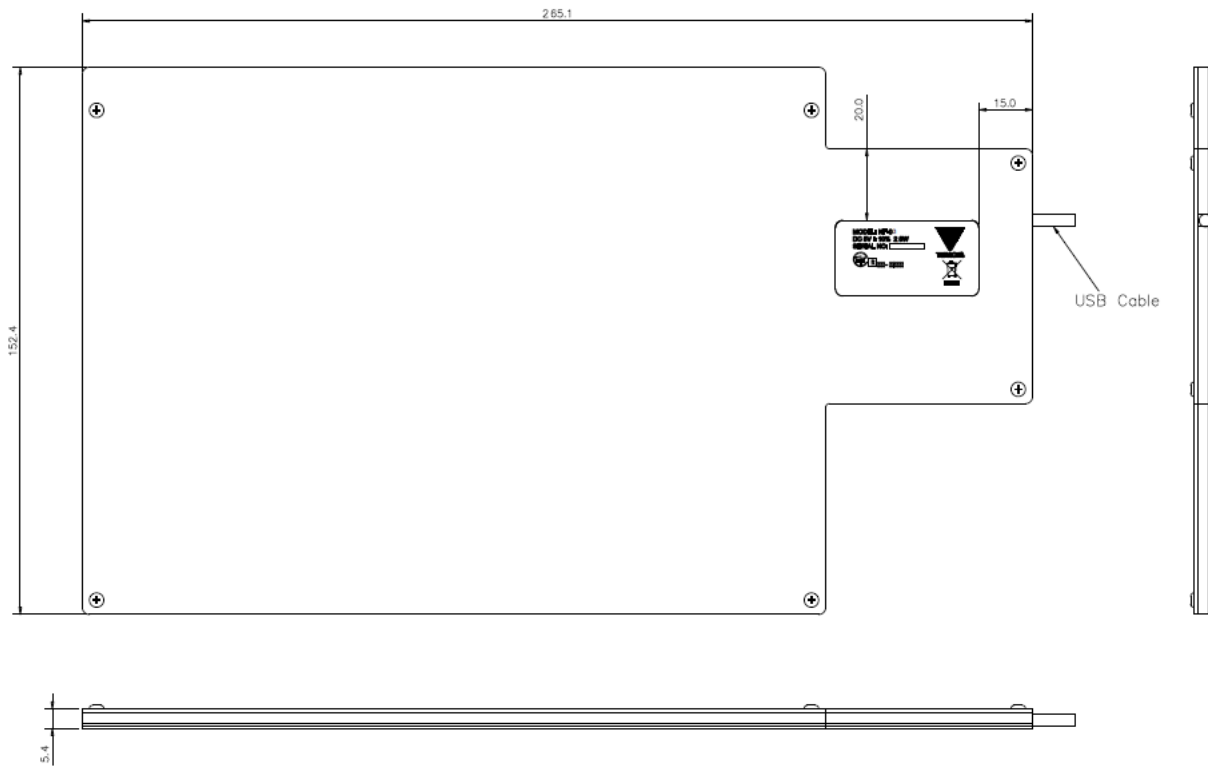
### 1.1 Model Specification

<b>Model</b>	:	NF-03
<b>Dimension (in mm)</b>	:	265.0 (L) X 152.4 (W) X 5.4 (H)
<b>Modulation</b>	:	ASK
<b>Frequency Range</b>	:	13.56MHz
<b>Data Rate</b>	:	53 kbps
<b>Scanning Range</b>	:	15cm (ypical)
<b>Voltage &amp; Current</b>	:	5Vdc, 450mA (max)
<b>USB cable length</b>	:	2meter
<b>Housing material</b>	:	ABS

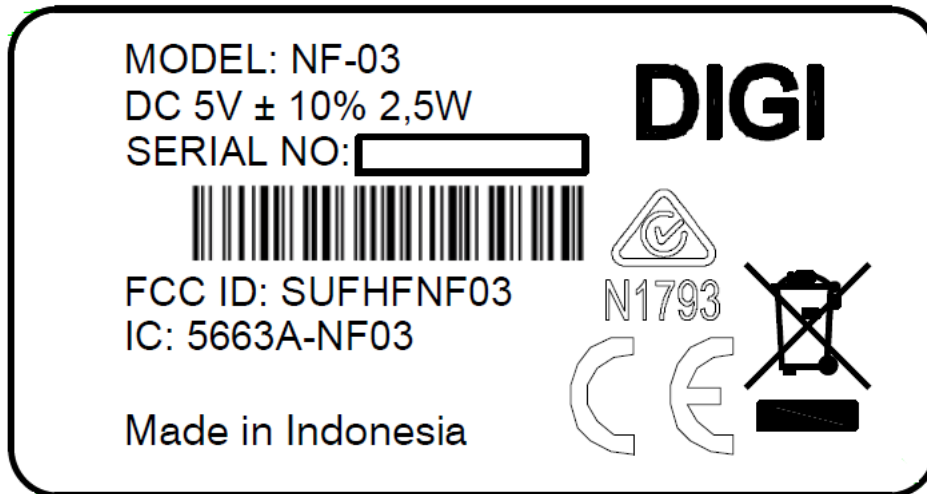
### 1.2 Operating Specification

<b>Power Source</b>	:	External	:	From USB 5V DC source
		Internal	:	From SM6000 scale USB port
<b>Operating Temperature</b>	:	0 °C to 40 °C		
<b>Humidity</b>	:	95% max non condensing		

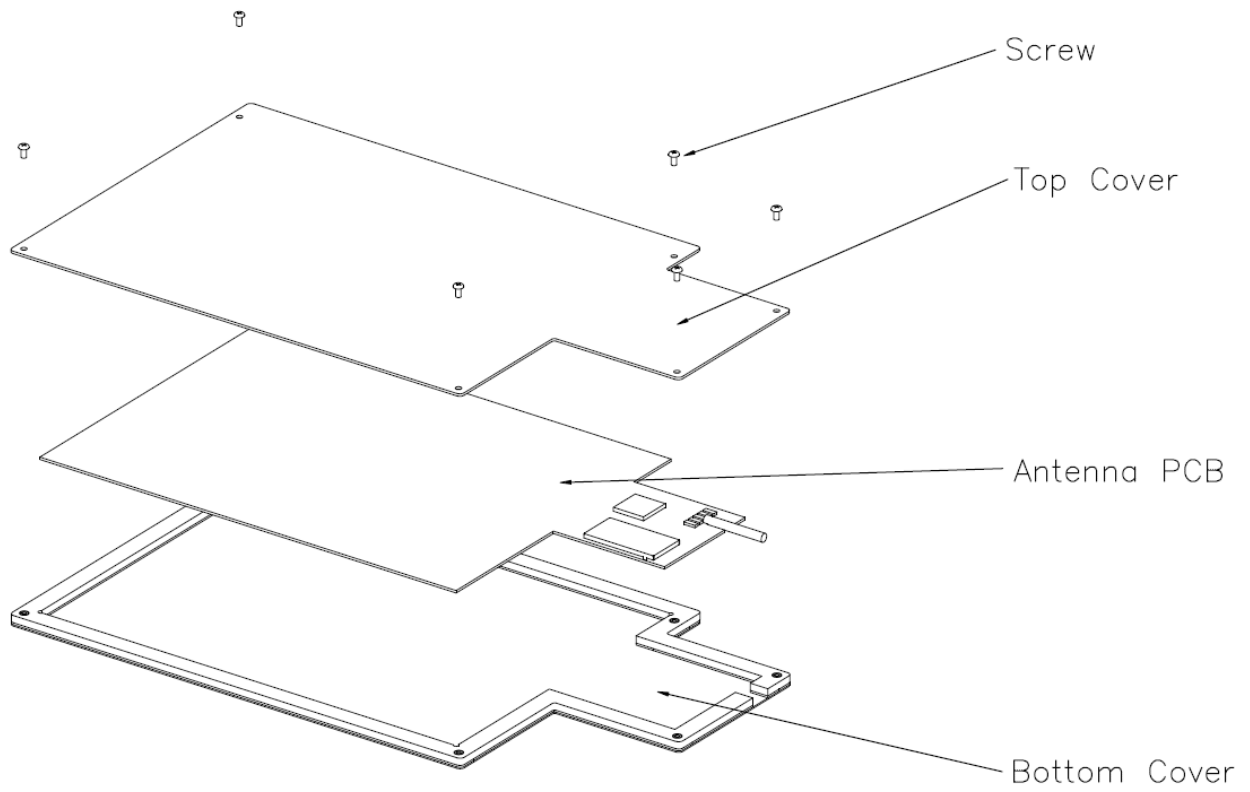
2.1 Dimension



2.2 Nameplate



2.3 Exploded View





### 3. NF-03 Setup Diagram

#### 3.1 Setup Diagram

The NF-03 RFID reader to be fixed at designated location of Digi machine, eg weighing scale

The NF-03 will detect HF passive tags which contain container tare weight information. The typical detection range between tag and reader is 15cm.

SM-6000 Machine with NF-03 setup example

