Australian Government
Department of Industry, Science and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval

NMI S818

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that an approval for use for trade has been granted in respect of the instruments herein described.

Tiliter model TS105 Point of Sale (POS) System

submitted by Tiliter Pty Ltd
Level 1 / 477 Pitt St
Ultimo NSW 2007

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This approval has been granted with reference to document NMI M 7, *Pattern Approval Specifications for Point of Sale Systems*, dated June 2012.

This approval is subject to review at the decision of the Chief Metrologist in accordance with the conditions specified in the document NMI P 106.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved – certificate issued	09/07/21
1	Pattern amended (Model and Key features) – Variant 1 & 2 approved – certificate issued	10/06/22
2	Variant 3 approved – certificate issued	13/03/23
3	Pattern amended (submitted by) & Variant 4 approved – certificate issued	21/08/25

CONDITIONS OF APPROVAL

General

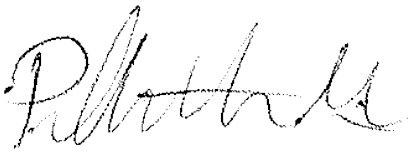
Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI S818' and only by persons authorised by the submittor.

It is the submittor's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with document NMI P 106.

Special

Certain aspects of this instrument (in particular label printing formats) are able to be configured by the user. Whilst NMI believes that acceptable formats can be achieved for typical basic sales modes, it is also possible for the instrument to be configured to produce unacceptable formats, and use of some formats may be inappropriate for different sales modes. It is the responsibility of the user to ensure that acceptable and appropriate formats are used in any particular situation.

Signed by a person authorised by the Chief Metrologist to exercise their powers under Regulation 60 of the *National Measurement Regulations 1999*.



Phillip Mitchell
A/g Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No S818

1. Description of Pattern approved on 09/07/21

A Tiliter model TS105 (**) point of sale (POS) system to provide certain additional facilities for transactions when interfaced to compatible (#) NMI-approved measuring instruments granted with reference to document NMI M 7.

(**) This is the basic model number which may have suffixes, in the form TS105.xx, where x may be any digit representing non-metrological features

1.1 Key Features

- The system provides customer operated point of sale arrangements for a CAS model PD-II self-indicating non-automatic weighing instrument (approval NMI 6/4C/237) or other compatible (#1) NMI-approved measuring instruments.
- The system receives measurement data from the output interface of the approved measuring instrument and computes prices using a product look up (PLU) facility.
- The system computes prices for measured and non-measured items and is approved for use for transactions direct to the public. (#2)
- The system is able to apply a pre-set tare value up to the maximum capacity of the approved measuring instrument. Pre-set tare values may be keyboard-entered or stored (e.g. within a PLU facility).
- The system may be connected in a network to share common PLU data, and to accumulate and retrieve management information.
- The system displays and may print barcodes which may be used to finalise transactions with other Point of Sale systems (#3).
- The system includes a camera used to identify items placed on the load receptor of the NMI-approved measuring instrument.

(#1) ‘Compatible’ is defined to mean that no additions/changes to the legally relevant hardware/software specified in this approval are required for satisfactory operation of the system.

(#2) The system may be configured which does not compute price and indicates measured quantity and product details only.

(#3) **Note**: Other Point of Sale systems which receive measurement data through barcodes produced by the Tiliter TS105 have not been assessed and are outside the scope of this Certificate of Approval. This Certificate does not constitute or imply approval for these systems.

1.2 System Description

The Tiliter model TS105 point of sale (POS) system (Figure 1) comprises a metal enclosure which secures the NMI-approved measuring instrument and POS Controller. The POS Controller, Electronic Indicator, Camera and Label Printer are attached to the enclosure.

The primary indicator of the approved measuring instrument is accessed through a transparent panel on the front or side of the enclosure (Figure 2).

Note: Access to the tare button of the NMI-approved measuring instrument is prevented by the transparent panel. The system is configured for use with pre-set tare values.

The system components shall not interact with the measuring instrument in a way that would cause an incorrect indication of the measured quantity or price.

(i) POS Controller

The Tiliter model TS105 POS controller comprises a custom machine vision inference computer or equivalent (*) that operates a Linux-based operating system running Tiliter AI Scale legally relevant version 1.0.27 software. Non-legally relevant software build versions may also be shown.

The software version number is displayed by pressing the settings icon in the top right corner from the main screen, followed by the icon in the top left corner of the menu shown. Build configuration options shown on this menu indicate configurations with or without price calculation function (Figure 3).

(ii) Electronic Indications

Indications shall satisfy the requirements of document NMI M 7, *Pattern Approval Specifications for Point of Sale Systems*.

A Posiflex model PS-3415E touch sensitive PC-based device or equivalent (*) is connected to the POS controller to provide an indication for the customer (Figure 4 & 5).

The Posiflex model PS-3415E device or equivalent (*) operates a Windows based operating system and is used to interface with the Webserver application of the Tiliter AI Scale software operating on the POS Controller.

Information additional to that required by document NMI M 7, including totalisation details and product images, may also be indicated.

(iii) Printing Devices

Labels shall satisfy the requirements of document NMI M 7, *Pattern Approval Specifications for Point of Sale Systems*.

A Bixolon model SRP-S300 printer or equivalent (*) is connected to provide a label printing facility. A typical label is shown in Figure 6.

(*) ‘Equivalent’ is defined to mean other proprietary equipment of the same or better specifications requiring no changes to the software specified in this approval for satisfactory operation of the system.

(iv) Product Recognition

The system includes a camera and lighting system which is used to detect items placed on the measuring instrument. The detected items are identified by image processing software and facilitate identification of the item in the PLU facility (Figure 7 and 8).

The system will display one, two or four options depending on the confidence of the product being identified. A facility exists for the user to override the automatic predictions.

1.3 Verification Provision

Provision is made for the application of a verification mark.

1.4 Descriptive Markings and Notices

The POS controller is marked in a clear and permanent manner, in one location, with the following information:

Submittor's name or mark	……..
Serial number or other unique identifier	……..
Pattern approval number	NMI S818

Instruments with the transparent panel located on the side of the enclosure as described in **1.2 System Description** shall carry a notice advising the user of the location of the window. This window shall not be obstructed during installation.

2. Description of Variant 1 approved on 10/06/22

The pattern or variants operating Legally Relevant software version 1.0.89 defined in clause **1.2 (i) POS Controller.**

Legally Relevant software changes to align with international approvals. Capacity and scale intervals of the connected measuring instrument may be shown on the Touch Display.

Customers may toggle organic product option where the PLU for organic is provided in the PLU facility (Figures 4 and 8). Organic product may be presented using product recognition **1.2 (iv) Product Recognition.**

Systems may be configured without the product recognition function described in **1.2 (iv) Product Recognition**. Users are directed to select the product to from the available list in the in the PLU facility. Software configurations are shown on the software version menu described in **1.2 (i) POS Controller** with "recognition" values of either True or False (Figure 3).

3. Description of Variant 2 approved on 10/06/22

The pattern or variants may be configured without a label printer as described in **1.2 (iii) Printing Device** (Figure 9).

Transaction data may be transmitted by scanning the barcode on the electronic display (Figure 5).

Software configurations are shown on the software version menu described in **1.2 (i) POS Controller** with "printer" values of either True or False (Figure 3).

4. Description of Variant 3 approved on 13/03/23

With the POS Controller operating updated Legally Relevant software versions with the following processor configurations:

- TV6 Processor Hardware – Legally Relevant software version 1.0.95
- TV4/5 Processor Hardware – Legally Relevant software version 1.0.95

5. Description of Variant 4 approved on 21/08/25

A Tiliter model TS105.2 point of sale (POS) system (Figure 10) which is similar to the pattern. This variant has the POS controller functionality incorporated into the electronic indicator and runs an updated software version 1.0.116. The updated software includes an updated user interface shown in Figure 11 and 12.

The typical labels are shown in Figure 13.

Capacity and scale intervals of the connected measuring instrument may be shown on the Touch Display.

Customers may toggle an organic product option where the PLU for organic is provided in the PLU facility (Figures 11 and 12). Organic products may be presented using product recognition **1.2 (iv) Product Recognition.**

The system may be configured with or without the label printer accessory, as described in **1.2 (iii) Printing Device** (Figure 9).

TEST PROCEDURE No S818

The POS system shall be tested in addition to any tests specified in the approval documentation for the measuring instrument/s to which the POS system is connected, as appropriate

The POS system shall be tested in the normal operational mode of the instrument and device, not in 'training mode' or any other management mode.

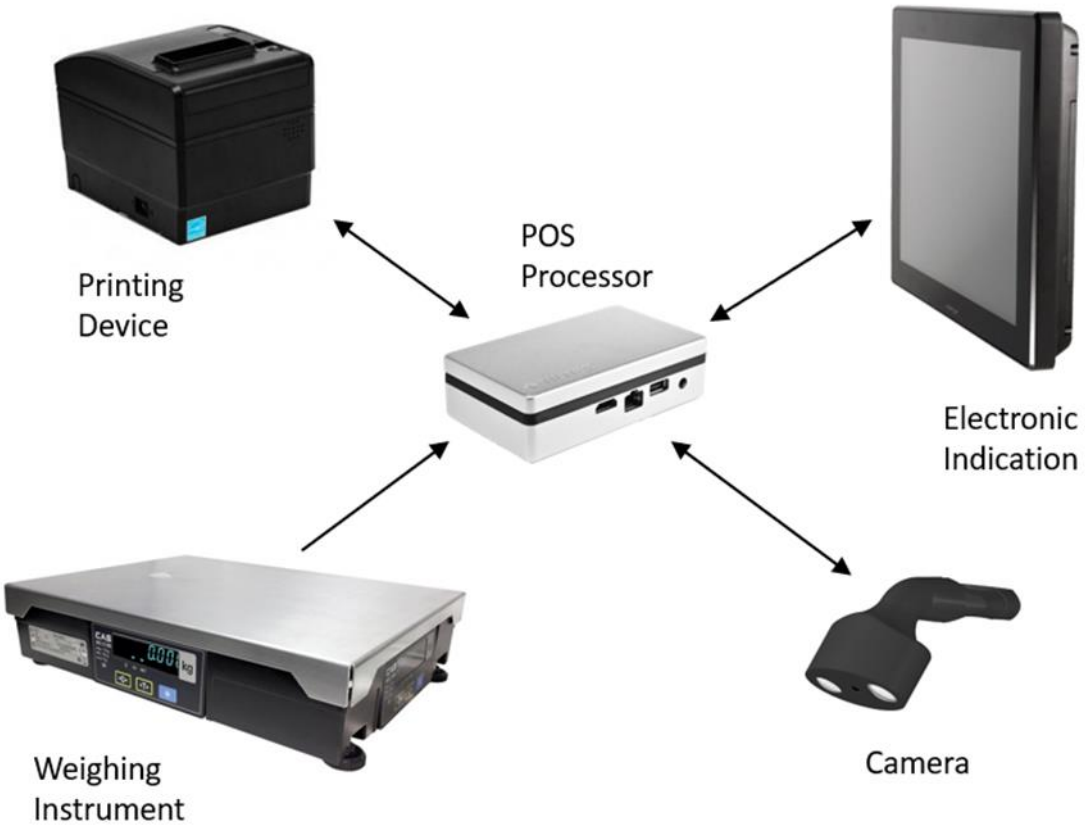
Maximum Permissible Error

The maximum permissible error for price computation is ±0.5 cent.

TESTS

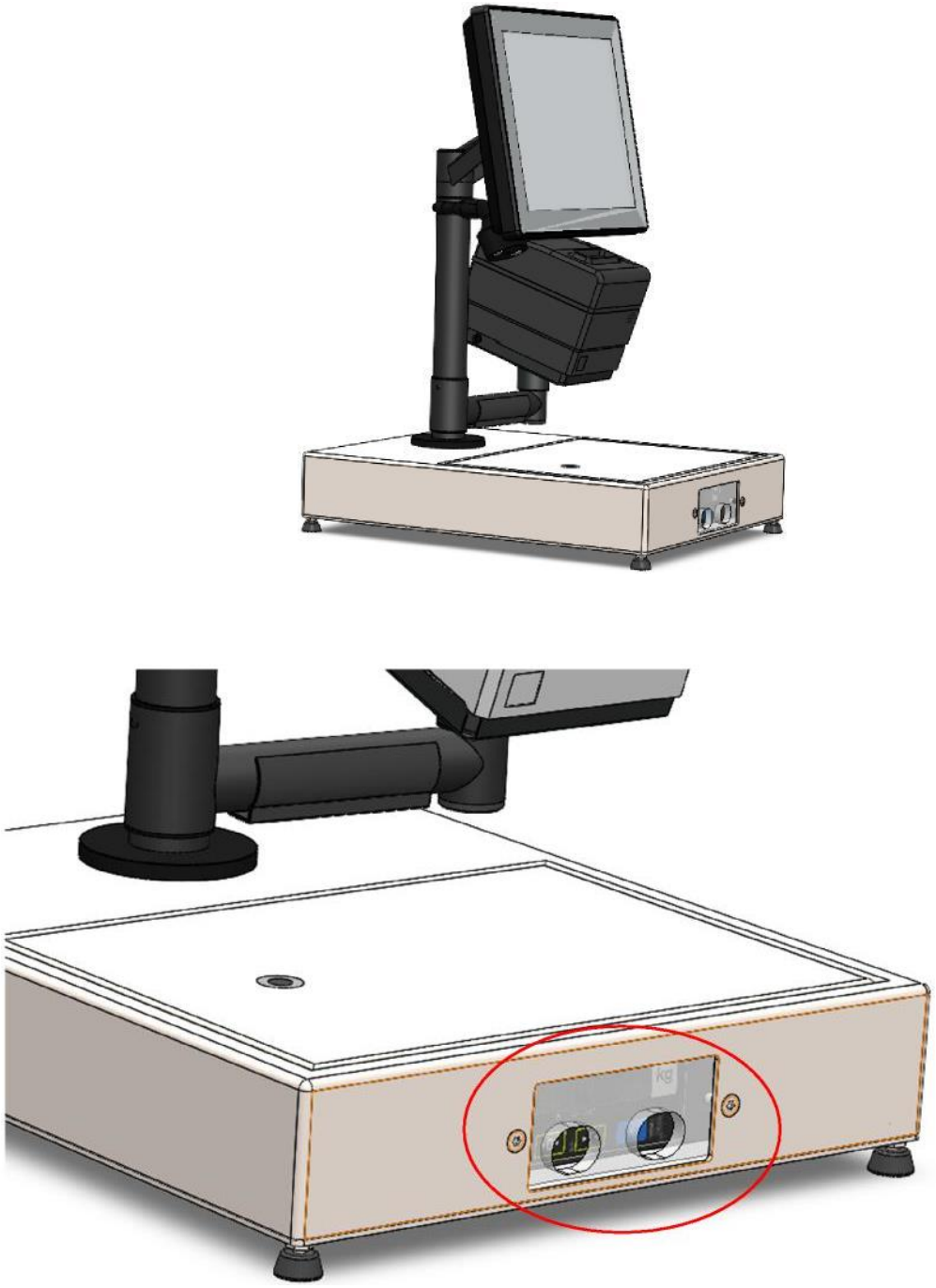
1. Check the legally relevant software version number.
2. Check that the POS system faithfully reproduces the measurement data in the same units and scale interval as the connected approved measuring instrument, e.g. test by using a weighed item PLU without a stored tare.
3. For systems with a build configuration option Price_calculator: True (Figure 3), check that the system performs correct price computation, and computes and indicates a correct unrounded price.
4. Perform a measurement with a preset tare applied and confirm that the POS system correctly calculates and indicates a net measurement result.
5. For systems configured with a label printer and build configuration option printer: True (Figure 3), ensure that electronic indications and printed labels are in accordance with document NMI M 7.
6. Check that instruments are marked and carry notices in accordance with clause **1.4 Descriptive Markings and Notices**

FIGURE S818 – 1



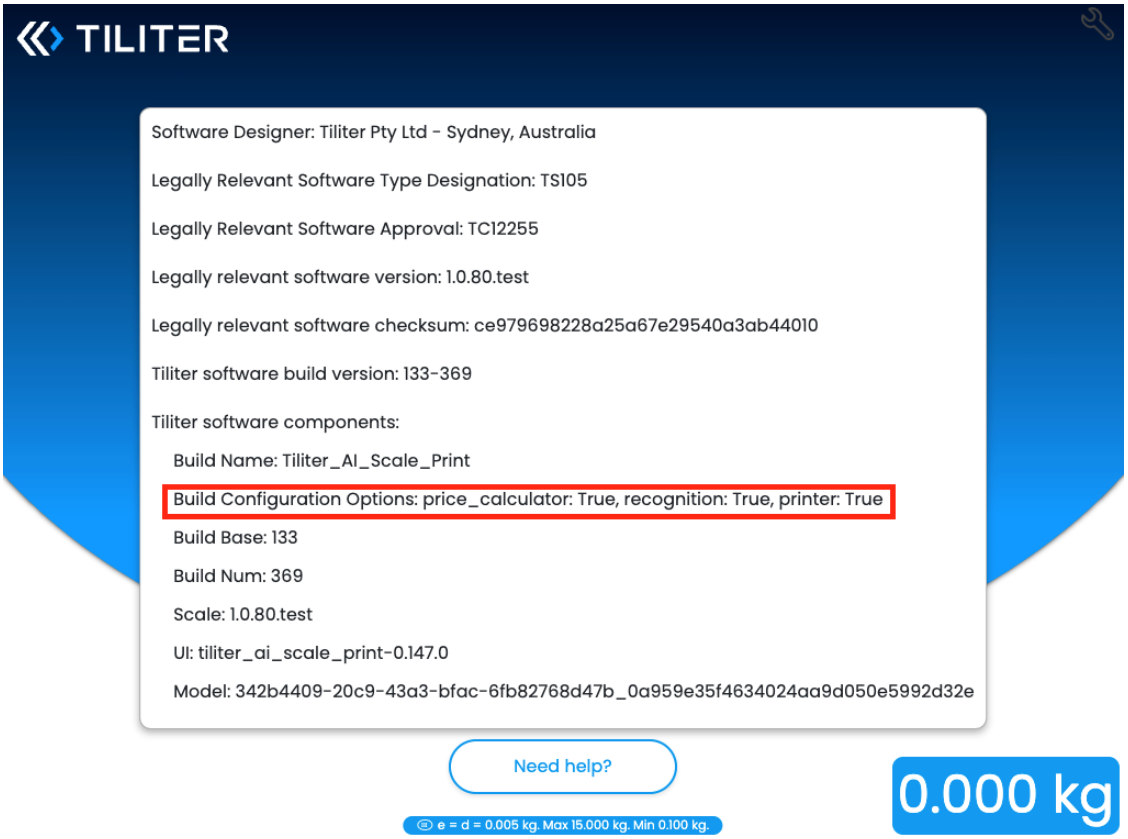
Tiliter model TS105 Point of Sale (POS) system overview

FIGURE S818 – 2



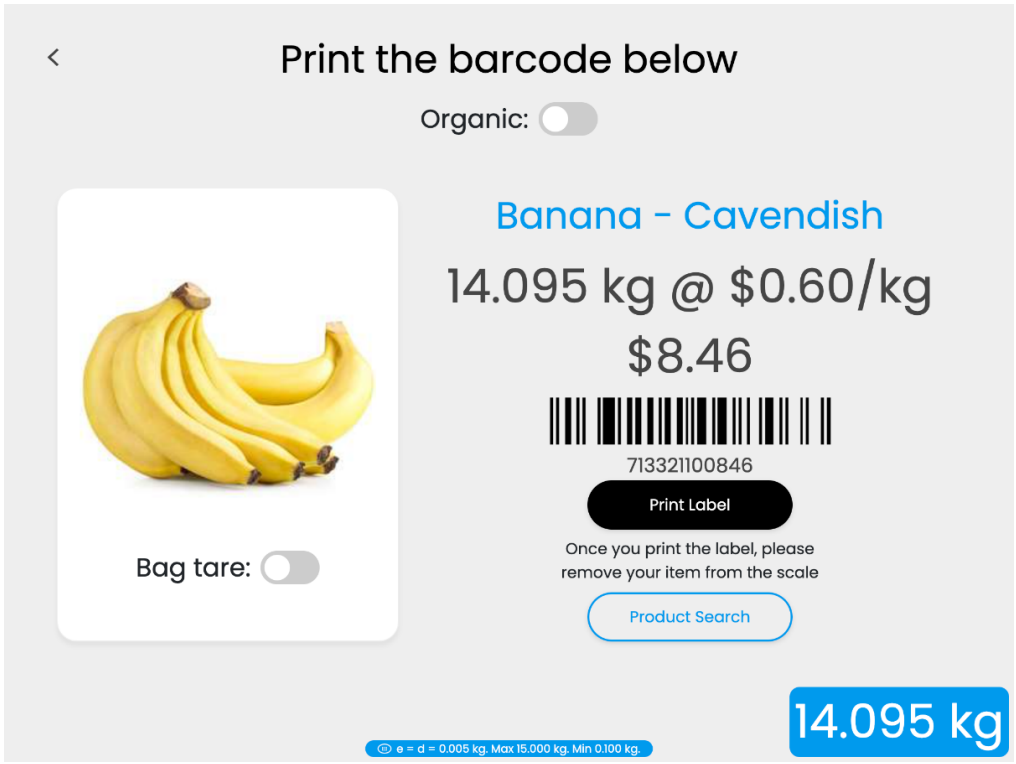
Tiliter model TS105 Point of Sale system
Note: The shape of the primary indicator window may vary slightly.

Figure S818 – 3



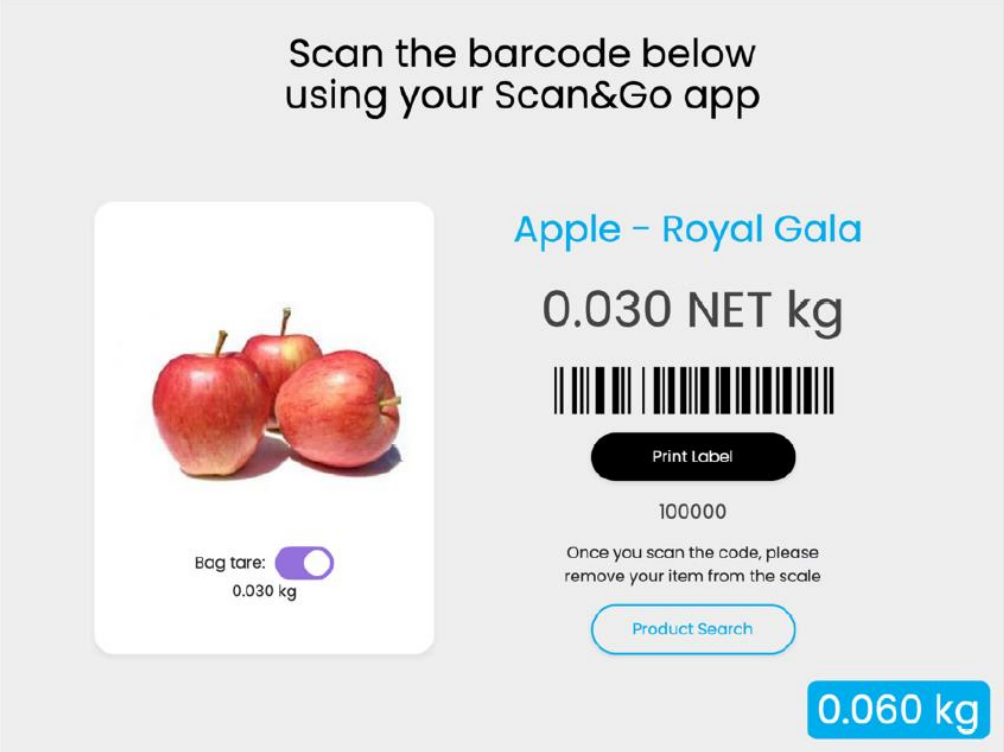
Typical menu depicting software version.
Configuration flags highlighted in red rectangle.

FIGURE S818 – 4



Typical user interface depicting with Price Calculation (Pattern) and Organic Product selection (Variant 1).

FIGURE S818 – 5

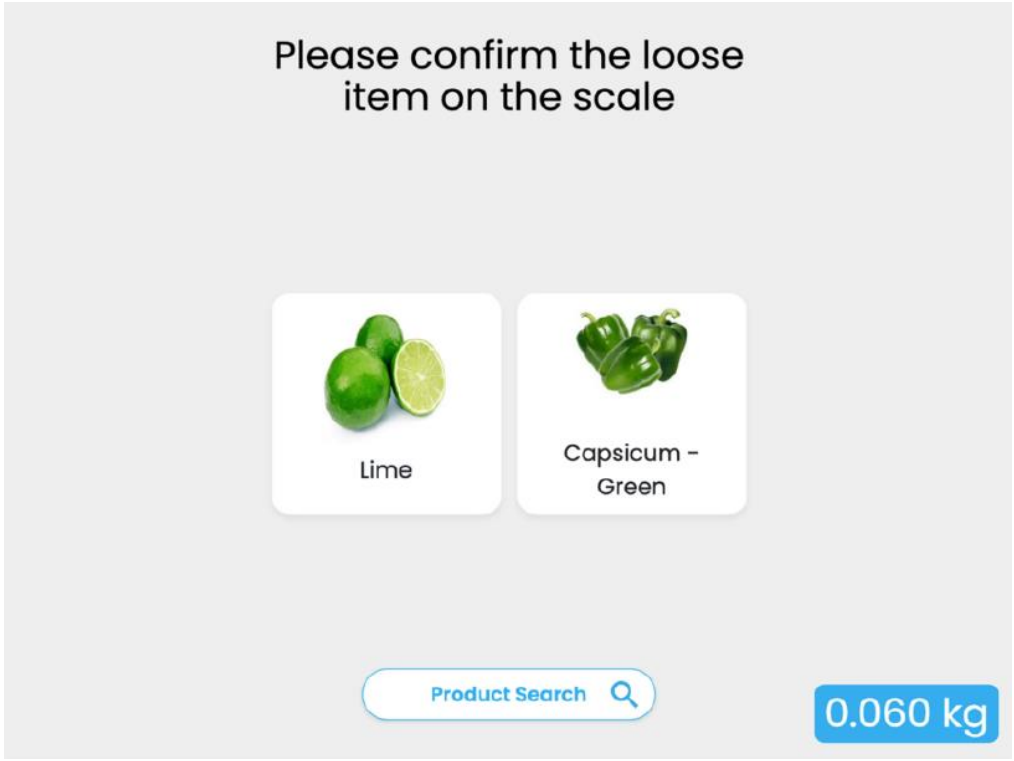


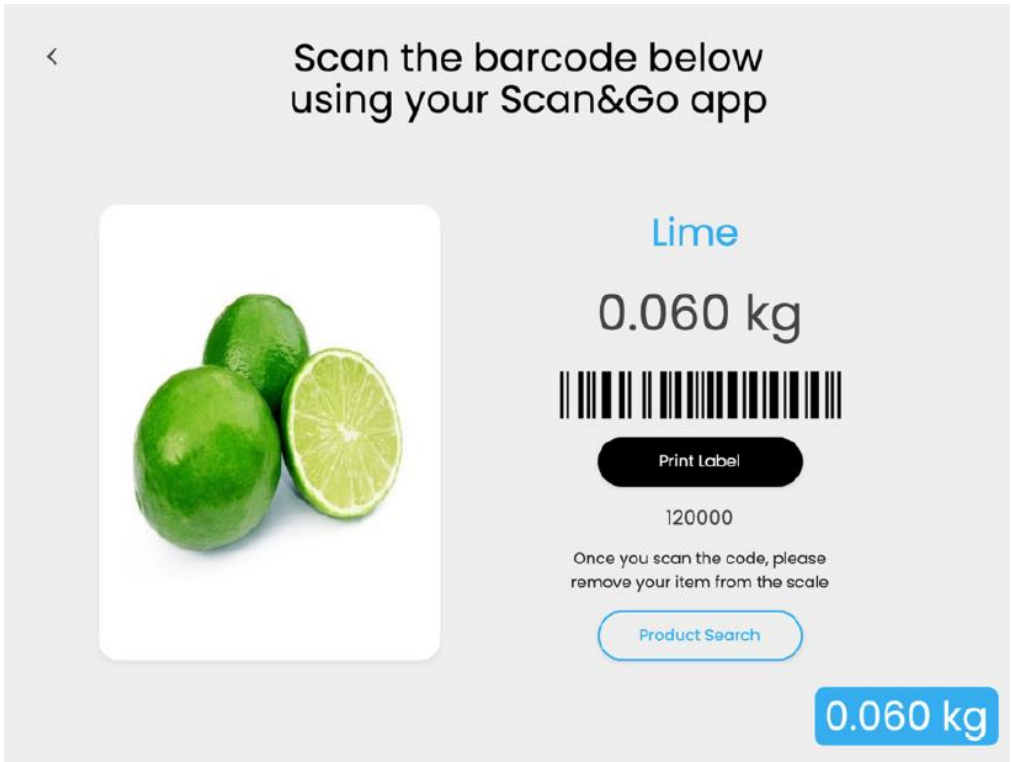
Typical customer display with no price calculation and tare applied

FIGURE S818 – 6

A typical label

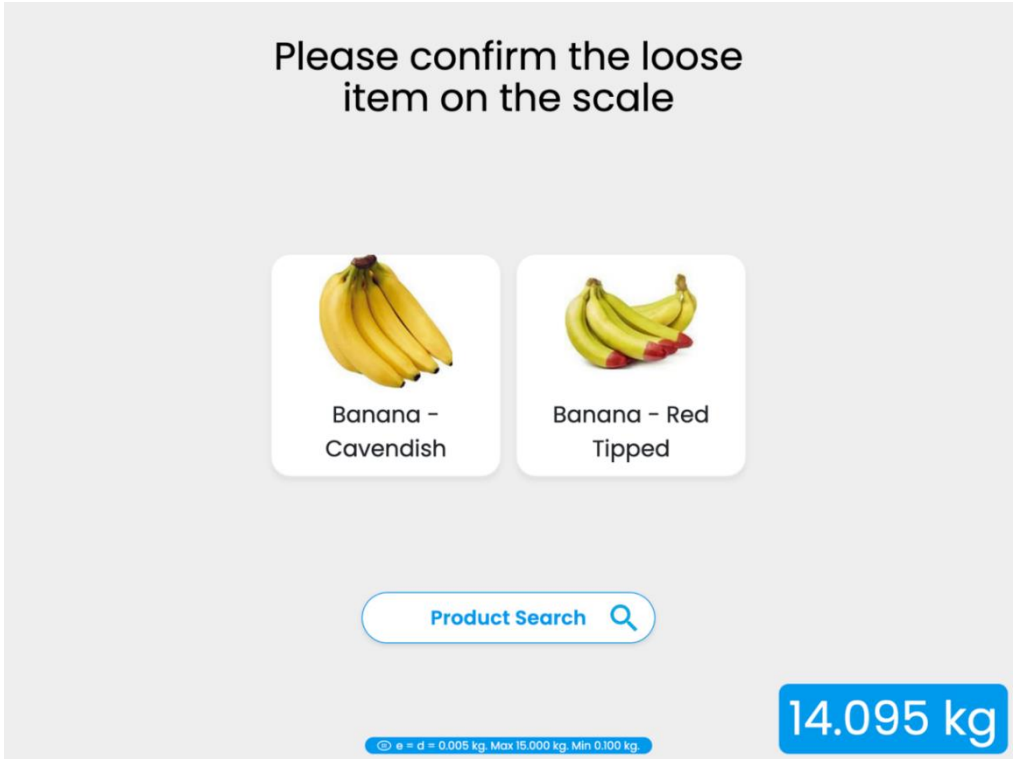
FIGURE S818 – 7





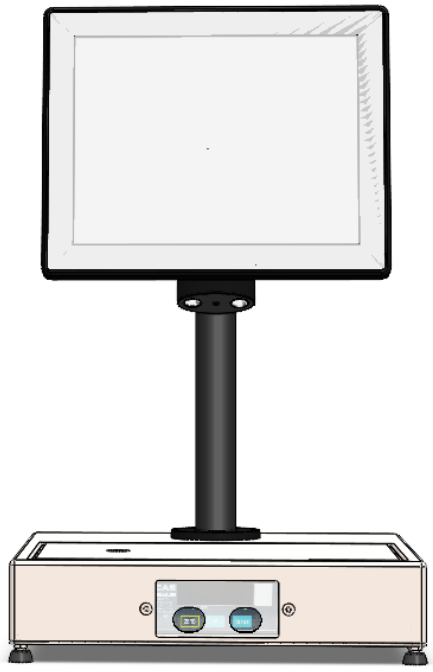
Typical user interface depicting detection of items

FIGURE S818 – 8



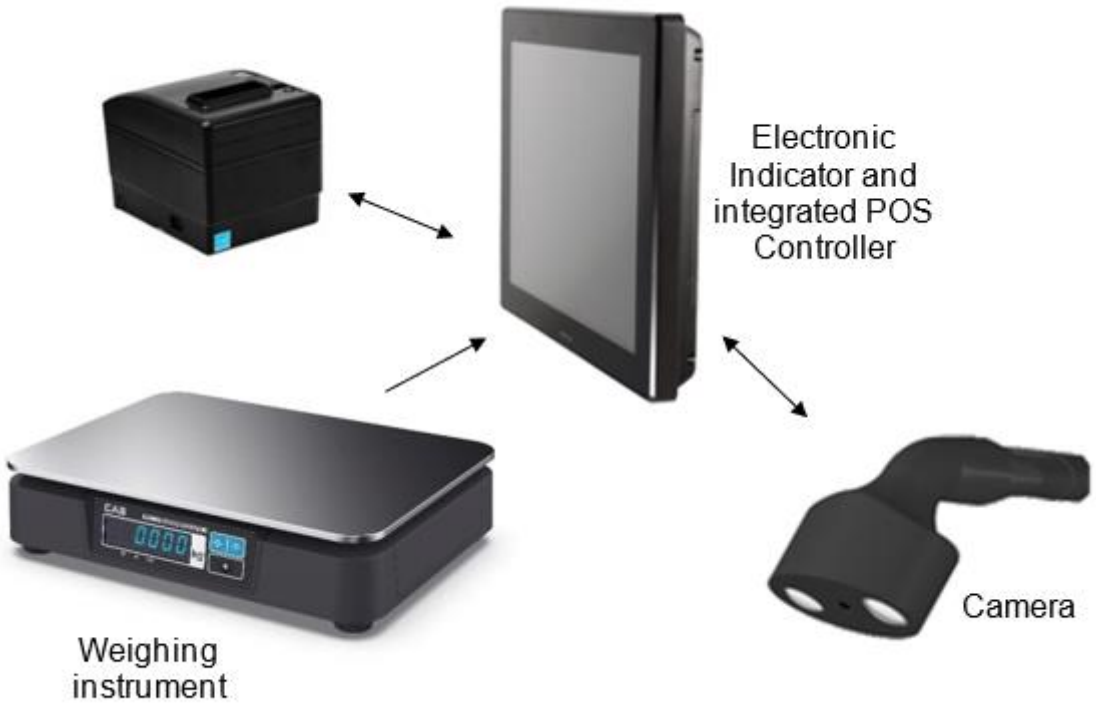
Typical user interface depicting top 2 selection interface.

FIGURE S818 – 9



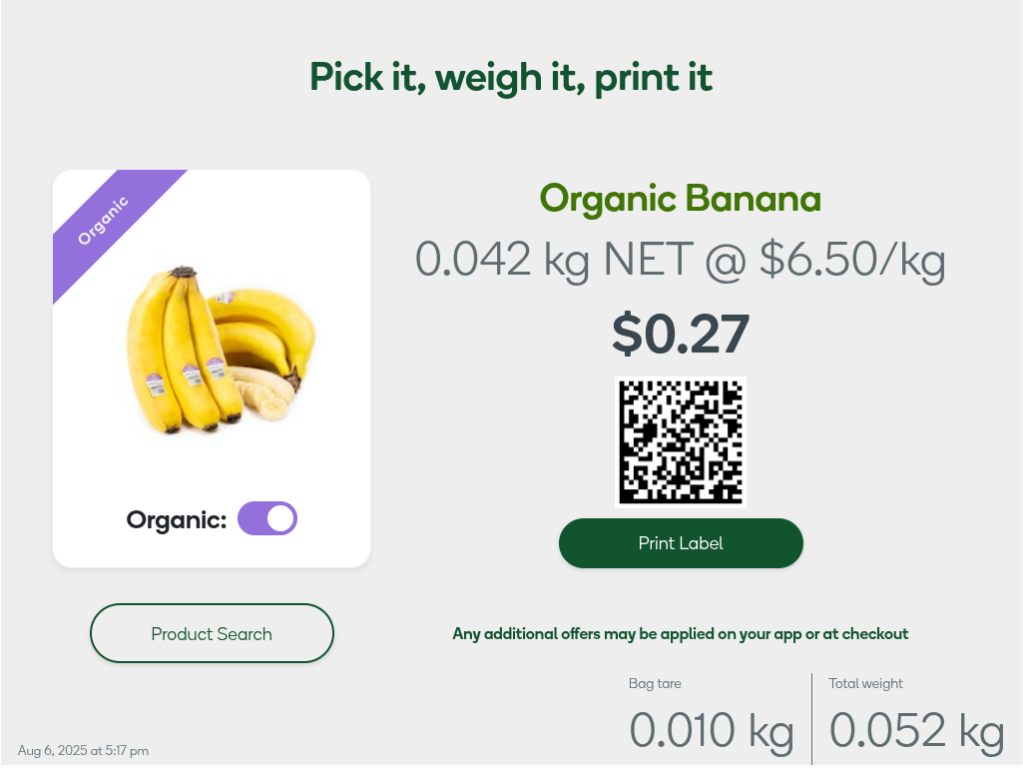
Tiliter model TS105 Point of Sale system configured without a Label Printer for product recognition (Variant 2).

FIGURE S818 – 10



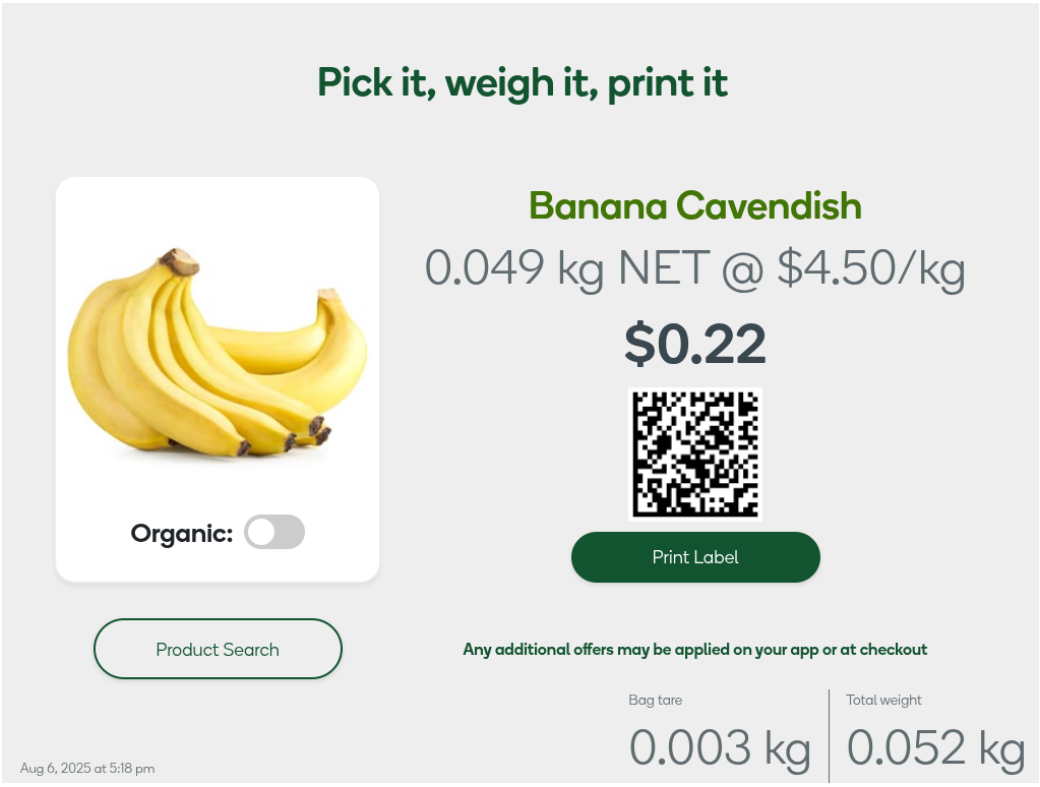
Tiliter model TS105.2 Point of Sale (POS) system overview (Variant 4)

FIGURE S818 – 11



Typical user interface depicting with Price Calculation (Pattern) and Organic Product selection (Variant 4)

FIGURE S818 – 12



Typical user interface depicting with Price Calculation (Pattern) and Non-Organic Product selection (Variant 4)

FIGURE S818 – 13

Typical labels (Variant 4)

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