Australian Government
Department of Industry, Science and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval
NMI S518

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.

Integration Technologies Model Enabler 2 PCI Controller for Fuel Dispensers for Motor Vehicles

submitted by Integration Technologies Limited
136b The Square
Palmerston North 4410
NEW ZEALAND

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 R 117 *Measuring Systems for Liquids Other than Water*, dated June 2011.

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 & variant 1 approved – interim certificate issued	11/03/09
1	Variant 2 approved – interim certificate issued	27/05/09
2	Pattern & variants 1 & 2 approved– certificate issued	1/09/09

Document History (cont…)

Rev	Reason/Details	Date
3	Pattern & variants 1 & 2 reviewed & updated – variants 3 & 4 approved – certificate issued	4/03/15
4	Pattern and Variants amended (point of sale renamed self-service control system) - Variant 5 approved – certificate issued	28/08/17
5	Pattern & variants reviewed - Variant 6 approved – certificate issued	11/03/20
6	Variant 6 amended – Variant 7 approved – certificate issued	27/09/23
7	Variant 8 approved – certificate issued	18/11/25

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI S518' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S518' in addition to the approval number of the instrument, 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.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificate No S1/0B.

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

Darryl Hines
Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No S518

1. Description of Pattern approved on 11/03/09

An Integration Technologies model Enabler 2 PCI flowmeter controller (Figure 1) in the form of an expansion card installed in an approved control system to provide self-service control of compatible (#) approved fuel dispensers for motor vehicles.

1.1 Field of Operation

- The controller can provide a self-serve arrangement for approved Production Engineering 1000 series fuel dispensers, or other compatible (#) approved fuel dispensers.
- The controller may facilitate operation in attended or unattended self-service arrangements when interfaced with a compatible (#) approved self-service control system.

(#) 'Compatible' is defined to mean that no additions/changes to hardware/software are required for satisfactory operation of the complete system.

1.2 System Description

The Enabler 2 PCI controller (Figure 1) provides the interface between an approved self-service control system and the fuel dispensers.

(i) Controller

The Enabler 2 PCI controller comprises a PCI Local Bus expansion card installed in an approved personal computer that forms part of the self-service control system. The controller provides the self-service control system with the fuel dispenser control functions.

(ii) Forecourt Distribution Module

A forecourt distribution module provides the electrical interface between the Enabler 2 PCI controller and the fuel dispensers.

(iii) Pump Server Software

Pump Server version v3.30 software operating on a Microsoft Windows operating system provides the self-service control system software interface to the Enabler 2 PCI controller for the configuration and control of fuel dispensers.

1.3 Checking Facilities

The Enabler 2 PCI controller receives the fuel sale data (unit price, litres dispensed and total price) directly from the fuel dispenser(s). The controller monitors the status of connected fuel dispensers. Error checking verifies that transmitted data is correct.

Additional system checking facilities may be required when the controller is used in an attended or unattended self-service system. The checking facilities are described in the approval documentation for the self-service control system that is interfaced to the controller.

1.4 Descriptive Markings

Any self-service control system in which the Enabler controller is installed, is marked with the following data, in the vicinity of any required markings specified in the approval documentation for the self-service control system:

Manufacturer's name or mark	……..
Pattern approval mark	NMI S518

1.5 Verification and Sealing

The Enabler controller does not require a separate verification mark.

The Enabler controller does not require sealing.

2. Description of Variant 1 approved on 11/03/09

A model Enabler 3 PCI controller (Figure 2) which has the same functions as the pattern (model Enabler 2 PCI) but uses upgraded hardware.

3. Description of Variant 2 approved on 27/05/09

A model Enabler Express controller (Figure 3) which has the same functions as the pattern (model Enabler 2 PCI) but uses upgraded hardware for compatibility with PC motherboards that use the PCI Express bus. Instruments complying with Variant 2 can be identified by the label:

'Part #
ENABEXP'

4. Description of Variant 3 approved on 4/03/15

A model Enabler Version 4 controller (Figures 2 and 3) which has the same functions as variant 1 (model Enabler 3 PCI, Figure 2) and variant 2 (model Enabler Express, Figure 3) but uses upgraded software, namely Pump Server version 4.x.xx.x software operating on a Microsoft Windows operating system to provide the self-service control system software interface to the controller for the configuration and control of fuel dispensers.

5. Description of Variant 4 approved on 4/03/15

A model Enabler Embedded controller (Figure 4) which has the same functions as the variant 3 (Enabler Version 4) but is a standalone device in place of the expansion card installed in the approved self-serve control system. The controller interfaces with the control system using an Ethernet local area network (LAN) connection.

6. Description of Variant 5 approved on 28/08/17

A model Enabler Express V3 controller (Figure 5) which has the same functions as the Variant 2 (model Enabler Express) but uses upgraded hardware that integrates discrete electronic components into a Field Programmable Gate Array.

The Enabler Express V3 controller operates with Enabler Server version 4.x.xx.x on a Microsoft Windows Operating System to provide the self-service control system an interface for configuration and control of fuel dispensers.

7. Description of Variant 6 approved on 11/03/20

A model Enabler E controller (Figure 6) which is similar in function to the expansion card variations of the Enabler PCI (Pattern and Variants 1 to 4).

The Enabler E comprises updated hardware that provides an Ethernet network interface to the controller and operates as a standalone device from the personal computer operating the Pump Server Software.

The Enabler E requires Enabler Server version 4.x.xx.x operating on a Microsoft Windows Operating System to provide the self-service control system an interface for configuration and control of fuel dispensers.

The Enabler E controller may also be known as Enabler Ethernet Rev 4.

8. Description of Variant 7 approved on 27/09/23

An Enabler Ethernet Rev 5 controller which is an updated variation of the Enabler E controller described Variant 6.

The variant comprises updated hardware and Plug-in Distribution Modules (PDM) to provide a communication link to the fuel dispensers.

9. Description of Variant 8 approved on 18/11/25

A model Enabler Embedded V2 controller (Figure 7) which has the same functions as the variant 4 (Enabler Embedded controller). It uses upgraded hardware to provide attended and unattended self-service systems with an interface for the configuration and control of fuel dispensers.

The variant comprises an Enabler Embedded V2 board, an Enabler Interface Card (EIC) Rev 5, and Plug-in Distribution Modules (PDM) to provide a communication links to the fuel dispensers on the forecourt. The system has a built-in UPS function to allow operation after mains power failure.

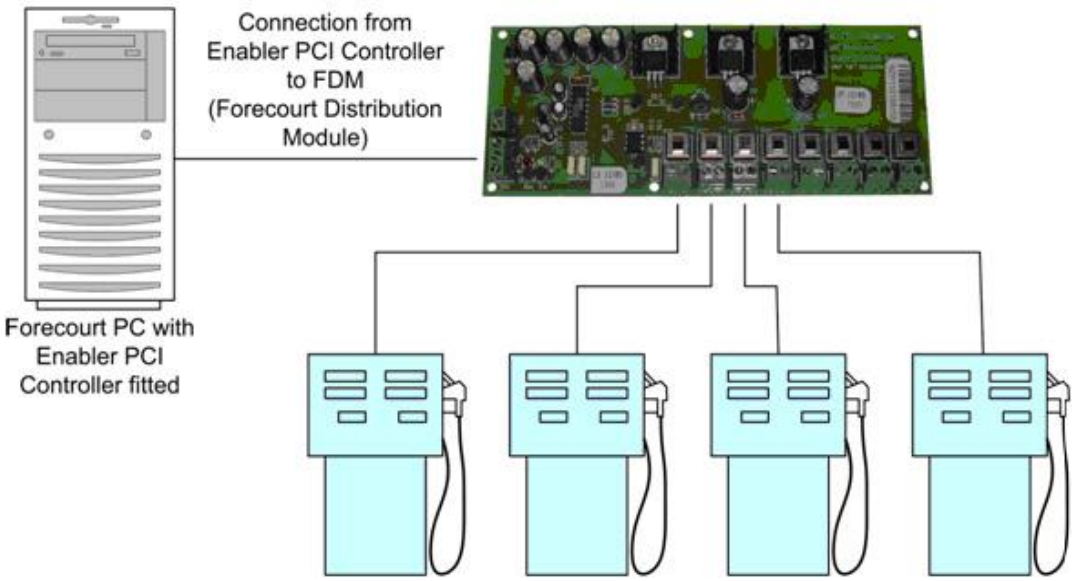
TEST PROCEDURE

Instruments shall be tested in conjunction with any tests specified in the approval documentation for the instruments to which the pattern is connected, as appropriate, and in accordance with any relevant tests specified in the National Instrument Test Procedures.

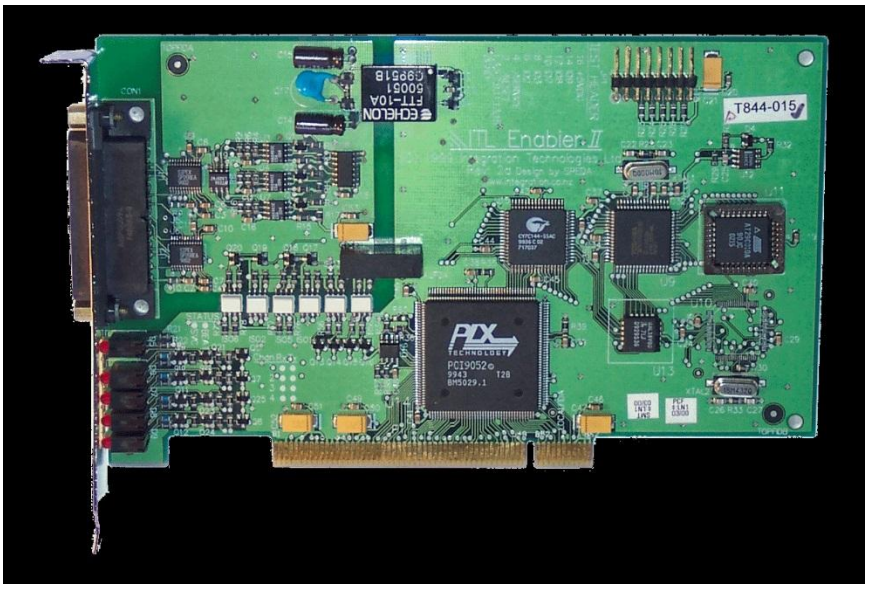
Maximum Permissible Errors

The maximum permissible errors applicable are those applicable to the fuel dispensers to which the instrument approved herein is fitted, as stated in the approval documentation for the fuel dispensers or in Schedule 1 of the *National Trade Measurement Regulations 2009*.

FIGURE S518 – 1

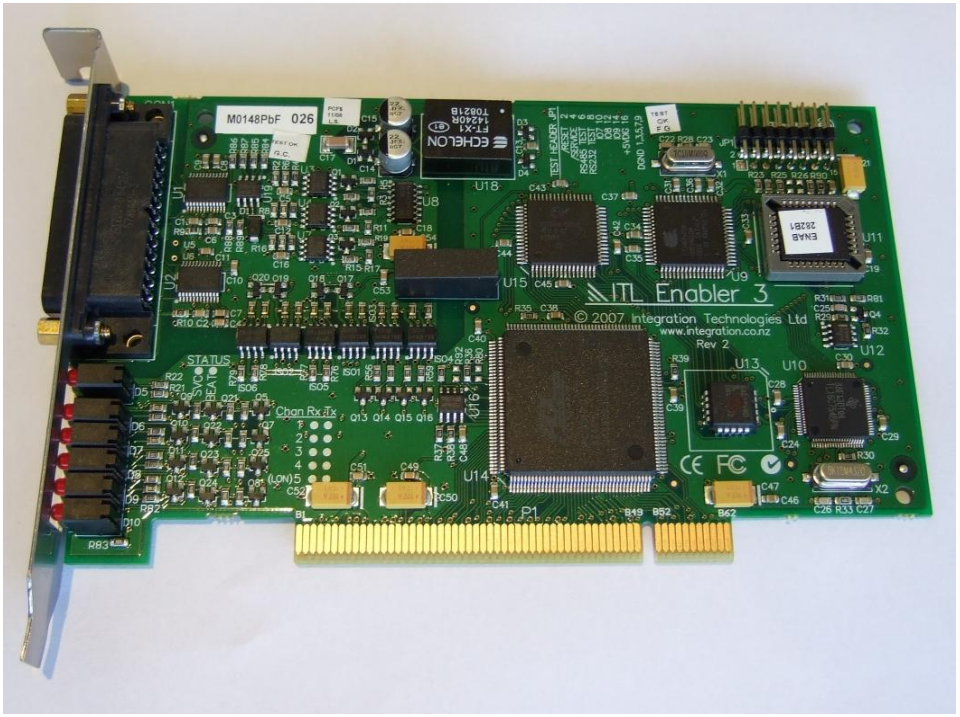


(a) Typical System Overview Including
Integration Technologies Enabler PCI Controller (The Pattern)



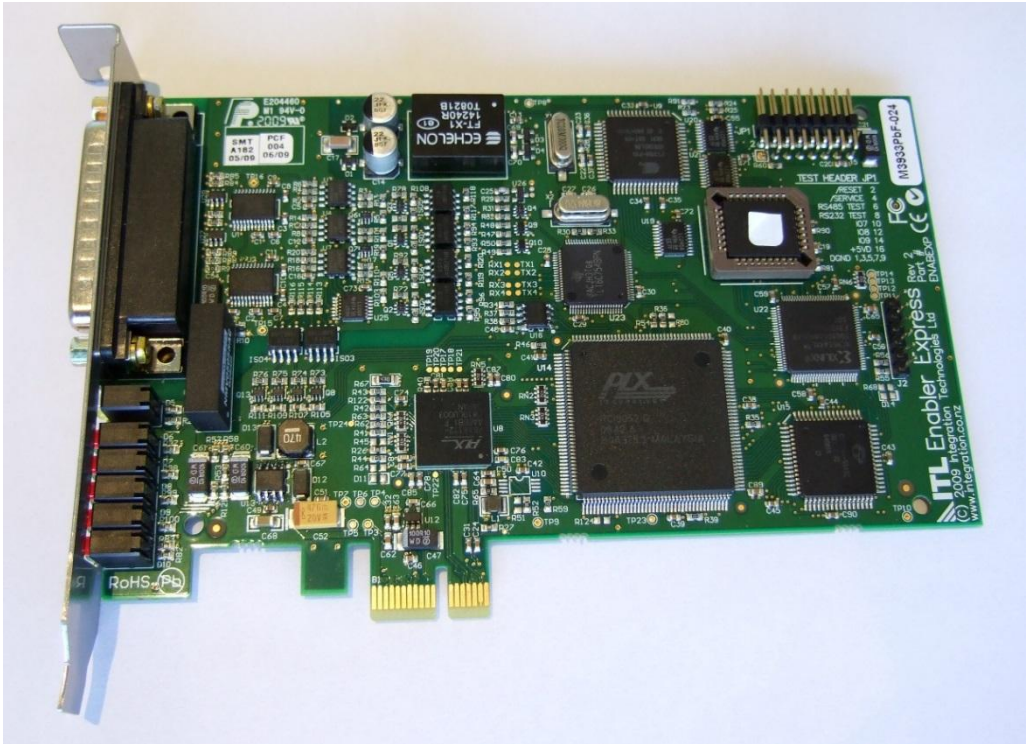
(b) Model Enabler 2 PCI Controller (The Pattern)

FIGURE S518 – 2



(Model Enabler 3 PCI Controller (Variant 1)

FIGURE S518 – 3

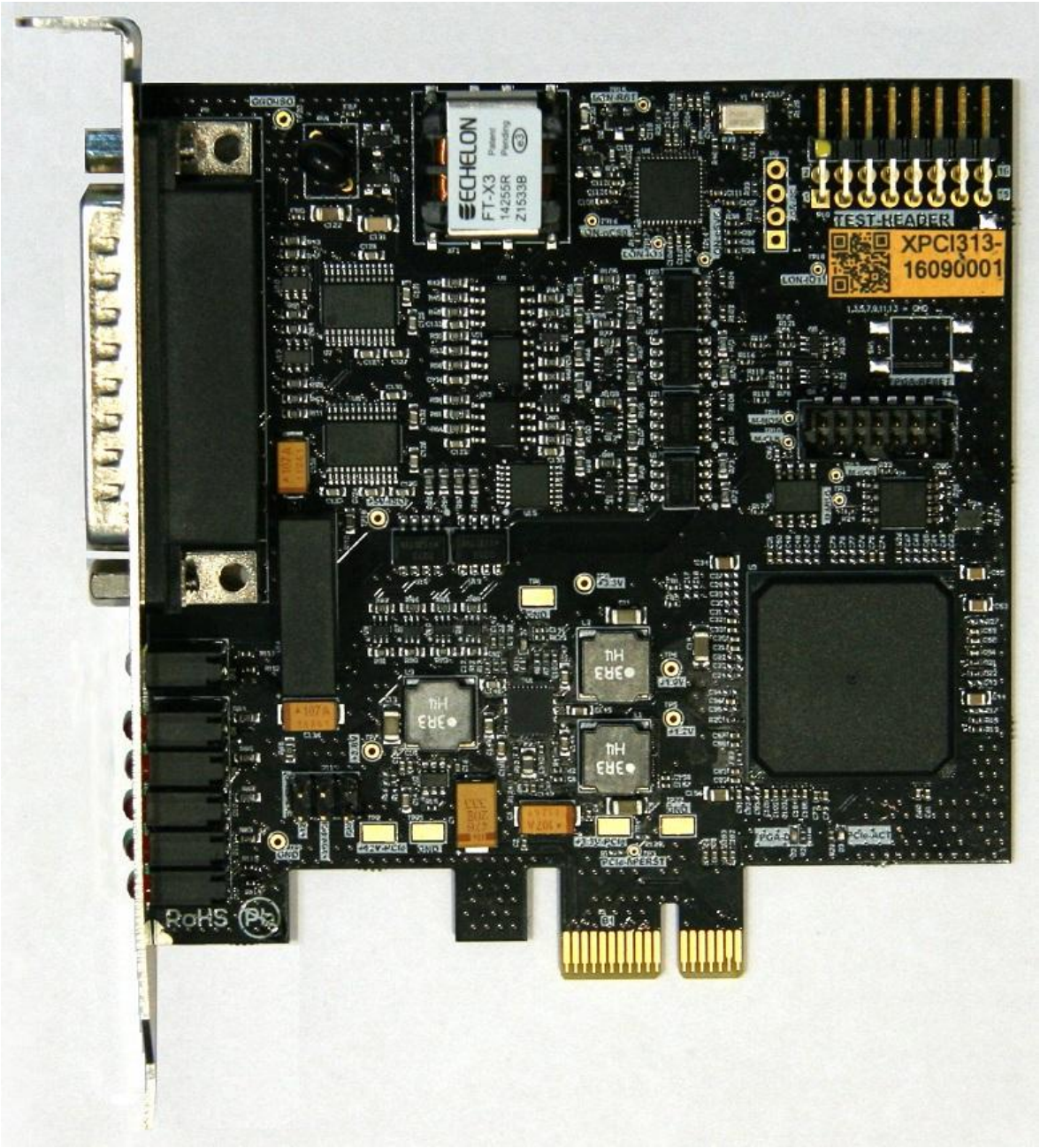


Model Enabler Express PCI Controller (Variant 2)

FIGURE S518 – 4

Model Enabler Embedded Controller (Variant 4)

FIGURE S518 – 5

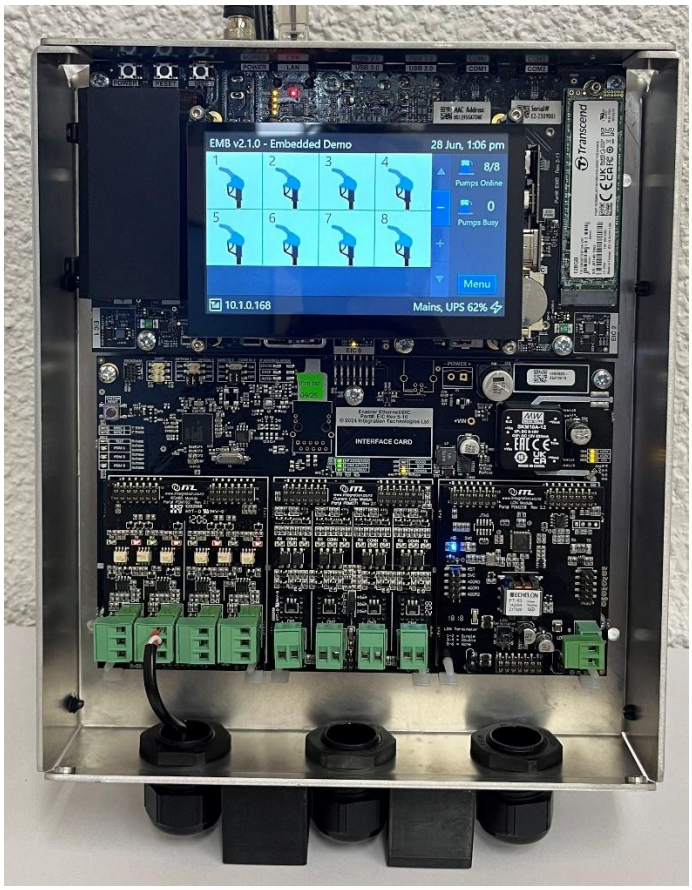


Model Enabler Express Controller (Variant 5)

FIGURE S518 – 6

Model Enabler E Controller (Variant 6)

FIGURE S518 – 7



Model Enabler Embedded V2 Controller (Variant 8)

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