

<b>Title</b>	<b>Create and test a software-controlled device built from components</b>		
<b>Level</b>	<b>2</b>	<b>Credits</b>	<b>3</b>

<b>Purpose</b>	<p>People credited with this unit standard are able to: prepare to create a software-controlled device built from components; assemble components for, program and test the software-controlled device.</p> <p>This unit standard has been developed primarily for assessment as an option within programmes leading to the New Zealand Certificate in Computing (User Fundamentals) (Level 2) [Ref: 2591], the New Zealand Certificate in Computing (Intermediate User) (Level 3) [Ref: 2592], or the New Zealand Certificate in Computing (Advanced User) (Level 4) [Ref: 2593].</p>
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<b>Classification</b>	Computing > Generic Computing
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<b>Available grade</b>	Achieved
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**Explanatory notes**

- 1 **Range**  
The software-controlled device built from components may include but is not limited to – robotics, scientific control systems, drones, nano technology, or other emerging technology. The device may use kit sets, but must include programming.
- 2 **A brief** will be supplied to the learner. It must clearly identify the outcomes required from the software-controlled device built from components, against which the success or otherwise of the device can be evaluated. The brief will include at least – the target users, the specification, and a testing plan.
- 3 **Definitions**  
*Conceptual layout design* is a representation clearly indicative of the final product.  
*Internal documentation* means documentation included as comments within the programme code, rather than documentation created separately.
- 4 **Legislation** relevant to this unit standard includes but is not limited to the:  
Copyright Act 1994;  
Copyright (New Technologies) Amendment Act 2008;  
Health and Safety at Work Act 2015;  
Privacy Act 1993;  
and its subsequent amendments.  
Current legislation and regulations can be accessed at <http://legislation.govt.nz>.

## Outcomes and evidence requirements

### Outcome 1

Prepare to create a software-controlled device built from components.

#### Evidence requirements

- 1.1 The requirements for a software-controlled device built from components are identified.
- Range includes but is not limited to – components required, construction requirements, programming requirements.
- 1.2 A simple conceptual layout design plan is developed to realise the requirements.
- 1.3 Strategies for managing identified potential hazards/risks related to the creation of the device are described.
- Range includes strategies for at least two hazards/risks.

### Outcome 2

Assemble components for, program, and test the software-controlled device.

#### Evidence requirements

- 2.1 The components are assembled to meet the construction requirements for the creation of the device.
- 2.2 The control software for the device is programmed and internal documentation completed to meet requirements of the brief.
- Range internal documentation of programming must contain sufficient comments to explain its purpose.
- 2.3 The device is tested to ensure fitness for purpose in terms of the requirements for the brief.
- Range includes but is not limited to fitness for purpose of – software, hardware, functionality, robustness.

<b>Replacement information</b>	This unit standard replaced unit standard 25660.
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<b>Planned review date</b>	31 December 2021
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	19 January 2017	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0226
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Please note**

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

**Comments on this unit standard**

Please contact NZQA National Qualifications Services [nqs@nzqa.govt.nz](mailto:nqs@nzqa.govt.nz) if you wish to suggest changes to the content of this unit standard.