

Title	Install electronic security surveillance systems		
Level	3	Credits	7

Purpose	<p>This unit standard is intended for the training and assessment of people working in or intending to work in the electronic security industry and covers the installation of security surveillance systems.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> – demonstrate knowledge of surveillance system components; – install components in surveillance systems to meet client requirements; – program surveillance systems; and – test, commission, and handover surveillance systems.
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Classification	Electronic Engineering > Electronic Security
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Available grade	Achieved
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Prerequisites	Unit 26841, <i>Demonstrate knowledge of electronic security systems and equipment</i> , or demonstrate equivalent knowledge and skills.
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Guidance Information

- 1 This unit standard has been developed for learning and assessment on-job at client premises.
- 2 Persons working or intending to work in private security need either a Company Licence, an Individual Licence (for Sole Traders) or a Certificate of Approval (for employees of companies). These licences are issued by the Private Security Personnel Licensing Authority available through:
www.justice.govt.nz/tribunals/licences-certificates/pspla/.
- 3 Definitions
Industry practice – those practices that competent practitioners within the industry recognise as current industry best practice.
Lighting – illumination across the visible and invisible spectrum.
PTZ – pan tilt zoom.
Safe and sound practice – as it relates to the installation of electrical equipment is defined in AS/NZS 3000:2007, *Electrical Installations (known as the Australian/New Zealand Wiring Rules)*.
Surveillance systems – may include but are not limited to – camera fixed lens, auto iris lens, video monitor, video intercom, lighting.

USB – universal serial bus.

- 4 References – Specific to Electronic Security Industry
Code of Practice for Electro-Mechanical Controlled Locking Devices on Egress Doors (2018);
FPANZ Code of Practice for the Integration of Building Fire Safety Systems with Other Services (2022);
Industry Code of Practice for Access Controlled Doors and Compliance: Schedule Reference Guide (2021);
New Zealand Security Association (Inc), Code of Practice - Security Systems: Electronic and Physical (2022);
Codes of Practice available from: [Guidelines, Codes of Practice and Standards | NZ Security Association](#).

AS/NZS 2201.1:2007, *Intruder alarm systems – Client's premises – Design, installation, commissioning and maintenance*;
AS/NZS 2201.5:2008, *Intruder alarm systems – Alarm transmission systems*;
AS/NZS 62767.1.1:2020 – Video Surveillance Systems for use in Security Applications – Part 1-1: System Requirements – General;
AS/NZS IEC 60839.11.1:2019 – Alarm and Electronic Security Systems, Part 11.1: Electrical;
AS/NZS IEC 60839.11.2:2019 – Alarm and Electronic Security Systems, Part 11.2: Electrical Access Control Systems – Application Guidelines;
AS/NZS IEC 60839.11.31:2020 – Alarm and Electronic Security Systems, Part 11.3: Electronic Access Control Systems – Core interoperability Protocol;
AS/NZS IEC 62676.2.2:2020 – Video Surveillance Systems for use in Security Applications – Part 2-2: Video Transmission Protocols – IP Interoperability Implementation based on HTTP and REST Services;
NZS-4512-2021- Fire Detection and Alarm Systems in Buildings;
NZS-4514-2021- Interconnected Smoke Alarms for Houses;
and all subsequent amendments and replacements.

References – General to Electronic Security Industry
Building Act 2004;
Electricity Act 1992;
Electricity (Safety) Regulations 2010;
Health and Safety at Work Act 2015;
Private Security Personnel and Private Investigators Act 2010;
Privacy Act 2020;
AS/NZS 3000:2007, *Electrical installations (known as the Australian/New Zealand Wiring Rules)*;
AS/NZS ISO 31000:2009 – Risk Management Principles and Guidelines;
AS/NZS 3016:2002 – Electrical Installations – Electrical Security Fences;
Telecommunications Act 2001;
Local territorial authority requirements;
and all subsequent amendments and replacements.
Standards available from [Standards New Zealand](#).

- 5 Where not stated, evidence for the number and type of equipment chosen is left to the discretion of the assessor, but it must be sufficient to assess competence in all outcomes of the unit standard.

6 Range

- a Candidates must refer to current legislation and Standards during assessment.
- b Demonstration of safe working practices in accordance with *safe and sound practice* are essential components of assessment of this unit standard.
- c All activities and evidence presented for all outcomes and performance criteria in this unit standard must be in accordance with:
 - i legislation;
 - ii policies and procedures;
 - iii ethical codes;
 - iv Standards;
 - v applicable site, enterprise, and industry practice; and,
 - vi where appropriate, manufacturer instructions, specifications, and data sheets.

Outcomes and performance criteria**Outcome 1**

Demonstrate knowledge of surveillance system components.

Range digital cameras and lenses, cabling systems, power supplies, recording systems, display systems, simple network solutions, lighting systems.

Performance criteria

- 1.1 Describe the components of a surveillance system and identify the features in terms of functionality.
- 1.2 Explain the purpose of each component with respect to the complete system.
- 1.3 Use specifications to identify variations of performance and operation of equivalent components from two manufacturers.

Outcome 2

Install components in surveillance systems to meet client requirements.

Range camera and lens, cabling, camera display systems, recording system, power supply power supplies;
evidence of all components and at least five systems is required.

Performance criteria

- 2.1 Complete installation and confirm connections.
- 2.2 Configure cameras with fixed IP addresses.

Outcome 3

Program surveillance systems.

Range evidence of five installations is required.

Performance criteria

- 3.1 Program recorder's recording hours of operation to ensure they meet client requirements.
- 3.2 Program motion detection to the situation and time requirements of the client.
- 3.3 Program fixed network IP addresses and gateway for remote access.
- 3.4 Program user access permission levels.

Range may include but is not limited to – hierarchy of authority, access to control PTZ cameras, image retrieval, camera viewing; evidence of user access to two systems is required.

Outcome 4

Test, commission, and hand over surveillance systems.

Range commission cameras and lenses, commission user functions, commission recording and display functions, commission remote access; evidence of five installations is required.

Performance criteria

- 4.1 Test for camera focus and ability to operate in the expected lighting conditions, and record results.
- 4.2 Test the recorded image, noting quality and frames per second, record images to external storage device, and record results.
- 4.3 Test to confirm camera images are displayed on monitors and are recorded on media in accordance with client needs and system specifications.
- 4.4 Test system remote access, user functions and ability to remotely record images, and record results.
- 4.5 Communicate the equipment operation, warranty, and service options to the customer in accordance with the equipment manual.
- 4.6 Complete hand over documentation in the agreed format and in accordance with customer and industry practice.
- 4.7 Brief client on system operation.

Planned review date	31 December 2029
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	18 November 1997	31 December 2011
Revision	2	3 April 2001	31 December 2011
Revision	3	11 March 2004	31 December 2012
Rollover	4	21 November 2008	31 December 2012
Review	5	19 November 2010	31 December 2022
Revision	6	17 June 2011	31 December 2022
Review	7	14 December 2017	31 December 2026
Rollover and Revision	8	27 October 2022	31 December 2026
Review	9	26 September 2024	N/A

Consent and Moderation Requirements (CMR) reference	0003
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council qualifications@waihangaararau.nz if you wish to suggest changes to the content of this unit standard.