

ROADS AND MARITIME SERVICES (RMS)

QA SPECIFICATION TS200

REGISTER OF ITS FIELD EQUIPMENT

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REVISION REGISTER

Ed/Rev Number	Clause Number	Description of Revision	Authorised By	Date
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Ed 1/ Rev 2	TS200/A	Corrected supplier for PAT DAW 100	A Mehaffey	2-Oct-2014
Ed 1/ Rev 3	TS200/A	Added approved AEI LED Lanterns. Removed prototype "FCG-VMS"	A Mehaffey	27-Nov-2014
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Ed 1/ Rev 5	various	Clarifications to "OEM" status. Multiple Updates to Appendix A	A Mehaffey	11-Aug-2015
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Ed 2 Rev 2	various	Approver becomes General Manager ITS or delegate. (title/role changes in RMS)	S Shaw	21-Jun-17
Ed 2/ Rev 3	various	Significant changes; removal of "provisional" classification due to misuse. Multiple Updates to Appendix A	S Kindleysides	23-Mar-18



REGISTER OF ITS FIELD EQUIPMENT

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IC-QA-TS200

<p>VERSION FOR: All Supply of ITS Devices to RMS</p>
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FOREWORD

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REVISIONS TO PREVIOUS VERSION

All revisions to the previous version (other than minor editorial and project specific changes) are indicated by a vertical line in the margin as shown here, except when it is a new edition and the text has been extensively rewritten.

PROJECT SPECIFIC CHANGES

Project Specific changes are **not allowed** to this Register.

This Register of ITS Field Equipment should only be changed by RMS (General Manager ITS or delegate).

Projects that are nominally required to supply ITS Field Equipment that are currently not listed within this Register must obtain approval from RMS (General Manager ITS or delegate) before using such equipment, as outlined in RMS TS202.

Requests for clarifications, re-issue, or other questions regarding this Register should be directed to: ITShelpdesk@rms.nsw.gov.au

RMS QA SPECIFICATION TS200

REGISTER OF ITS FIELD EQUIPMENT

1 GENERAL

1.1 SCOPE

Transport for NSW (TfNSW) and Roads and Maritime Services (RMS) have deployed a large variety of Intelligent Transport Systems (ITS) field equipment throughout the NSW road network to enable the operation of Intelligent Transport Systems.

This specification is intended to assist RMS staff and service providers in their selection of ITS field equipment for new installations, as well as for the maintenance or replacement of existing equipment, by identifying acceptable suppliers of equipment currently in operation.

There are two (2) categories of ITS field equipment suitable for supply by contractors:

- “**Type Approved**” ITS field equipment (Section 2.1.1)
- “**Acceptable**” ITS field equipment (Section 2.1.2)

These categories are defined in detail in Section 2 below.

Items excluded from the scope of this register include:

- RMS approved hardware and mounting structures supporting ITS Equipment installation (other than for Traffic Control Sites).
- Supporting ITS power and communications equipment (where not otherwise specified).

The hardware elements are generally either identified in detailed RMS Technical Specifications, shown within standard RMS drawings, or are sourced from nominated suppliers of ITS field equipment.

In all cases, supplied ITS field equipment and all associated devices must be suitable for their required purpose and installation environment.

1.2 STRUCTURE OF THE SPECIFICATION

This Specification includes a series of annexures that detail additional requirements.

1.2.1 Project Specific Requirements

All projects must select ITS field equipment from the Register as shown in Annexure TS200/A, or seek approval from RMS (Director ITS or delegate) before using unlisted equipment, as outlined in RMS TS202. Project specific changes to this Register are **not allowed**.

1.2.3 Reference Documents

Standards, specifications and test methods are referred to in abbreviated form (e.g. AS 2350). For convenience, the full titles are given in Annexure TS200/M.

1.3 DEFINITIONS AND ABBREVIATIONS

1.3.1 Definitions

The terms “you” and “your” mean “the Contractor” and “the Contractor’s” respectively.

The following definitions are applicable to this Specification:

Intelligent Transport System (ITS)	An integrated technology solution using computer-based control systems which communicate with field devices (at one or more sites) to provide a functional outcome designed to improve journeys through the transport network.
ITS Field Equipment	ITS Equipment or Devices supporting the required functionality of an Intelligent Transport System, associated with a nominated ITS Field Site
ITS Field Site	Nominated location of ITS Equipment, as shown on project plans and as required site for installation of devices.
Director ITS	RMS representative responsible for approvals over design documentations and additions to this Register.
ITS REGISTER	The listing of ITS Equipment suitable for supply to RMS via maintenance contractors and projects, located in Annexure TS200/A of this document.

1.3.2 Abbreviations

The following abbreviations apply to this Specification:

ITS	Intelligent Transport Systems
RMS	Roads and Maritime Services
TfNSW	Transport for New South Wales
tbd	To Be Determined
tbc	To Be Confirmed

2 REGISTER OF ITS FIELD EQUIPMENT

2.1 OVERVIEW

There are two (2) categories of ITS field equipment available suitable for supply by contractors:

- **“Type Approved”** ITS field equipment – evaluated as compliant to RMS specifications and supplied with an awarded RMS Type Approval Certification Number.
- **“Acceptable”** ITS field equipment – evaluated by RMS and considered acceptable for typical intended use.

Irrespective of any technical approval bestowed herein, as the ongoing maintenance is arranged by others, in all cases equipment that is used on the Road Network must also gain acceptance from Asset Manager, Network Sydney. This acceptance is twofold, firstly that financial resources have been allocated and secondly that requisite maintenance facilities have been identified.

There is a further category of ITS field equipment, “Legacy”, which is **not** suitable for general supply.

This register is not intended to replace the need for projects and ITS maintainers to ensure that their ITS equipment or systems operate in compliance with RMS specifications, nor does nomination in this register imply that all devices nominated are specifically compliant to current RMS specifications.

From a contractual supply perspective all ITS field equipment listed in TS200/Annexure A of this document may be considered as “RMS Approved”, as long as the supply conditions applied to their listed approval classification can be proven to be met (and demonstrated). The purchaser must ensure that the installation follows manufacturer and/or RMS requirements. ITS Branch should be used to provide technical advice and guidance on integration with RMS’ monitoring systems.

The RMS process for general evaluation of ITS Devices (and associated equipment) is described in specification RMS QA TS201, which also establishes the applicant gateway via the [ITS Helpdesk](#).

The process for evaluation of ITS solutions proposed for supply by projects (potentially incorporating supply of equipment neither approved nor acceptable) is described in specification RMS QA TS202. Where a project identifies, within an ITS solution, the use of equipment not listed herein, approval for the project should be obtained through the TS202 process.

2.1.1 “Type Approved” ITS Equipment

Type Approval is the highest level of RMS validation for supply of ITS Equipment, and is typically associated with safety-related systems and functions.

Type Approved ITS Equipment shall be submitted by the manufacturer for detailed analysis and review by RMS ITS Engineers. The technical review shall incorporate review of independent test reports, break-down examinations of sample equipment, and extensive field trials.

This detailed review is to ensure that the ITS Equipment is not only compliant with the associated RMS specification(s), but also designed to be reliable and to operate correctly with the host ITS.

After detailed review, a “Type Approval Certification Number” is awarded to the manufacturer, and devices shall only be supplied with documented proof of RMS “Type Approval Certification”.

Examples of Type Approved ITS Equipment within this document are:

- (a) Traffic Signal Controller for traffic lights at intersections (e.g.: Tyco Eclipse);

2.1.2 “Acceptable” ITS Equipment

The mid-level approval category is “Acceptable” that identifies ITS equipment that RMS deems acceptable for typical use.

Information submitted by the manufacturer/supplier shall be reviewed by RMS to determine if the functional objectives of the ITS device are demonstrated for typical use. Other information sources may also be used by RMS. Such information includes:

- Compliance with mandatory regulatory requirements (Safety, EMC), as applicable
- Compliance with specifications or parts thereof, Australian or International, as relevant.
- Information on prior use/installations.

If deemed necessary RMS may require the manufacturer/supplier to install a trial site/s or system for evaluation by RMS prior to RMS awarding approval for the nominated equipment.

A system integration test may also be required to validate correct operation with specific ITS host systems, if relevant to the equipment type.

This approval category should be used for ITS equipment for which RMS does not currently have an equipment specification, but where there is either an appropriate Australian or International Standard.

Examples of “Acceptable” ITS Equipment within this document are:

- (a) Video Surveillance Camera Site equipment “Accepted” as equivalent to TS106 default supply.

2.1.3 “Legacy” ITS Equipment

“Legacy” ITS field equipment is a level of RMS classification and is not considered suitable for supply.

A listing of “Legacy” equipment is only available through the ITS Help Desk and shall **not** be provided to tenderers for RMS works.

“Legacy” equipment need not be removed from the field but should be replaced with “Approved” or “Acceptable” ITS equipment on site/system reconstruction, major upgrade or unrepairable failure.

A listing of field equipment as “Legacy” may indicate that the field equipment:

- Was compatible with a prior ITS Host System, but may not suit current systems, or has not been evaluated to confirm as compatible with the current systems.
- Was compliant with prior specifications, but may not be compliant with current specifications such that usage may be limited to maintenance of existing ITS field sites.
- Is compliant with current specifications, but has been replaced by the manufacturer/supplier with an updated model. The item listed may not be actively supported by the manufacturer/supplier.

ANNEXURE TS200/A – ITS FIELD EQUIPMENT REGISTER

A1 ADAPTIVE TRAFFIC CONTROL

Traffic Signal Controller

Supplier	Type	Model	Software	Category
ATC	Housing – Ground	ATSC4	n/a	Type Approved
	Logic Rack:		n/a	Type Approved
	Conflict Monitor	TC400-36-0GC	2013-07-V2.05	Type Approved
	Logic Processor Module	TC400-045-0HD	2014-06-V1.05	Type Approved
	Main Processing Daughter Board	TC400-53 Version 1.8 (VC6) Version 8.4 (VC5)	2014-06-V1.05 2010-08-V1.02	Type Approved
	External Interface Module	TC400-065-0I	2016-05-V2.01	Type Approved
	Vehicle Detector Module	TC416-080-AB	2012-11-V1.06	Type Approved
	Output Module	TC400-040-0JD	2013-05-V1.09	Type Approved
	Output Module (NextGen)	TC400-240-0BB	2011-07-V1.08	Type Approved
	Power Supply Module	TC400-025-0JA	2013-07-V2.05	Type Approved
	Special Facility Module	TC400-055-0A	2014-08-V1.05	Type Approved
	Switch Board Module	TC400-067-0C	2016-05-V2.01	Type Approved
	Top Hat		n/a	Acceptable
QTC	Housing – Ground	Hadron	n/a	Type Approved
	Logic Rack:	LR16 orLR24	n/a	Type Approved
	Power Supply Module	PSM100		Type Approved
	Loop/Input Module	LIM1616DW	Ver 3.65	Type Approved
	Signal Group Module	SGM524	Ver 4.32	Type Approved
	Command Module	CM3264	Ver 1.088N (VC5)	Type Approved
	Conflict Monitor		QTC V3.0	Type Approved
	Top Hat		n/a	Acceptable

Supplier	Type	Model	Software	Category
Tyco	Housing – Ground	EC1	n/a	Type Approved
	Housing – Post	EA1	n/a	Type Approved
	Logic Rack:		n/a	Type Approved
	Power Supply Module	PSM1 V8	Ver 2.09.0913	Type Approved
	Lamp Control Module	LCM8 V10	Ver 2.18.2564	Type Approved
	Loop Detector Module	LDM416 V9	Ver 1.10.0914	Type Approved
	Central Processor Module	CPM1a V18 Bootstrap Traffic Manager	Ver 1.090762 Ver 2.51.0651	Type Approved
	Top Hat		n/a	Acceptable

Traffic Signal Controller - Communications Modem

Supplier	Model / Type	Software	Category
Micro Connect	DIAL LCM (<i>PSTN</i>)	V1.04b	Type Approved
Dataplex	DPX 213 iPS (<i>PSTN</i>)	V1.04	Type Approved
	DPX-3890-01 (<i>8-port Server –PSTN</i>)	VC.14e	Type Approved

Traffic Signal Site – Portable Traffic Signals

Supplier	Model / Type	Software	Category
A1 Roadlines	CS-200 PTC-1000	V1.05 V2.03	Type Approved
Aldridge Electrical Industries	CS-200	V1.05	Type Approved
Data Signs	PTL-300	02.02.1	Type Approved
Bartco	BTLC-100	TLC-1.0.1-030	Type Approved

Traffic Signal Lantern

Supplier	Model / Type	Number	Category
Aldridge Traffic Systems	LED 200mm: Roundel (RYG) Arrow (RYG) Pedestrian (W,DW) Bicycle (RG) Bus (RY,White) 300mm: Roundel (RYG) Arrow (RYG)	RA453 RA453A RL552 RA452C RA453B RA983 RA983A	Type Approved
Aldridge Electrical Industries	LED 200mm: Roundel (RYG) Arrow (RYG) Pedestrian (W, DW) Bicycle (RG)	RA453 RA453AL RA542L	Type Approved
Braums	LED 200mm: 2 Aspect YA/ GA 2 Aspect RA/ YA 2 Aspect RA/ YA/ GA 3 Aspect R/ Y/ GA 3 Aspect R/ Y/ G 4 Aspect R/ Y/ G/ GA 4 Aspect R/ Y/ G/ RA 1 Aspect Bus White 3 Aspect Bus R /Y/ White 1 Aspect 'T' White 3 Aspect 'T' R /Y /White 1 Aspect 'E' White 2 Aspect Pedestrian W/ DW 2 Aspect Cycle RC/ GC 3 Aspect Cycle R/ Y/ G 300mm: 2 Aspect YA/ GA 2 Aspect RA/ YA 3 Aspect RA/ YA/ GA 3 Aspect R/ Y/ GA 3 Aspect R/ Y/ G 4 Aspect R/ Y/ G/ GA 4 Aspect R/ Y/ G/ RA 1 Aspect Bus White 3 Aspect Bus R/ Y/ White 2 Aspect Cross R/ White	BTLAA22YGN BTLAA22RYN BTLAA23N BTLAA23GAN BTLAV23N BTLAA24GAN BTLAA24RAN BTLAB21N BTLAB23N BTLAT21N BTLAT23N BTLAE21N BTLAP22N BTLAC22N BTLAC23N BTLAA32YGN BTLAA32RYN BTLAA33N BTLAA33GAN BTLAV33N BTLAA34GAN BTLAA34RAN BTLAB31N BTLAB33N BTLAX32N	Type Approved

Supplier	Model / Type	Number	Category
Tyco	LED 200mm: Roundel (RYG) Arrow (RYG) Pedestrian (W,DW) Bicycle (RYG) Bus (RY,White) 300mm: Roundel (RYG) Arrow (RYG)		Type Approved

RYG – Red, Yellow, Green

xA – arrow aspect of colour x

W,DW – Walk, Don't Walk

Traffic Signal Lantern – Target Boards

Supplier	Model / Type	Category
Aldridge Traffic Systems	Target Boards, Single / Dual 3 aspects 200mm/300mm	Acceptable
Aldridge Electrical Industries	Target Board, Single / Dual 3 aspects (200mm)	Acceptable
Braums	Target Board, Single / Dual 3 aspects 200mm/300mm	Acceptable
Tyco	Target Boards, Single / Dual 3 aspects 200mm/300mm	Acceptable

Traffic Signal Lantern – Special Body

Supplier	Model / Type	Category
Aldridge Electrical Industries	200mm body - 1 & 4 aspects	Type Approved
Aldridge Traffic Systems	200mm / 300mm body - 1 & 4 aspect	Type Approved
Braums	200mm /300mm body - 1 & 4 aspects	Type Approved
Tyco	200mm / 300mm body - 1 & 4 aspect	Type Approved

Traffic Signal Site – Posts & Mast Arms

Supplier	Model / Type	Category
Hayman Industries	Post Type 2-7, and 9-13, Offset and Shallow Type 2 base plate	Acceptable
Wieland Engineering	Post Type 2-7, and 9-13, Offset and Shallow Type 2 base plate	Acceptable
Taperline	Post Type 5 only	Acceptable

Traffic Signal Site – Top Assembly and Low Mounting Bracket

Supplier	Model / Type	Category
Aldridge Electrical Industries	Top assembly, Low mounting bracket, and associated hardware	Acceptable
Aldridge Traffic Systems	Top assembly, Low mounting bracket, and associated hardware	Acceptable
Braums	Top assembly, Low mounting bracket, and associated hardware	Acceptable
CNJ Electrical Services	Top assembly, Low mounting bracket, and associated hardware	Acceptable
Tyco	Top assembly, Low mounting bracket, and associated hardware	Acceptable

Traffic Signal Site – Audio Tactile Units

Supplier	Model / Type	Software	Category
Aldridge Electrical Industries	Driver Card & Housing – CW45-5	V5	Type Approved
Aldridge Traffic Systems	Driver Card & Housing – CW45-7/ATV 2V1	004	Type Approved
	Housing – AT 200	n/a	Type Approved
	Housing – CW45-6	n/a	Type Approved
Braums	Driver Card & Housing – BAT1001	015-TS-100	Type Approved

Traffic Signal Site – Push Button Assembly

Supplier	Product	Model	Category
Aldridge Electrical Industries	Push-Button with Transducer	CW257	Type Approved
Aldridge Traffic Systems	Push-Button with Transducer	CW255	Type Approved
Braums	Push-Button with Transducer: Single arrow Double arrow	BPB1001 BPN003	Type Approved

Traffic Signal Site – Pit Covers and Frames

Supplier	Model / Type	Category
ACO	Pit Covers/frames	Acceptable
Durham	Pit Covers/frames	Acceptable
ICON	Pit Covers/frames	Acceptable
Mascot Engineering	Pit Covers/frames	Acceptable

Traffic Signal Site – Pre-formed and pre-fabricated Loops

Supplier	Type	Model	Category
Traffic Tech	Ezy Loops (pre- formed, stick down)	SS-EL	Acceptable
PJ's Loop Service Pty Ltd	Thermapp (pre- formed stick down)		Acceptable
Juvana	Patriot (pre-fabricated, enclosed tube)	CG16MM Series	Acceptable
		CG9.5MM Series	Acceptable
Traffic Tech	De-Tech (pre-fabricated, enclosed tube)		Acceptable

Traffic Signal Site – Inductive Loop, other Cables, Cable Accessories and Loop Sealant

Supplier	Model / Type	Category
Bambach	Loop, Loop Feeder, and 29 core cable	Acceptable
Cable Accessories	Jointing Kits and Crimps	Acceptable
Channell	Crimps and Terminals	Acceptable
Gripset Industries	Gripset B26 (Loop Sealant)	Acceptable
Madision Technology	Loop, Loop Feeder, and 29 core cable	Acceptable
Olex	Loop, Loop Feeder, and 29 core cable	Acceptable
Scott Technology	Scotec (Loop Sealant)	Acceptable

Traffic Signal Site - Terminal Boxes (mast arm / wooden pole)

Supplier	Model / Type	Category
Aldridge Traffic Systems	Terminal Boxes	Acceptable
Aldridge Electrical Industries	Terminal Boxes	Acceptable
Braums	Terminal Box (for Mast Arms)	Acceptable
CNJ Electrical Services	Terminal Box (for Mast Arms)	Acceptable

Traffic Signal Site – PJ Box

Supplier	Model / Type	Category
Powercast	PJ Box	Acceptable

Traffic Signal Site - Fuse Box

Supplier	Model / Type	Category
Aldridge Traffic Systems	Post-Mounted Fuse Box	Acceptable
Braums	Post-Mounted Fuse Box	Acceptable
Reagle	Underground Fuse Box	Acceptable

Traffic Signal Site – Facility Key

Supplier	Model / Type	Category
Fountain Line	Facility Key	Acceptable

A2 TIDAL LANE CONTROL***Lane Control Equipment***

Supplier	Type	Model	Category
ESDR Electronics	SERNIS Unidirectional In-Pavement Light (white)	SR-45-WW-1G (1 gland)	Acceptable
		SR-45-WW-2G (2 gland)	Acceptable
Traffic Tech	SWARCO MLK v5.0 In-Pavement Light (white/white)		Acceptable

A3 ELECTRONIC MESSAGE SIGNS***Monochrome VMS***

Supplier	Model / Type	Category
No listing		

VSLs

Supplier	Model / Type	Category
No listing		

Vehicle Activated Warning Sign

Supplier	Model / Type	Category
No listing		

Changeable Message Signs

Supplier	Model / Type	Category
No listing		

Flashing Arrow Signs

Supplier	Model / Type	Controller Model Number	Software	Category
A1 Roadlines	Type A – Single sided	QS-AB04	Controller – 0721 / Light Sensor – 8169	Type Approved
	Type A – Double sided	QS-AB04D	Controller – 0721 / Light Sensor – 8169	Type Approved
	Type B – Single sided	QS-AB03	Controller – 5753 / Light Sensor - 8169	Type Approved
	Type B – Double sided	QS-AB03D	Controller – 5753 / Light Sensor - 8169	Type Approved
	Type C - Trailer	QS-AB03	Controller – 0721 / Light Sensor - 8169	Type Approved
Arrow Emergency Systems	Type A	TYPE A/B	V2.5	Type Approved
	Type B	TYPE A/B	V2.5	Type Approved
Aldridge Electrical Industries	Type A Mode VM-2413LSE-C	VM-2413LSE-M	V1.0	Type Approved
	Type B Mode VM-2413LSE-C	VM-2413LSE-M	V1.0	Type Approved
	Type C FAS 12V ST-4815	ST-4815-C	V1.0	Type Approved
Aldridge Traffic Systems	Type B	RA7001AC Type 1 Rotary Switch	V3.05	Type Approved
	Type B	RA7001AC Type 2 Keypad	V3.05	Type Approved
Data Signs	Type C	43020	01.00.03	Type Approved
Global Traffic Equipment	Type B – Single sided	AC4S (GT7027)	V1.2	Type Approved
	Type B – Double sided	AC4S (GT7028)	V1.2	Type Approved
J1-LED Intelligent Transport Systems	Type A JL-D-0128	JL-D-0128	JLD0128124	Type Approved
Magnum MFG	VMAB-BS Type B	VMAB-BSC (TYPE B)	FO_M8_DIRV1.0.4	Type Approved
Road Runner Parts	Type A	Switch Panel 460100 Rev C	V104	Type Approved
	Type B	Switch Panel 460100 Rev C	V104	Type Approved
Traffic Signals Sales & Service	Type A	TYPE A/B	-	Type Approved

Supplier	Model / Type	Controller Model Number	Software	Category
	Type B	TYPE A/B	-	Type Approved

Colour VMS

Supplier	Model / Type	Category
No listing		

ISLUS

Supplier	Model / Type	Category
No listing		

Regulatory and Warning Sign

Supplier	Model / Type	Category
No listing		

A4 TRAFFIC DETECTION AND MONITORING*Vehicle Classifiers and Counters*

Supplier	Model / Type	Category
CEOS	TIRTL (IR Smart Classifier)	Acceptable
Excel Technology Group	XL 500 / 1000 LL / LPL / PLP (Inductive Loop Classifier)	Acceptable
Nortech	IR100 (Inductive Loop Classifier)	Acceptable
	IR200(Inductive Loop Classifier)	Acceptable
TCS Products	Trafficorder Tube Counter	Acceptable

Over-Speed Detection

Supplier	Model / Type	Category
No listing		

Vehicle to Infrastructure (Travel Time)

Supplier	Model / Type	Category
RMS Intelligent Transport Systems	Efkon AG - FZ 58058 uW Tolling Tag Interrogator (Travel Time)	Acceptable

Traffic Detector/Traffic Flow Monitor

Supplier	Model / Type	Category
Nortech	IR100 (Inductive Loop)	Acceptable
	IR200 (Inductive Loop)	Acceptable

Weigh in Motion Site

Supplier	Model / Type	Category
No listing		

A5 TRAFFIC INCIDENT VERIFICATION**TS106 - Video Surveillance Cameras – IP Digitised Analogue Video – Type A**

Manufacturer	Model / Type	Category
No listing		

TS106 - Video Surveillance Cameras – IP Digitised Analogue Video – Type B

Manufacturer	Model / Type	Category
No listing		

TS106 - Video Surveillance Cameras – Native IP Digital Video – Type A

Manufacturer	Model / Type	Category
Bosch	IP Camera PoE (Sand Finish) MIC-7230-W5	Acceptable

TS106 - Video Surveillance Cameras – Native IP Digital Video – Type B

Manufacturer	Model / Type	Category
Axis	Q1615 MkII	Acceptable
Vivotek	Speed dome camera SD9366-EH	Acceptable

TS106 - Video Surveillance Cameras – Accessories

Supplier	Model / Type	Category
Bosch	DCA Camera Mount- MIC-DCA-HW	Acceptable
Advantech	PoE Injector EKI-2711hpi-AE	Acceptable
Microsemi	PoE Injector PD-9501GI	Acceptable
Delta	120W 48VDC DIN Power Supply	Acceptable
Novaris	Surge Suppressor (Sacrificial) RJ45 Cat6	Acceptable
Ingaleps	CCTV Pole / Mast	Acceptable

Supplier	Model / Type	Category
Camera and Lighting Lowering Systems	CCTV Pole / Mast Lowering Device	Acceptable

A6 OTHER APPROVED DEVICES*Outdoor Equipment Cabinets*

Manufacturer	Model / Type	Category
Boval Engineering	Standard Roadside Cabinet	Acceptable
Mercury Innovation	Hardened Roadside Cabinet High Security with Thermal Management (enforcement grade /double skin)	Acceptable

Street Lighting- LED Luminaires

Supplier	Model / Type	Category
No listing		

Road Weather Information

Supplier	Model / Type	Category
Manly Hydraulic	Flood Warning Sensor	Acceptable

Emergency Telephones

Supplier	Model / Type	Category
KJ Precision	Dritel 3G / 4G, PSTN - Solar/Mains power	Acceptable
RMS – ITS Manufacturing	3G / 4G, PSTN - Solar/Mains power	Acceptable
Dallas Delta	3G / 4G, PSTN - Solar/Mains power	Acceptable

ANNEXURE TS200/B – ITS EQUIPMENT: SUPPLIER DETAILS

Supplier	Address	Phone
A1 Roadlines Pty Ltd	89 Rushdale Street, Knoxfield VIC 3180	03 9765 9400
ACO	134-140 Old Bathurst Road, Emu Plains. NSW 2750	02 47474000
Aldridge Electrical Industries Pty Ltd	U10 / 16 Sir Joseph Banks Drive, Kurnell NSW 2231	02 9540 9966
Arrow Emergency Systems	14 Pinnacle Street, Brendale QLD 4500	07 3881 3302
Applied Traffic Pty Ltd	6 /42 Smith Street, Capalaba Queensland 4157	07 3245 5505
Armitage Group Pty Ltd	31/65 Marigold Street, Revesby, NSW 2212	02 9771 2364
ARRB	500 Burwood Hwy, Vermont South VIC 3133	03 9881 1555
Aldridge Traffic Controllers (BRAUMS)	Unit N, 10-16 South St, Rydalmere NSW 2116	02 8846 5599
Aldridge Traffic Systems	12 – 14 Leeds Street, Rhodes NSW 2138	02 9736 3677
Bambach Wires & Cables	102 Old Pittwater Road, Brookvale NSW 2100	02 9938 5622
Bartco Visual Information Systems	1 Westside Avenue, Port Melbourne VIC 3207	1300 306 106
Boval Engineering	13 Coombes Dr, Penrith NSW 2750	02 4728 4909
BRAUMS (ATC)	Unit N, 10-16 South St, Rydalmere NSW 2116	02 8846 5599
BOSCH		02 9842-4759
Cables Accessories (Australia) Pty Ltd	8 Distribution Place, Seven Hills NSW 2147	02 97355000
Camera and Lighting Lowering Systems	835 Industrial Drive, Elmhurst, IL 60126, USA	+1 708 681 4330
Central Weighing Australasia Pty Ltd	PO Box 682, Mooloolaba, Queensland. 4557	07 5444 2910
CEOS Pty Ltd	3/17 Burgundy St, Heidelberg, Victoria 3084	03 9458 4955
Ceva Logistics	Unit3 / 9 Ferndell Street, Guildford NSW	1300 363 382
Channell (previously Egerton)	3 Healey Circuit, Huntingwood NSW 2148	02 8884 4111
Clearview Traffic / Astucia Australia	28 Freeman Street, Campbellfield, Victoria 3061	0404 004 162
CNJ Electrical Services	8 Enterprise Drive, Glendenning NSW 2761	02 9625 6822
Compusign Pty Ltd	8 / 10 Clarice Road Box Hill VIC 3128	03 9890 3400
Controlware		02 9765 8222
Dallas Delta Corporation Pty Ltd	102 Albert Street, East Brunswick VIC 3057	03 9387 7388
Data Signs Pty Ltd	5 Grace Court, Sunshine West VIC 3020	03 9312 2177
Dataplex Pty Ltd	1 Rivett Rd. North Ryde NSW 2113	02 9869 2500
Durham	Lot 103 Curtis Road, Mulgrave NSW 2756	02 4587 7011
ELWC Australia	PO Box142, Castle Hill NSW 1765	02 9899 3468
ESDR Electronics	Unit 7/ 30 Perry St, Matraville	02 9700 1050
Excel Technology Group	18 Staple Street, Seventeen Mile Rocks, QLD 4073	07 3279 4322
Gerard Lighting Pty Ltd	96-112 Gow Street, Padstow NSW 2211	1300 799 300
Global Traffic Equipment Pty Ltd (Giga Signs)	27 Gibbs Street, Arundel QLD 4214	07 5631 4444
Gripset Industries Pty Ltd	30 Park Ave, Woodville North SA 5012	08 8124 7300
Hayman Industries	119 Airds Road, Minto NSW 2566	02 8796 2600
ICON	2 Field Close, Moorebank NSW2170	02 96125800

Register of ITS Field Equipment**TS200**

Supplier	Address	Phone
Intelligent Transport Systems (RMS)	Australian Technology Park, Eveleigh, NSW.	ITSHelpdesk
Ingaleps	www.ingaleps.com.au	02 9933 4699
RMS ITS Manufacturing	129A Orchardleigh Street, Yennora NSW 2150	02 9794 4754
J1-LED Intelligent Transport Systems Pty Ltd	10 Production Street, Beenleigh Qld 4207	07 3807 6272
John McGain Products	3 Production Ave, Kogarah NSW 2217	02 9587 0232
Juvana Pty Ltd	PO Box 5522, Brendale QLD 4500	07 3203 6556
Kenshaw Electrical Pty Ltd	9 Belford Place, Cardiff NSW 2285	02 4903 1500
Kistler Instruments Australia Pty Ltd	U1.23 L1, 202 Jells Rd, Wheelers Hill VIC 3150	03 9560 5055
KJ Precision Engineering	16/388 Newman Rd, Geebung Qld Australia 4034	07 3265 3240
Logix Engineering	28 Spine Street, Summer Park. QLD 4074	0434 034 703
Madison Technology Cables	149 Beaconsfield Road, Silverwater NSW 2128	02 97481911
Magnetic Automation Pty Ltd	U1, 24 Prince William Drv, Seven Hills, NSW 2147	02 9421 8800
Magnum MFG Pty Ltd	45 Holland St, Northgate QLD 4013	07 3266 1000
Manly Hydraulics Laboratory	110b King Street, Manly Vale NSW 2093	02 9949 0200
Mascot Engineering	37 Tarlington Place, Smithfield NSW 2164	02 9828 2600
Micro Connect Pty Ltd	22 Gardenia Place FOREST GLEN 4556	02 8002 1987
Mercury Innovation	Unit 1 179/183 Woodpark Rd, Smithfield NSW 2164	0403 997878
Microcom Pty Ltd (MetroCount)	15 O'Connor Close, North Coogee WA 6163	08 9430 6164
Navtech Radar Ltd	Ardington Wantage Oxfordshire UK OX12 8PD	+44 (0)1235 832 419
Nortech Detection Pty Ltd	5 / 49 Frenchs Forest Rd, Frenchs Forest NSW 2086	02 8977 4047
Novaris:-	www.control-logic.com.au	1800 557 705
:-	info@lfsp.com.au	0427 60 44 44
Olex Cables	29 Davis Road, Wetherill Park NSW 2164	1300 556 555
PJ's Loop Services Pty Ltd	30 Medway Road, Bringelly NSW 2556	02 4774 9747
Powercast Pty Ltd	27/13 Swaffham Road, Minto NSW2566	02 87313301
Quick Turn Circuits Pty Ltd	14 Leeds Street, Rhodes NSW 2138	02 9896 5702
Regal Switchboards	9 / 28 Vore Street, Silverwater NSW 2128	02 9748 7888
RMS Intelligent Transport Systems	Bay 4 - L1, Australian Technology Park, Eveleigh NSW 2015	02 8396 1601
Road Runner Parts	U4/48 Riverside Rd, Chipping Norton NSW 2170	02 9728 3443
RTS Constructions Aust Pty Ltd	Unit 1, 2 Stoddart Road, Prospect NSW 2148	02 9636 1233
SAGE Automation	L1 1, 3 Richardson Place, North Ryde NSW 2113	02 9878 9600
Scott Technology Pty Ltd	Unit 1, 28 Lee Holm Road, St. Marys NSW 2760	02 9623 6444
SICK Pty Ltd	Unit 1 , 17 Stanton Rd Seven Hills NSW 2147	03 9457 0600
Taperline	2 Caruso Court, Maddington WA 6109	08 9493 1414
Traffic Control Supplies	59 Moreton Street Heathwood QLD 4110	07 3278 8022
TCS Products Pty Ltd	5 / 24 Vore Street Silverwater MSW 2128	1 800 506 706
Traffic Signals Sales & Service Pty Ltd	133 Arcadia Road, Arcadia NSW 2159	02 9736 3677
Traffic Tech	2 /26 Leighton Place, Hornsby NSW 2077	02 9477 7262
Tyco Traffic & Transportation	137 McCredie Street, Guildford NSW 2161	02 8718 2000
Trantek	West Ryde NSW 2114	02 9808 6166
Wieland Engineering	19 Wellington Street, Riverstone NSW 2765	02 9627 4400

ANNEXURES TS200/C TO TS200/L – (NOT USED)

ANNEXURE TS200/M – REFERENCE DOCUMENTS

RMS Specifications

RMS Q	Quality Management System
RMS TS201	Approval of ITS Field Equipment
RMS TS202	Project Approval of ITS Solutions for Projects
RMS TSxxx	RMS “Traffic Systems” (ITS) specifications 001 to 299