

Inner Range 8-32 Zone LAN Expander Module

P/N: 996005PCB&K

INSTALLATION MANUAL

Overview

The **8-32 Zone LAN Expander** provides 8 Zone inputs, 2 Auxiliary outputs and 2 Siren drivers. The Module is supplied as a PCB and Installation Kit for installation in suitable Inner Range enclosures. The number of Zones &/or Auxiliaries can be further expanded using UniBus expander boards. *See p3 for details of the expansion options.* Up to 99 8-32 Zone Expanders can be enrolled on a Controller. However, the total number of Zone Inputs that can be utilized is limited to 512 in an Inception system, or determined by the smart card license options in an Integrity system.

IMPORTANT NOTES:

- 1) **a) This Installation Manual is for Revision B, C & D PCBs.** For Revision A PCBs refer to Revision 1 of this manual available from the Inner Range Support Web page. The PCB Revision is printed on the Circuit Board with the PCB Part Number. e.g. 936005_A = Rev. A. 936005_D = Rev. D. etc.

b) The firmware in Revision D PCBs must be V3.2.0 or later. The firmware is installed in the factory, but if the firmware is changed in the field, do NOT use any version prior to V3.2.0. Latest firmware is recommended.

c) The firmware in Revision B or C PCBs must be V1.30 or later. The firmware is installed in the factory, but if the firmware is changed in the field, do NOT use any version prior to V1.30. Downgrading the firmware to an earlier version may cause damage to Siren speakers. Latest firmware is recommended.

d) Modules with firmware V3.1.1 or later cannot be downgraded to an earlier firmware version.

e) If upgrading from a firmware version prior to V3.1.1 to a firmware version later than V3.1.1, the firmware must be upgraded to V3.1.1 first, and then upgraded to the later firmware version.
- 2) **The Integrity 8-Zone LAN Expander Module is identified on the system LAN as follows:**
 - Integrity / Infiniti Controller: “Wired Zone Expander” Module (E).
 - Inception Controller: “8 Input Expander”.
- 3) **Integrity Software and Controller Compatibility.** Latest Integrity Software and Controller Firmware is recommended. Firmware prior to V4.0 is not advised.
- 4) **End-Of-Line Resistor Scheme.** The standard EOL Resistor scheme for current Inner Range products is 2k2 / 2k2. Systems with Controller firmware V3.3.4 or later support the 2k2/2k2 scheme and earlier 2k2/6k8 scheme by default. *See pages 6 & 7 & “Zone Input Wiring” on page 9 for more information.* The earlier 2k2/6k8 scheme is still required for LAN Modules & UniBus boards connected to Integrity Controllers with firmware prior to V3.3.4.
- 5) **Fire Protection.** This product must be installed into a suitable non-flammable equipment enclosure ensuring that the enclosure has been installed onto a non-flammable surface and away from all flammable materials. Any Conduit entry points that have the knockout removed but are not used, must also be resealed using Conduit Plugs.
- 6) **Siren Outputs.** Due to component shortages, some Revision C 8-32 Zone LAN Expander Modules do not include the two dedicated Siren Speaker Outputs, ‘S1INT’ & ‘S2EXT’, on connector T7. *Additional details and alternate Siren control options are provided in the ‘8Z LAN Exp Siren Notice’ document, P/N: 636005SIREN.*

REGULATORY INFORMATION

UL294 Requirements.

File No: BP20873

- Wiring methods shall be in accordance with the National Electrical Code (ANSI/NFPA70), local codes, and the authorities having jurisdiction.
- The host Controller (Integriti, Infiniti or Inception Controller), remote Modules and UniBus in-cabinet expansion boards are acceptable for indoor use only and must be installed within the protected premises.
- The AC power cord must not be plugged into an outlet controlled by a switch.
- If a separate power supply is utilized for ancillary power (e.g. For electric locks), the power supply must be a UL Listed Access Control or Burglar Alarm, Low-Voltage Class 2, Power-Limited, power source capable of a minimum of 4 hrs standby power.
- All cabling must be UL Listed and/or Recognized wire
- All interconnecting devices must be UL Listed.
- This access control system must be used with UL listed Card Readers.
- The following Listed Card Readers are compatible with the system:
 - Inner Range SIFER Reader
 - Inner Range SIFER-Keypad
 - HID iClass
 - HID iClass SE
 - HID Proximity
- Fuses. CAUTION - FOR CONTINUED PROTECTION AGAINST THE RISK OF FIRE, REPLACE WITH ONLY THE SAME TYPE AND RATING OF FUSE.

FCC Statement

Information to the user (FCC Part 15.105)

Class B Product:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning: Any changes or modifications not expressly approved by Inner Range Pty Ltd could void the user's authority to operate the equipment.

ISED (Canada)

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

CAN ICES-3 (B) / NMB-3(B)

EXPANSION OPTIONS

The UniBus Port (P3) is a connection bus for local expansion boards which are installed in the same enclosure. The “UniBus” port on an 8-32 Zone LAN Expander Module can be used to provide additional Zones and Auxiliary outputs.

The following UniBus options are compatible with this Module:

<u>Inner Range Part Number.</u>	<u>Description.</u>	<u>Maximum of this type per Module*</u>
996500	UniBus 8 Zone Expander board.	3
996515	UniBus 8 Relay Expander board.	4
996510 (Obsolete)	UniBus 4 Relay Expander board.	4
996540	UniBus 16-Floor Lift Interface board.	6

***Up to 6 UniBus boards in total may be connected to a host Module.** The limit on the number of any particular type of UniBus board that can be connected is determined by the total number of entities supported by the Module and the UniBus board.

e.g. Integrity Wired Expander Modules such as the 8-32 Zone LAN Expander, support up to 32 Zones in total. Therefore up to 3 UniBus 8-Zone Exander boards may be connected.

When a new UniBus board is added to a Module in an Integrity system, the “Unsecured” System Input will be triggered to indicate that a new UniBus board is present.

IMPORTANT NOTES:

- A suitable Inner Range Power Supply must be connected to the Module via the 10-way bus cable on P2 when UniBus boards are used or when Siren Speakers are connected.
 - Integrity 2A Standard Power Supply. P/N: 996090PCB&K (Not available in some regions)
 - Integrity 3A Smart Power Supply. P/N: 996091PCB&K
 - Integrity 8A Smart Power Supply. P/N: 996092 (Not available in some regions)
 - Integrity 10A PFC Smart Power Supply. P/N: 996095 (Not available in some regions)
- Ensure that the current required by UniBus Boards and their peripherals does not cause the power supply current limit to be exceeded or Battery recharge times to be compromised. *See “Specifications - Electrical” on page 12 for proper loading.*
- UniBus Expansion boards are connected to the host LAN Module using the 270mm cable provided with the UniBus Board. Other UniBus cable lengths may be purchased separately if required:

150mm: P/N: 996791SS	475mm: P/N: 996791LL	675mm: P/N: 996791XL
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- The UniBus cables are in-cabinet connections. Wiring connected to UniBus terminals must not exit the enclosure.

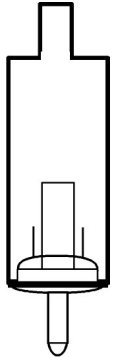
PARTS LIST

- Integrity 8 Zone Expander Module PCB.
- Installation Manual. (This document)
- Installation Kit containing:

- 6 x Metal M3 PCB Mounting Clips.	- 1 x Cable; Chassis Earth to PCB.
- 6 x M3x10mm screws.	- 1 x 6.3mm QC connector (Spare)
- 3 x 8 Way plug-on screw terminals.	- 2 x 4 Way plug-on screw terminals.
- 1 x 6 Way plug-on screw terminals.	- 1 x 2 Way plug-on screw terminals.
- 20 x 2k2 End-of-line resistors. (red-red-black-brown-brown). For 8 Zone Inputs + 2 spare.	

Installing the Module

1. INSTALLATION ENVIRONMENT should be maintained at a temperature of 0° to 49° Celsius (32° to 120° F) and 15% to 85% Relative humidity (non-condensing).
2. MOUNTING. The Module can be mounted in a suitable Inner Range metal enclosure (typically a powered enclosure) using the PCB mounting clips & M3 screws provided, or other suitable PCB standoffs. The enclosure must be an approved cabinet installed in a suitable location in accordance with the instructions supplied with the enclosure. It must have Tamper switch protection provided by an Integrity Module installed in the same enclosure.
3. CABINET TAMPER SWITCH. If installed in an Inner Range enclosure, the “Normally Closed” Tamper Switch is inserted into the hole provided in the Tamper switch bracket. The Tamper Switch bracket is then positioned in the slot provided in the chassis before the chassis is mounted on the wall. *See drawing opposite.*
Two 4.8mm QC terminals are provided with the enclosure for connecting a 2-core cable to the switch. The 2-core cable is then connected to the 8-32 Zone LAN Expander Module using the “TAMP” and “0V” input terminals on T1. (The Switch is Open Circuit when the plunger is depressed)
See drawing on p6.
In-cabinet connection. Wiring connected to these terminals must not exit the enclosure.
4. MODULE NUMBER is set using DIPswitches 1 to 7. *See table below.*



Module Numbering

SW1. DIPswitches 1 to 7: Set the Expander Module number. *See table below.*

SW1. DIPswitch 8: Not currently used. Must be set to OFF.

The Module number equals $n + 1$, where n is the binary number set on the DIPswitches.

Module No:	DIPswitch:	1	2	3	4	5	6	7	8
	Binary value:	1	2	4	8	16	32	64	n/a
1		off	off	off	off	off	off	off	Always Off.
2		ON	off	off	off	off	off	off	
3		off	ON	off	off	off	off	off	
4		ON	ON	off	off	off	off	off	
5		off	off	ON	off	off	off	off	
6		ON	off	ON	off	off	off	off	
7		off	ON	ON	off	off	off	off	
8		ON	ON	ON	off	off	off	off	
9		off	off	off	ON	off	off	off	
10		ON	off	off	ON	off	off	off	
11		off	ON	off	ON	off	off	off	
12		ON	ON	off	ON	off	off	off	
13		off	off	ON	ON	off	off	off	
14		ON	off	ON	ON	off	off	off	
15		off	ON	ON	ON	off	off	off	
16		ON	ON	ON	ON	off	off	off	
through to									
64		ON	ON	ON	ON	ON	ON	off	
65		off	off	off	off	off	off	ON	
...99		off	ON	off	off	off	ON	ON	

Connecting Power to the PCB.

In-cabinet connections. Wiring connected to these terminals must not exit the enclosure.

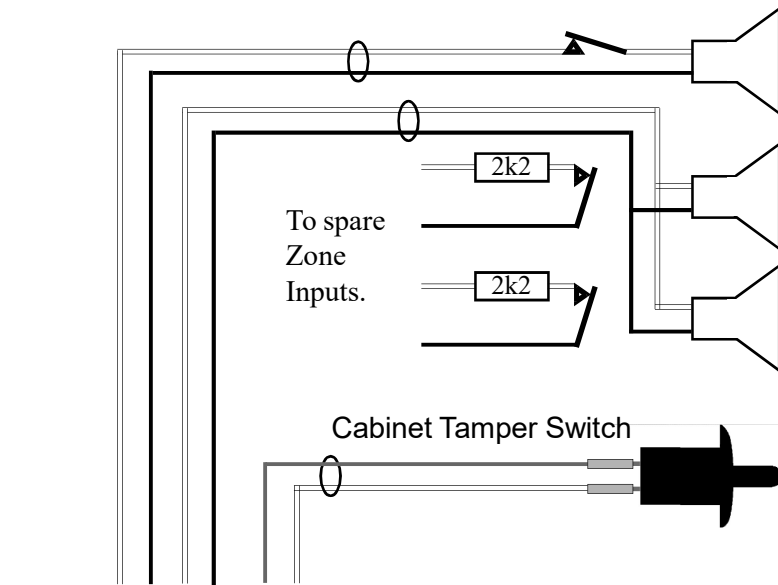
1. Connect the 10-way External Power bus cable between P2 on the Integrati Smart Power Supply and P2 “External Power” on the 8-32 Zone LAN Expander Module.
2. Connect the EARTH wire provided between the “EARTH” Lug on the PCB and the nearest EARTH stud on the chassis, using the M4 locking nut and star washer provided.

Status and Fault LEDs *See p6 for locations*

L1	L1 (RX)	Valid LAN packet received or LAN Fault/System Fault indication. <i>See table below.</i>
L2	L2 (TX)	LAN packet sent or LAN Fault/System Fault indication. <i>See table below.</i>
L3	FAULT.	ON = LAN Fault. Refer to “LAN Problems” table below for fault details.
		FLASHING;
		& L1 FLASHING / L2 OFF = System Fault. Hardware problem.
		Return to supplier for repair or replacement.
		& L1 OFF / L2 FLASHING = System Fault. Firmware problem.
		Return to supplier for repair or replacement.
L4	System	SLOW FLASHING = Device running OK.
		FAST FLASHING = Internal Fault. Return for service.
L9		ON = Auxiliary 1 On
L10		ON = Auxiliary 2 On
L14	UniBus	FLASHING = Idle. No UniBus cards connected.
		OFF = OK. UniBus Card/s communicating correctly.
		ON = Fault. Problem with one or more UniBus Cards.
		e.g. Address conflict.
L24	3V3	3.3V Microprocessor supply OK.

LAN Problems. If L3 (‘FAULT’ LED) is ON.

L1	L2	EXPLANATION / REMEDY	
ON	OFF	NO ROOM.	Too many Modules on the Network. Check limits and licencing.
Flash	ON	EXISTS.	Duplicate Module. Module number already in use by a module of the same type.
Flash	Flash	DIMENSION.	Dimensions. Module number selected is too big. Select a lower Module number that is not already in use or check limits and licencing.
OFF	ON	UNKNOWN.	Module type unknown. Controller firmware upgrade required.
ON	ON	NO ADDRESS.	Module is un-addressed. (Not communicating with the Controller)
ON	Flash	DISABLED.	Module disabled.



Siren Cabling. Typically 24/0.2 (20AWG)
Minimum: 14/0.2 (21AWG)

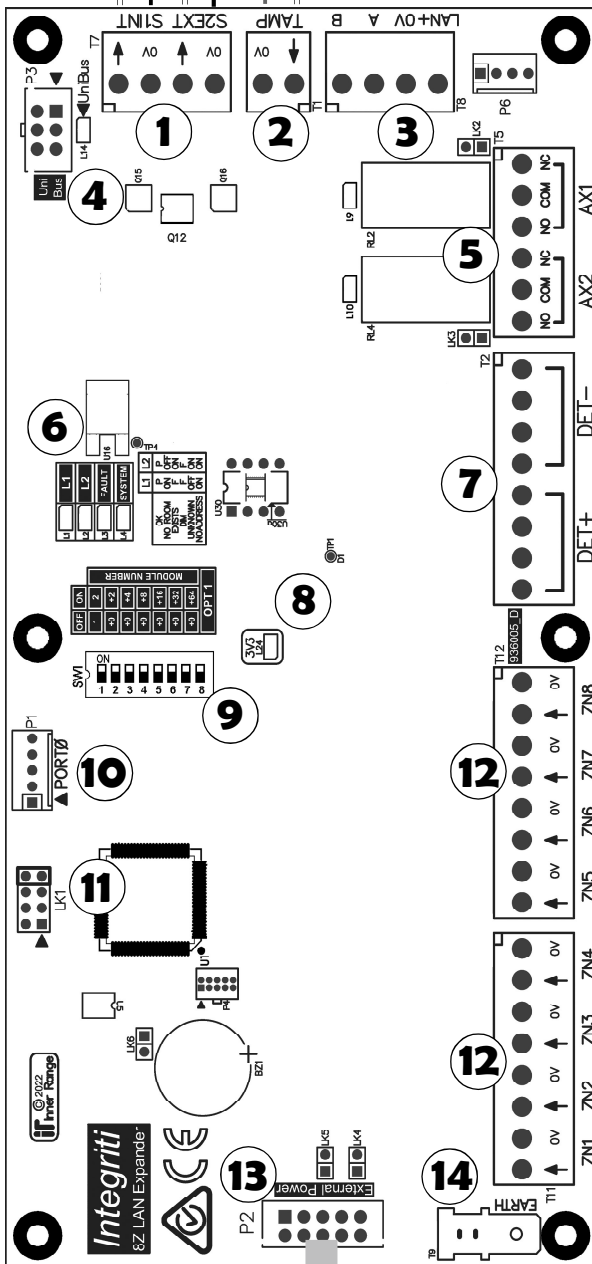
Siren Cover Tamper Switch.

Single Siren Speaker: A Normally Closed Tamper Switch is wired in series.

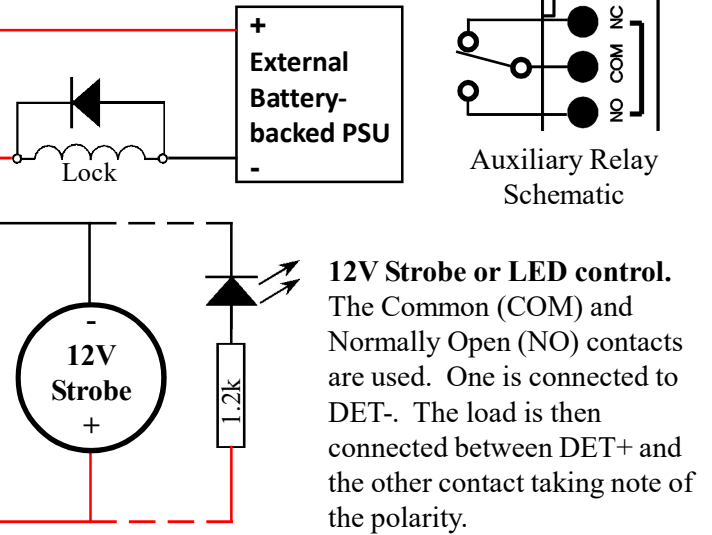
Two Siren Speakers in parallel: The Normally Closed Tamper Switches are wired with one EOL Resistor to spare Zone Inputs and programmed for Tamper processing.

Cabinet Tamper Switch. Typically wired with Figure-8 or Security Cable.

Lock or Solenoid control. An External Power Supply should be used to power inductive loads. See p9 for more details.



Smart Power Supply
Bus Cable.



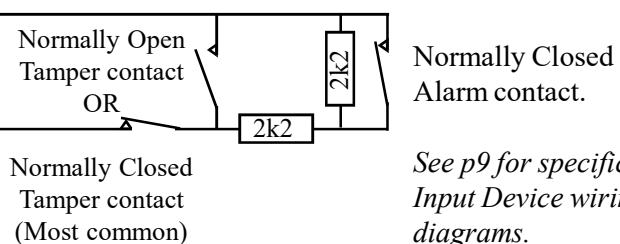
12V Strobe or LED control.
The Common (COM) and Normally Open (NO) contacts are used. One is connected to DET-. The load is then connected between DET+ and the other contact taking note of the polarity.

End-Of-Line Resistor Scheme States

For Default 2k2/2k2 EOL scheme:

2k2	= Sealed
4k4 (2k2 + 2k2)	= Unseal/Alarm
9k * (2k2 + 6k8)	= Unseal/Alarm
Open or Short Circuit	= Tamper

* Legacy Concept EOL scheme



See p9 for specific Zone
Input Device wiring
diagrams.

INNER RANGE 8-32 ZONE LAN EXPANDER MODULE PCB

1. **T7. Siren Connections.** . S1INT: To internal 8 Ohm Siren speaker.
See drawing opposite. S2EXT: To external 8 Ohm Siren speaker.
- The Module must be powered by an external power supply when Siren Speakers are connected. See page 3.
 - A maximum of two 8 Ohm Siren speakers may be connected to each siren output, wired in parallel.
 - Normally Closed Siren cover Tamper switches may be wired in series with the speaker cable. This method utilizes the siren speaker circuit monitoring. See 'Specifications' for Siren Tamper Alarm conditions.
 - If high-impedance devices (Piezo Siren Speakers) are used, fit a 6k8 Resistor across the Piezo Siren device terminals to Seal the "Siren Tamper" System Input.
3. **T8 / P6. RS485 LAN Connections.** See p8 for details.
- LAN+: Used to power the Module (if P2 not used) or to power a subsequent LAN Module if required.
- 0V: Connect LAN Common 0V (-VE).
- A: LAN Data A connection.
- B: LAN Data B connection.
- Note: P6 provides a temporary LCD Terminal connection via the LAN Ancillary Cable (P/N: 993028) for commissioning, fault finding, etc.
5. **T5 / L9 / L10. Auxiliary outputs.** T5 Aux1 and Aux 2 Relay output connections.
See drawing opposite & page 9. L9 / L10 Auxiliary On indication.
- Auxiliary Relay Outputs AX1 and AX2 can switch up to 2A at 30Volts DC.
- If switching an AC load, a limit of 1A at 30V AC RMS must be observed.
6. **L1 / L2 / L3 / L4** L1 LAN Data Receive / Fault indication.
L2 LAN Data Transmit / Fault indication.
L3 Fault. See details and table on page 5.
L4 System. Slow Flash: Device running OK
Fast Flash: Internal Fault. Return for service.
7. **T18. Detector Power.** Power Supply output for +12V Detector Power. See drawing opposite and p9.
NOTE: Devices powered from this supply output must be rated to operate with a power supply of up to 14VDC.
8. **L24.** 3.3V Microprocessor supply is present.
9. **DIPswitch SW1.** Module number. See page 4.
- 10/11 LK1 / Port 0.** Not Fitted (Factory Only).
12. **T11 / T12. Zone Input connections.** See drawing opposite and p9 for details..
The End-of-line Resistors must be installed in or on the Detection Device. Typical Detection Devices with Normally Closed Alarm contacts and Normally Closed **OR** Normally Open Tamper Contacts are wired as shown opposite. Examples of PIR and Reed Switch wiring are shown on p9.

In-cabinet connections. Wiring connected to these terminals must not exit the enclosure.

2. **T1. Tamper Switch Connection.** Connections for Normally Closed Tamper Switch. No End-of-Line resistors required. *See Step 3 on Page 4 & drawing opposite.*
4. **P3 / L14. UniBus.** Connector & Status LED for local UniBus boards.
e.g. UniBus 8 Zone Expander or 8 Auxiliary Expander. *See pages 3 and 5.*
13. **P2** External Power Supply connection. Connect to P2 on an appropriate Integrati Smart Power Supply using the 10-way cable provided with the Power Supply.
14. **T9. Earth Terminal.** Connect to chassis using earth wire supplied in the installation kit.

Field Wiring Details

RS485 SYSTEM LAN WIRING

NOTE: Refer to the relevant Controller Installation Manual for full LAN wiring details.

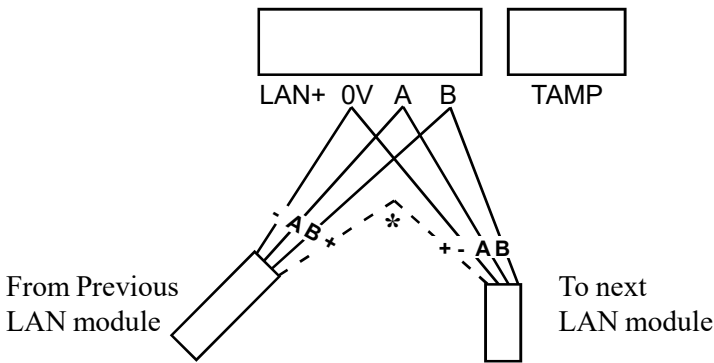
The LAN is connected using twisted pair cable.

e.g. RS485 / RS422 data cable or Category 5/5e cable.

One pair is used for Data A & B, and the other pair is used for LAN+ (if required) & 0V.

MODULE POWERED FROM LOCAL INNER RANGE EXTERNAL POWER SUPPLY (Recommended)

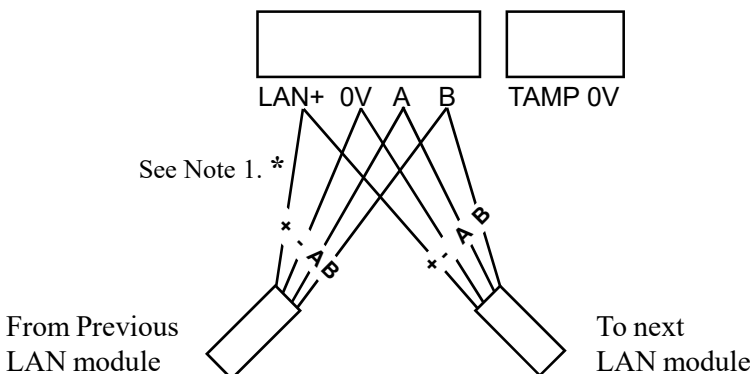
- If the Module has a local Power Supply connected, the LAN+ terminal may be used to provide power to LCD Terminals, etc. in the vicinity of the Expander module. However, if used in this way, note that this terminal must not be connected to the LAN+/POS terminal on other Expanders, Control module, Power Supplies or any other Module where LAN+/POS is a power source.
- If required, the LAN to subsequent Modules may derive +12V from the incoming LAN cable.
 - * See diagram below.
- Current drawn from LAN+ and DET+ must not exceed the limit of the Power Supply source.



MODULE POWERED FROM THE LAN

NOTES:

1. * If both "LAN +" wires provide a Power supply source, the one that is not required to power the Module must not be connected.
2. If UniBus boards are to be connected to this Module, a local external Power Supply (e.g. Integrity Smart Power Supply) must be used.
3. Ensure that adequate power supply current and backup battery capacity are available from the power supply source when powering the Module from LAN+.

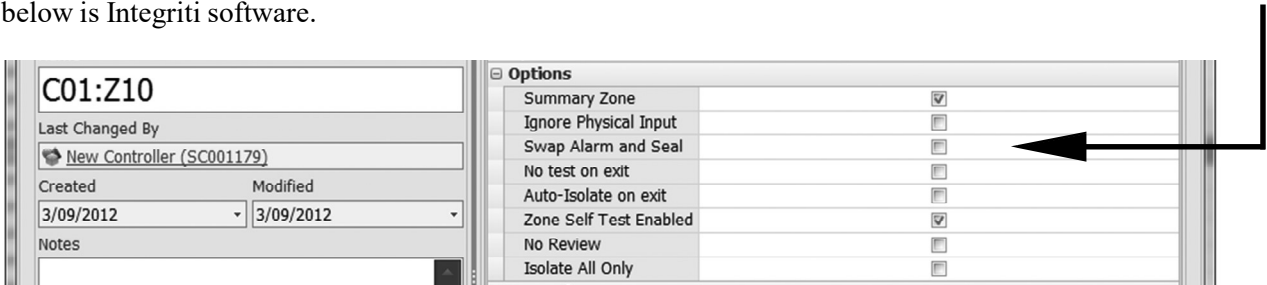


AUXILIARY OUTPUT WIRING NOTES

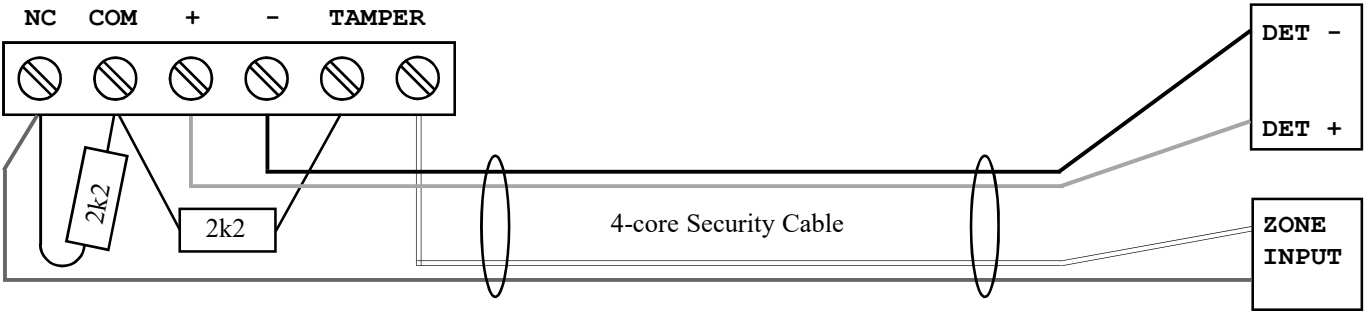
- 1) A separate external power supply must be used for the auxiliary devices if the combined current drawn by the Auxiliary devices + LAN current + Detectors + Other peripheral expansion boards, exceeds the current available from the normal Power Supply source. e.g. The connected Integriti Smart Power Supply or the LAN. *See the Power Supply specifications for details.*
- 2) An External Power Supply should be used to power inductive loads. This protects the Module, provides improved battery backup & recharge times and minimizes the possibility of earth loops.
- 3) If an Inductive load (eg electric door lock) is connected, then a Clamp diode (e.g. 1N4004) must be fitted across the load. Cathode (bar) to +ve. *See diagram on p6.*

ZONE INPUT WIRING

Detection devices with Normally Open Alarm contacts are wired in exactly the same manner as above. When programming the Zone Input, however, the option to “Swap Alarm and Seal” must be enabled. (Set to [Y]es) Example below is Integriti software.



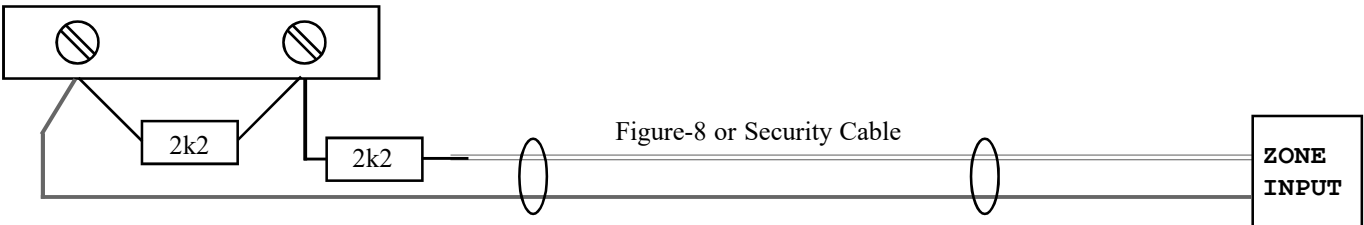
Example. PIR Movement Detector



Note that the connector terminals may be arranged and labelled differently to the example shown above. Please check the manufacturers documentation. The table opposite provides details of some of the more common Detector terminal labelling.

Label in example	Alternative labels	Description
NC COM	N/C ALARM NC RELAY NC	Normally Closed Alarm output contacts
+ -	+ 12V DC -	Power Supply Input
TAMPER	TAMPER NC 24 HR	Normally Closed Tamper Contacts

Example. Reed Switch



TESTING & TROUBLESHOOTING

Pre Power Up Testing

The following checks are performed with all AC power and Batteries disconnected.

Physically inspect cabling for any signs of cable damage or short circuits.

Unplug the DET+ connectors from the Circuit Board.

Using an ohmmeter, check for short circuits between each DET+ wire and a) the DET- connection, and b) the metal chassis. Restore the DET+ connectors.

For any Sirens that are connected, unplug the Siren connectors (S1INT and S2EXT) from the Circuit Board.

Using an ohmmeter, check for short circuits between the two wires going to each Siren.

Also check for short circuits from each Siren wire to the metal chassis.

Restore the Siren connectors.

Unplug the RS485 LAN connectors from the Circuit Board.

Using an ohmmeter, check for short circuits between LAN+ and 0V, and LAN+ and the metal chassis.

Also check for short circuits between A and 0V, and B and 0V.

Restore the LAN connectors.

Power Up Testing

Apply AC power and connect the Batteries. Perform the following tests with a DC Voltmeter.

Measure the DC Voltage between the DET “+” & “-” Terminals on the Inner Range Smart Power supply. +13.75V +/- 2%

Measure the DC Voltage between the BATTERY + & - Terminals on the Inner Range Smart Power supply. +13.75V +/- 2%

Measure the DC Voltage between the DET+ and DET- output Terminals on the Expander Module. +13.75V +/- 2%

Measure the DC Voltage between the RS485 LAN+ and 0V Terminals on the Expander Module. +13.75V +/- 2%

Check the FAULT and STATUS LEDs on the Module. L24 “3V3” LED should be On. If not, check the table on page 5 for details.

Status and Fault LEDs

Details of the Status and Fault LED indications are provided on page 5.

Zones and System Inputs

INTEGRITI: The status of any Zone or System Input can be viewed in the Integrity System Designer Software or via the LCD Terminal Test Menu. <MEMU>, 4, 1.

INCEPTION: The status of any Zone or System Input can be viewed via the Inception Browser ‘State/Control’ menu.

Sirens and Auxiliary Outputs

INTEGRITI: The status of any Siren or Auxiliary output can be viewed in the Integrity System Designer Software or via the LCD Terminal Test Menu: Auxiliary Outputs: <MEMU>, 4, 2.

Sirens <MEMU>, 4, 3.

INCEPTION: The status of any Siren or Auxiliary output can be viewed via the Inception Browser ‘State/Control’ menu.

System Operation

System User operations are described in the following manuals:

INTEGRITI

Integrati User Manual - Elite LCD Terminal

Integriti Colour Graphic Terminal User Manual

A Beginners Guide to Inner Range Systems

INCEPTION

Inception User Manual

A Beginners Guide to Inner Range Systems

System Commissioning and Routine Maintenance

Procedures for a range of Commissioning and Routine Maintenance Tests are provided in the document:

INTEGRITI:

“Inner Range. Integrity Security and Access Controllers. Manufacturers recommended routine maintenance.”

INCEPTION:

“Inner Range. Inception Security and Access Controllers. Manufacturers recommended routine maintenance.”

Routine Maintenance Testing should be performed at intervals of not less than one year, or more frequently as required by relevant regulations, and/or as agreed with the customer.

Specifications

Mechanical

PCB dimensions: L: 200mm. W: 94mm H: Allow 45mm.
 Installation environment: 0° to 49° Celsius (32° to 120° F) and 15-85% relative humidity (non-condensing)

Electrical

Power Supply Input: 11V to 14V DC.
 Current Consumption: 70mA idle (with 2k2 EOL on all 8 Zones)
 110mA with both Auxiliary relays On. (i.e. 20mA per Relay)

NOTE. These figures do NOT include the current required by:

- Any peripherals such as UniBus boards, Detectors, Lamps or Warning devices, etc. being powered from the UniBus Port, DET+ or LAN+.
- Siren speakers.

Power Supply outputs:	<u>Output</u>	<u>Current Limit</u>	<u>Voltage</u>
DET+ & UniBus:	1.2A *	13.75VDC	
RS485 LAN+	1.2A *	13.75VDC	

Siren Speaker Output: 2.3A † Minimum load impedance: 4 Ohms.

Siren Speaker Output Tamper Conditions.

When Siren/s On: Siren device absent or removed or short circuit detected.

When Siren/s Off: Siren device absent or removed. (Tamper not triggered if shorted when off)

NOTE: If Siren Speakers are connected, the Module must be powered by an external Power Supply connected to P2 via the 10-way bus cable. If the Module is powered via LAN+, supply current may be inadequate for Siren operation and Siren tamper monitoring is not supported.

* Maximum Total Ancillary Current (DET+, UniBus & LAN+ combined): 1.2A

† Depending on the current drawn by other power supply outputs, the Module may source a portion of the siren current from the Battery if required.

Aux. Relay Contacts. Maximum ratings: 2 Amps at up to 30VDC
 1 Amp at up to 30VAC RMS

Overcurrent Protection. Provided via self-resetting electronic fuses on the Integrity Power Supply connected to the P2 “External Power” connector. If activated, removing the additional load or short circuit from the relevant output will restore the output to normal operation.

Depending on overall power requirements, battery backup & re-charge times, a separate Battery-backed power supply may be required for peripheral devices.

Disclaimer

1. The manufacturer &/or it's agents take no responsibility for any damage, financial loss or injury caused to any equipment, property or persons resulting from the correct or incorrect use of the system or it's peripherals. The purchaser assumes all responsibility in the use of the system and it's peripherals.
2. While every effort has been made to ensure the accuracy of this manual, the manufacturer assumes no responsibility or liability for any errors or omissions. Due to ongoing development, this manual is subject to change without notice.

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