System Programming

INTEGRITI
RF Zone Inputs: Program 'Radio Expander' module/s and 'Inputs'.
User Pendants: Program 'RF Remotes', 'RF Remote Templates' and 'Users'.
Programming details are provided in the Integriti Programming Reference Manual.

INCEPTION
RF Zone Inputs: Program 'IR-Inovonics RF Module/s' and 'Inputs'.
User Pendants: Program 'Remote Fob Templates' and 'Manage Users'.
Programming details are provided via the Info buttons in the Inception browser.

NOTE
Additional programming may be required depending on the desired functionality.

Module Status and Fault LEDs

SYS

Slow Flash   Module powered and firmware running OK.

FAULT

ON   LAN Fault. Refer to L1/L2 details below.

SYS & FAULT

Both Fast Flash   No valid firmware loaded. Return to supplier for repair.

L1(RX)	L2 (TX)	EXPLANATION / REMEDY WHEN 'FAULT' LED IS ON.
ON	ON	Module is un-addressed. Check LAN 0V, A & B connections.
OFF	ON	Module type unknown. Firmware upgrade required to Control Module. *See page 1 for compatible Controller firmware versions.*
Flash	ON	Duplicate Module. This module number is already in use by a module of the same type.
Flash	Flash	Module number selected is too big for Control Module RAM size or Memory Configuration. Select a lower Module number.
ON	OFF	Too many modules on the Network for Control Module RAM size.
OFF	Flash	Module is disabled.

Integriti/Inception

Inovonics™ RF Expander Module.
P/N: 996008

INSTALLATION INSTRUCTIONS

Overview

The Inovonics™ RF Expander, designated as an "F" Type module, provides an interface for Inovonics™ security transmitters such as detectors, universal transmitters and user pendants.
Refer to the 'Inovonics Security Product Guide. Australia/New Zealand' for details.
The number of devices supported is determined by the Controller Input and User licensing. There are <u>no</u> Auxiliaries on this Module.

Power is sourced from the LAN or a separate battery-backed external supply.
Depending on type, Transmitters are processed as Zone Inputs or User RF remotes. Some devices can be processed as either type depending on how they are enrolled in the system. Repeaters can be used to extend the range of the system. The Repeater device ID can be assigned to an RF Zone Input to allow Repeater problems to be monitored.
Refer to the "Integriti/Inception Inovonics Transmitter Compatibility Guide" for details.

Up to 32 Detectors can be monitored by each Module as Zone Inputs. User pendant transmissions can be received via any RF Expander Module in the system. Transmitters must be registered via simple procedures described on page 7, before they can be used. Once registered, system programming is then performed to specify their operations. An RF Zone indicates an Alarm state when the device is in alarm, and a Tamper state when the housing is opened. A 'Detailed Review' option is available to log information including transmitter signal strength which can assist in commissioning and troubleshooting.

COMPATIBILITY: ***Integriti Controller Firmware & Software must be V17 or later.***
                          Inception Controller must be V1.2.1 or later.
                          For use in Australia and New Zealand only.

Acknowledgement and Disclaimer:

Parts List

- RF Expander Module/EN4200 Receiver in plastic enclosure with mounting kit.
- Integriti/Inception Inovonics RF Expander Module Installation Manual. (This doc.)
- Inovonics EchoStream Serial Receiver Installation Instructions. (Note: Step 2.3 and the 'Power requirement' spec. in this document are not relevant in this application)
- 1 x 4 Way Plug on Screw Terminal. (Pre-fitted to RF Expander Module)

Specifications

Power Supply Input:	11.5V to 14V DC
Current Consumption.	115mA.
Installation environment:	0º to 50º C. 15% to 85% Relative humidity (non-condensing)
Enclosure dimensions:	165mm (Width) x 92mm (Height) x 28mm (Depth)
Zone Inputs:	32 Wireless zones.
Auxiliaries:	4. (Virtual Auxiliaries only. NO physical Auxiliaries)
RF Frequency Band:	915-928 MHz (Australia). 921-928 MHz (New Zealand)

Installation

The RF Expander Module is supplied in a plastic enclosure which can be mounted in an appropriate location using fasteners through the four mounting holes in the base.

1. Choose a location. The Module should be installed where it is within reliable range of all devices that are to be associated with the Receiver and also meets the Integriti/ Inception LAN cabling requirements.
   The module should also be installed away from metal objects (duct work, wire mesh screens, boxes) and away from areas of electrical interference.which will reduce the RF range. The range and performance of any wireless product depends on the structure and environment in which it operates.
   Refer to the Inovonics Security Product Guide and appropriate transmitter specifications and instructions for details of RF range.

2. Set the 'Frequeny Band' link to "AUS" or "NZ" to suit the country of installation.
   See page 5 for details.

3. Set the Module Number using DIPswitches 1 to 7 as required.
   DIPswitch 8 must be Off. *See table on page 3.*

4. Connect the LAN, connect the power supply (if required), test, then fit the enclosure cover. *See details on pages 4 to 6.*

Transmitter Registration

INTEGRITI (NOTE: User Pendants are registered via a nominated RF Expander module, selected in the Controller 'Default Modules' options. The default is F01 (RadioExp: 01).

Transmitter Registration via Integriti Software (Recommended method):
 - User Pendant (Remote) registration. If the Hexadecimal Device ID is known, it can be entered in the 'Remote Data' field under 'Credential' in 'RF Remote' programming.
If the Device ID is not known, use the 'Find Remote' dialogue. This is accessed in User programming by clicking on the 'From Review' button under the 'RF Remotes' tab.
When the 'Find Remote' screen is opened, press a User button on the Pendant.

 - Zone Input registration is done in 'Radio Expander' module programming under 'Sensor Registry'. If the Hexadecimal Device ID is known, it can be entered in the 'RF Sensor ID' field for the required Zone Input. If the Device ID is not known, click on the selection button <…> at the end of the RF Sensor ID field. This opens the 'Sensor ID Picker' window allowing you to view/search past or real-time RF Transmitter events to select a Transmitter ID. Press the Reset/Learn button on the Transmitter; or a User button if a Pendant.

Transmitter Registration via an LCD Terminal:
If this option is used, note that in the Integriti Software, the Control Module 'Data Sync Mode' must be set to allow changes from the Controller.
 - User Pendant (Remote) registration.   MENU, 7, 2, 0, 0, 1. OR MENU, 2, 7.
 - Zone Input registration.   MENU, 7, 2, 0, 0, 2

INCEPTION
Transmitters are registered in Inception using the 8-digit Decimal Serial Number which can be found on labels on both the inside and outside of the devices. e.g. The example shown is Serial Number 10252873.

If the serial number cannot be obtained from a label, it can be viewed by opening the Inception Browser and selecting 'Review Events'. Enable the 'Hardware' filter, then press the Reset/ Learn button on the Transmitter; or the User button/s if a Pendant.
Take note of the serial number that appears in the 'Who' column for each device triggered.

For Zone Inputs select the 'Hardware' option in the 'Configuration' menu. Select the "IR-Inovonics RF Module" to configure and enter the Serial Numbers in the 'RF Inputs' step.

For Pendants, first program one or more 'Remote Fob Templates' found under 'Configuration' > 'Access Control'. Then go to 'Manage Users' under 'Configuration' > 'Users'. Select or create a User. Expand the 'Credentials' option, click on 'Add Items' under 'Remote Fobs' then follow the prompts.

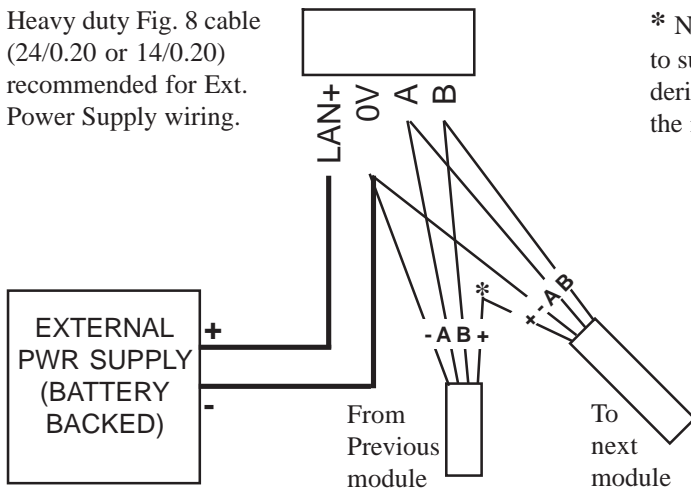## LAN and Power Supply Wiring

MODULE POWERED FROM THE LAN

* Note: If both "LAN +VE" wires provide a Power supply source, the one that is not required to power the Reader Module must NOT be connected.

See Note *

LAN+ 0V A B

From Previous LAN module

To next module
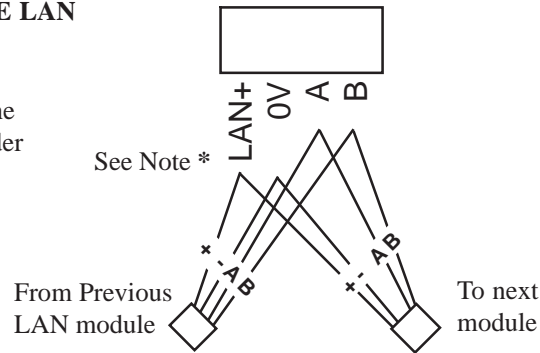
MODULE POWERED FROM EXTERNAL SUPPLY

Heavy duty Fig. 8 cable (24/0.20 or 14/0.20) recommended for Ext. Power Supply wiring.

* Note: If required, the LAN to subsequent Modules may derive +12V from "LAN+" or the incoming LAN cable.

LAN+ 0V A B

EXTERNAL PWR SUPPLY (BATTERY BACKED)   +   -

- A B +

From Previous module

To next module

Installation (continued)

LEDs:

L1	LAN RX Data and FAULT INDICATION.	*See table on page 8.*
L2	LAN TX Data and FAULT INDICATION.	*See table on page 8.*
L5	RF RX. Valid Wireless message received.	
L6	RF TX. Not used.	
FAULT	Fault condition exists.	*See table on page 8.*
SYS	SYSTEM STATUS.	*See table on page 8.*

DIPSwitch SW1:

The Module number is set using DIPswitches 1 to 7. The Module number equals $n + 1$, where n is the binary number set on DIPswitches 1 to 7. Switch 8 must remain OFF.

Module No:	DIPswitch: 1	2	3	4	5	6	7
	Binary value: 1	2	4	8	16	32	64
1	off	off	off	off	off	off	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
etc., through to							
99 (Integriti)	off	ON	off	off	off	ON	ON
or							
128 (Inception)	ON	ON	ON	ON	ON	ON	ON

EARTH CONNECTION:

The Inovonics RF Expander Module does not have an earth terminal and in a normal installation a connection to earth is not required.

If the LAN cabling connected to the Module passes through areas where electrical interference may exist, is installed outside a building, or is a very long run, then the Inner Range LAN Surge Diverter (P/N: 995041) may be used and connected to an effective EARTH to minimise interference. Inner Range products that are mounted in a metal chassis and have transformers, provide an earth point on the chassis, while three-wire plug packs provide connection to earth through the earth wire.

THE INOVONICS™ RF EXPANDER MODULE ASSEMBLY

RESET (LEARN) Button

Receiver Indicator LED. 'DEC'
Decode. On when the receiver
is decoding an RF transmission
from an Inovonics Wireless device.

Tamper Switch
Check that spring is
in place before fitting cover.

Housing Release Tab

JP1
Serial interface connection
to EN4200 Serial Port.

Indicator Lamps.
L5   RF RX. Valid Wireless message received.
L6   RF TX. Not used.
L1 (Rx).   LAN Data Receive & FAULT Diagnosis
L2 (Tx).   LAN Data Transmit & FAULT Diagnosis
FAULT.   Fault condition exists.
SYS.   System Status.
See table on page 8 for full details.

DIPswitch.
Switch 1-7.   Module number. *(See table on page 3)*

Rear Cable Entry Knockout

Side Cable Entry Fit
supplied insert if not used.
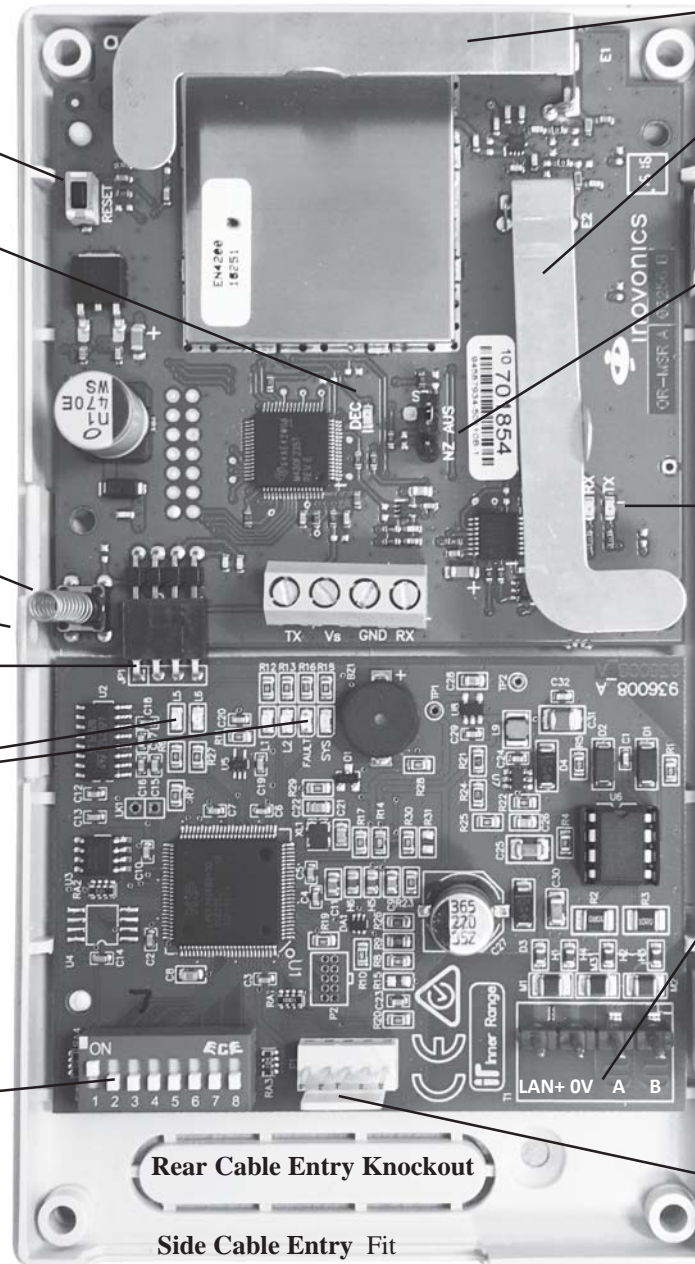
ANTENNAE
The Antennae must be kept clear of any power or
LAN wiring.

Frequency Band.
Set for correct country of installation. (Power
down before changing)
AUS Australia
NZ   New Zealand
Do not leave this link unfitted. Removing the
link altogether selects the North American
frequency band.

Receiver Indicator LEDS
TX   Data being sent to the Integriti system.
RX   Data being received from the Integriti
          system.

T1. LAN & External Power Connections.
LAN+ Connect LAN +ve IF Module powered
          from the LAN, OR +12V from External
          Battery-backed Power Supply.*
0V   Connect LAN 0V (Negative).
          Connect 0V (Negative) from External
          Power Supply if used.
A   LAN Data A connection.
B   LAN Data B connection.

*NOTE: Positive (+) connections from two
different power supply sources must never be
connected together.
See "LAN & Power Supply Wiring" on page 6.

P1   Factory Use ONLY