

Exhibit 8: User Manual

High Performance UHF fixed reader

UHF High performance RFID Reader

User Manual



Version 1.09

August 2008



FCC ID: VHY3271-1
FCC ID: VHY3271-2
FCC ID: VHY3271-3

IMPORTANT



The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to people.

CAUTION

RISK OF ELECTRICAL SHOCK
DO NOT OPEN

Please read instructions before operating this device.

Warranty is void if you open or tamper with this device.

Explosive atmospheres

User shall switch off this unit and obey all safety requirements in these areas. This unit may only be operated if the area is declared safe by a safety official. Hazardous areas typically include fuelling areas, below decks on boats, fuel or chemical transfer/storage points, blasting locations and areas where air contains chemicals or particles, such as grain, dust or metal powders.

NOTICE

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All information in this document including the design and specification are subject to change without notice for the purpose of product improvement.
For further information contact +27 12 345-9520.

SAFETY

- Avoid any extended human RF exposure directly in front of the UHF Reader, up to a distance of 30 cm, when unit is switched on.
- Only authorised personnel may open the unit due to risk of electrical shock. Warranty and certification is void if opened by unauthorised person.

APPROVALS

FCC Part 15 Class A
EN 300-220-1, 300-220-3, ETS 300-683 and EN 6100-3-2& 3 (CE) : **Pending**
IEC 60950 (CE): **Pending**
UL 60950/CAN/CSA22.2 No. 60950 : **Pending**

FCC ID: VHY3271-1, 902.5-908.8 band

FCC ID: VHY3271-2, 915.3-921.6 band

FCC ID: VHY3271-3, 921.2-927.5 band

FCC DECLARATION (USA)

FCC Section 15.19

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Information to User (FCC section 15.105)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the installation manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense.

Information to User (FCC section 15.21)

The user is cautioned that any changes or modifications not expressly approved by IPICO or authorized representative could void the user's authority to operate the equipment.

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HISTORY

Version	Date	Person	Reason
1.00	2002-01-18	HLvE	Create and issued for review from documents supplied by WHH and MvD
1.01	2002-02-19	WHH	Add ShowTags ver. 1.0 information
1.02	2002-02-20	MVD	Format document for release
1.03	2002-02-28	MVD	Update Firmware (v5.3), ShowTag ver. 1.01, Figure 7, Par 7.4.4.7, Figure 8, Table 4 Appendix A: All Acknowledgement commands
1.04A	2002-02-28	MVD	Update Firmware (v5.5 only available with RFU v2.00), ShowTag ver. 1.04, add Figure3, add Figure10, Move ShowTag to Appendix A. Move command set to Appendix B
1.05	2002-05-08	MVD	Add German Safety instruction.
1.06	2002-06-20	MVD	Add CE and FCC Pre-Compliance Approval and update technical specification
1.07	2003-02-12	MVD	Remove protocol description from this manual. Refer to protocol manual for SW command descriptions. Update technical specification.
1.08	2006-10-10	MVD	Change logo and Address to indicate new IPICO status. Update technical specification.
1.09	2008-08-02	MVD	Add FCC information, EVI application notes

GLOSSARY

dB	Decibels
dBd	Antenna gain in dB relative to dipole antenna
dBi	Antenna gain in dB relative to isotropic antenna
dBil	Antenna gain in dB relative to linearly polarized isotropic antenna
EIRP	Effective Isotropic Radiated Power (measured in dBi or dBil)
ERP	Effective Radiated Power (referred to a dipole) (measured in dBd)
EVI	Electronic Vehicle Identification
I and Q	Quadrature RF signals (90 deg out of phase)
RFID	Radio Frequency Identification
RFU	Radio Frequency Unit
CW	Continuous Wave

1. Supplied goods and accessories.



Figure 1 Supplied goods and accessories

2. Cable Connections

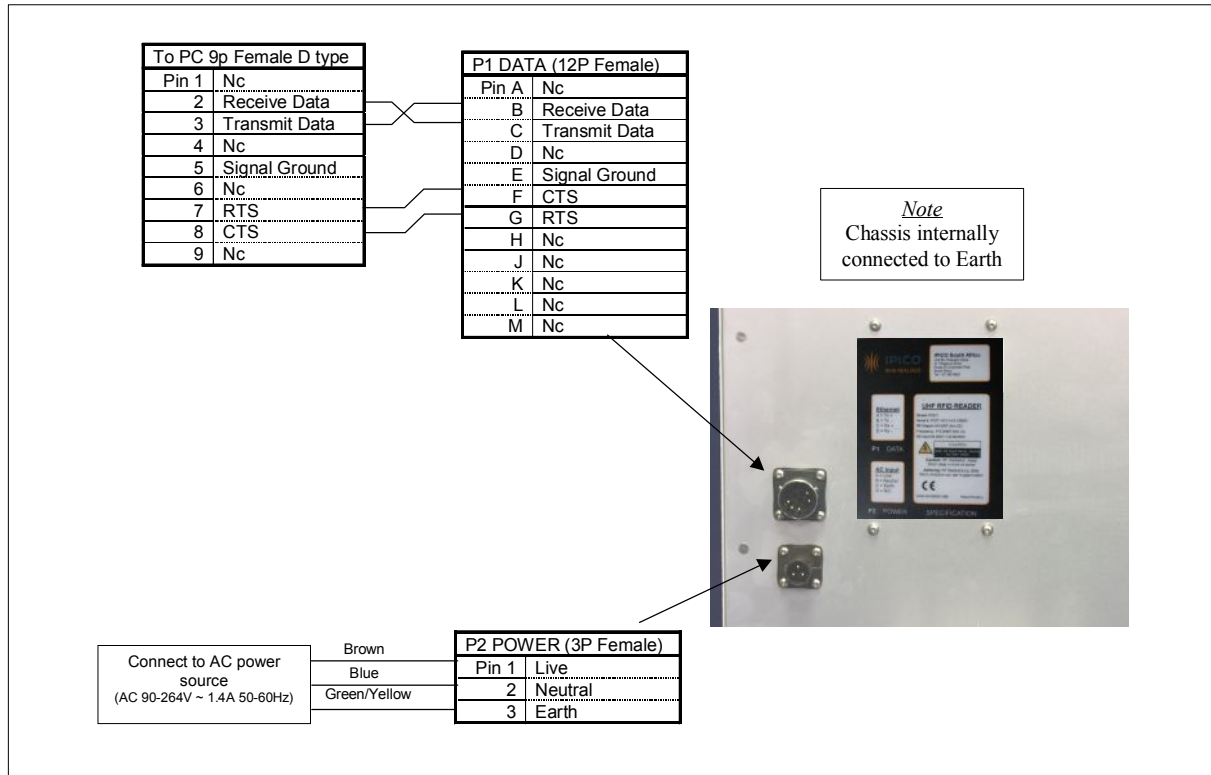


Figure 2 RS 232 (Default) and Mains Power Connection

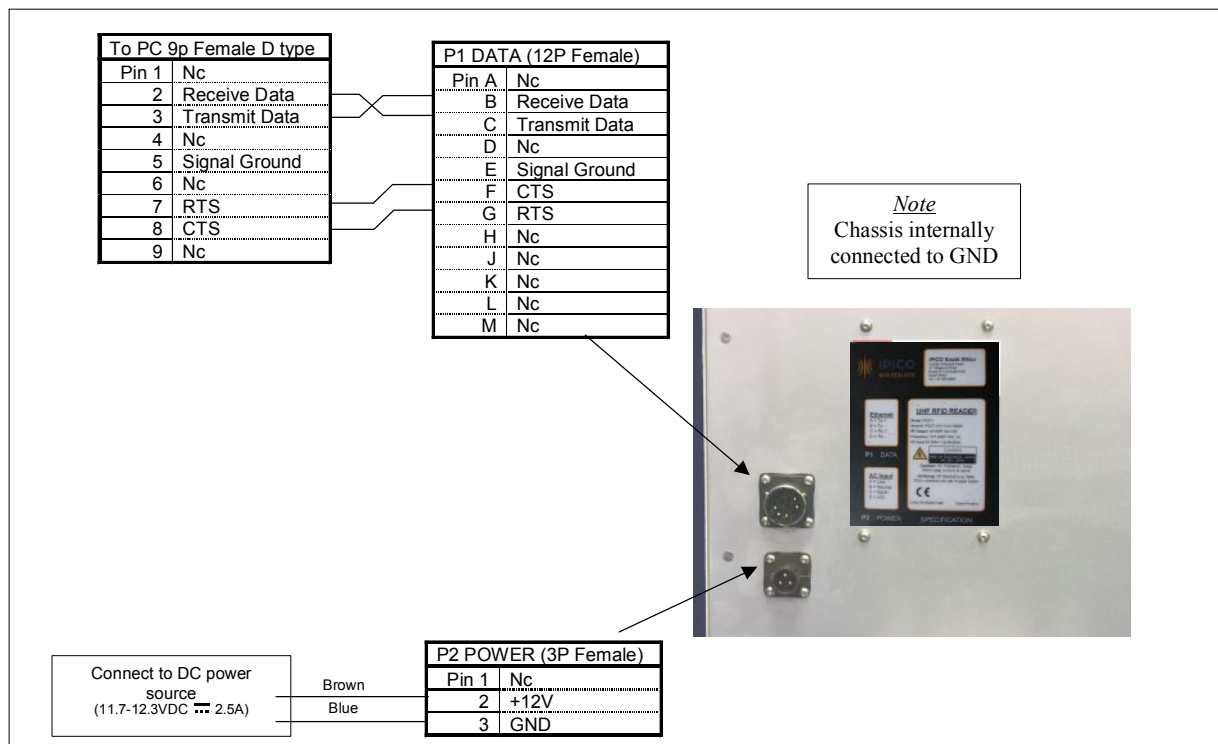


Figure 3 RS 232 (Default) and DC 12V Power Connection

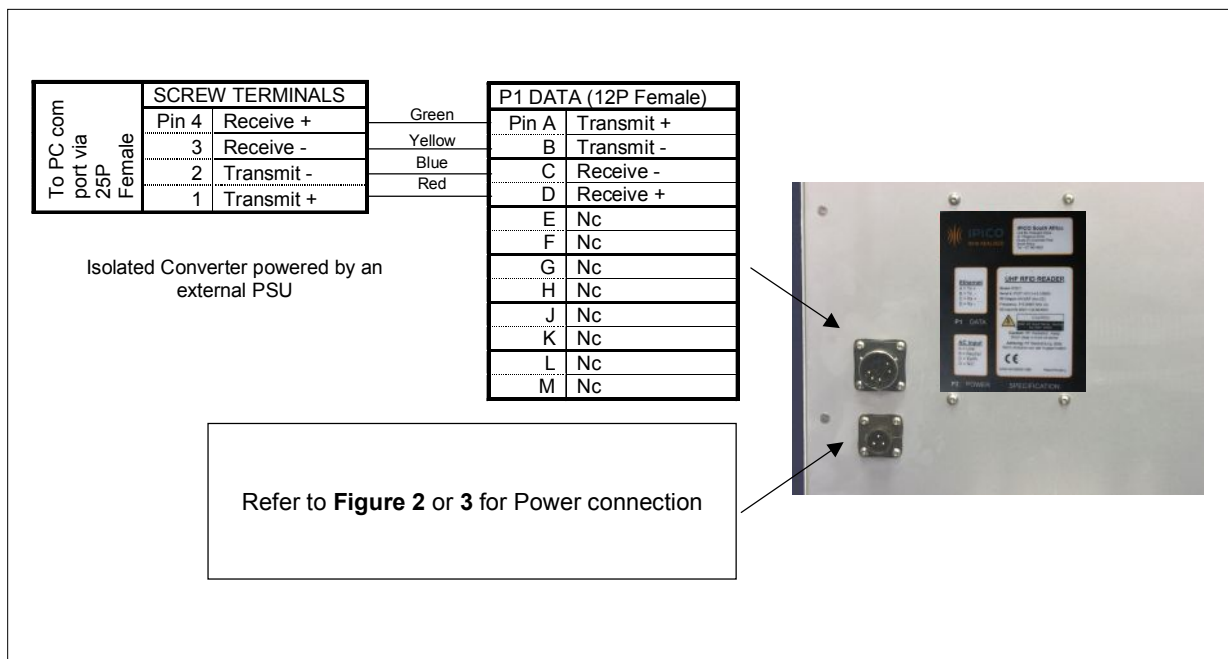


Figure 4 RS 232 to RS 485 Converter connection (optional)


Note: The RS 232 to RS485 converter is used to increase the distance between the reader and the host controller (typically a PC). Distances between the reader and host can be up to 1.2 km with baud rates not exceeding 100kbps. In case the host is not equipped with a 25Pin (male) secondary serial port, a 25 to 9 pin adapter must also be used to connect to the host. This connection allows for full-duplex, point-to-point communication only. The converters supplied by IPICO are optically isolated. The optically isolated converter, at the PC, must be powered from an external power supply (included).

The readers do not support a RS 485 multi-drop protocol due to the amount of data throughput. Up to 4 readers can be clustered and connected via RS232 to a iP-DIMI-SA-4 controller that support a wired and wireless (optional) Ethernet connection. The iP-DIMI-SA-4 also supports 4 isolated inputs and 4 potential free N/O outputs. Readers may also interface to the outside world via RS232/Ethernet converters. This allows the readers to communicate to an iP-DIMI-SA-8 or iP-DIMI-SA-32 via hubs for intelligent local control/buffering as well as clustering/zoning of readers.

Other medium and protocol converters are available on request. They include but are not limited to 802.11b Wireless LAN, Wiegand, Lonworks™, RS232-to-fiber optic etc. In the latter case, the DATA connection will be two ST-ST bulkhead connectors for multimode fibers. Please refer to IPICO support for more information regarding these options.

RJ45 (Wiring according T568A)		
1	Green/White	Transmit +
2	Green	Transmit -
3	Orange/White	Receive +
4	Blue	NC
5	Blue/Wht	NC
6	Orange	Receive -
7	Brown/wht	NC
8	Brown	NC

P1 DATA (12P Female)	
Pin A	Transmit +
B	Transmit -
C	Receive +
D	Receive -
E	Nc
F	Nc
G	Nc
H	Nc
J	Nc
K	Nc
L	Nc
M	Nc



Refer to **Figure 2** or **3** for Power connection

Figure 5 Ethernet connection (optional)

3. Front panel Indicator



Figure 6 Reader status indicator

A tri-colour LED will indicate the following reader status to the operator

- Steady RED light indicates Power ON but no processor/communication activity.
- Slow GREEN Flash at 1/6Hz indicates Internal processor working.
- Fast GREEN Flash at 1/2Hz indicates communication activity between reader and controller/PC.
- Random GREEN fast Flash indicates that a valid Tag ID is decoded.

4. Operations overview

The IPICO reader is designed as a read/write (RW) reader. The reader modulates READ commands to the tags in order to interrogate the tag. Depending on the application new DATA can be updated on the tag using a modulated WRITE command. Read commands will typically be 5ms in duration with a response from the tag in 300us for 64bits. A WRITE command will typically be longer and will average around 35ms.

During a read event, the reader will energise a tag(s) (can be a few milliseconds i.e 7ms), followed by modulating a READ command in order to 'get' DATA from the tag. The reader decode the incoming signal and place a time/date stamp on it, whilst buffering the data temporarily until such time it can be send, on the communication port, to the host. If multiple DATA pages are received from the same tag before the packet is send to the host, a hit counter is increased. This hit count is included in the communication packet to the host. The RF unit does a full quadrature down conversion, and both in-phase and quadrature phase signal (I and Q) are decoded.

5. Reader overview

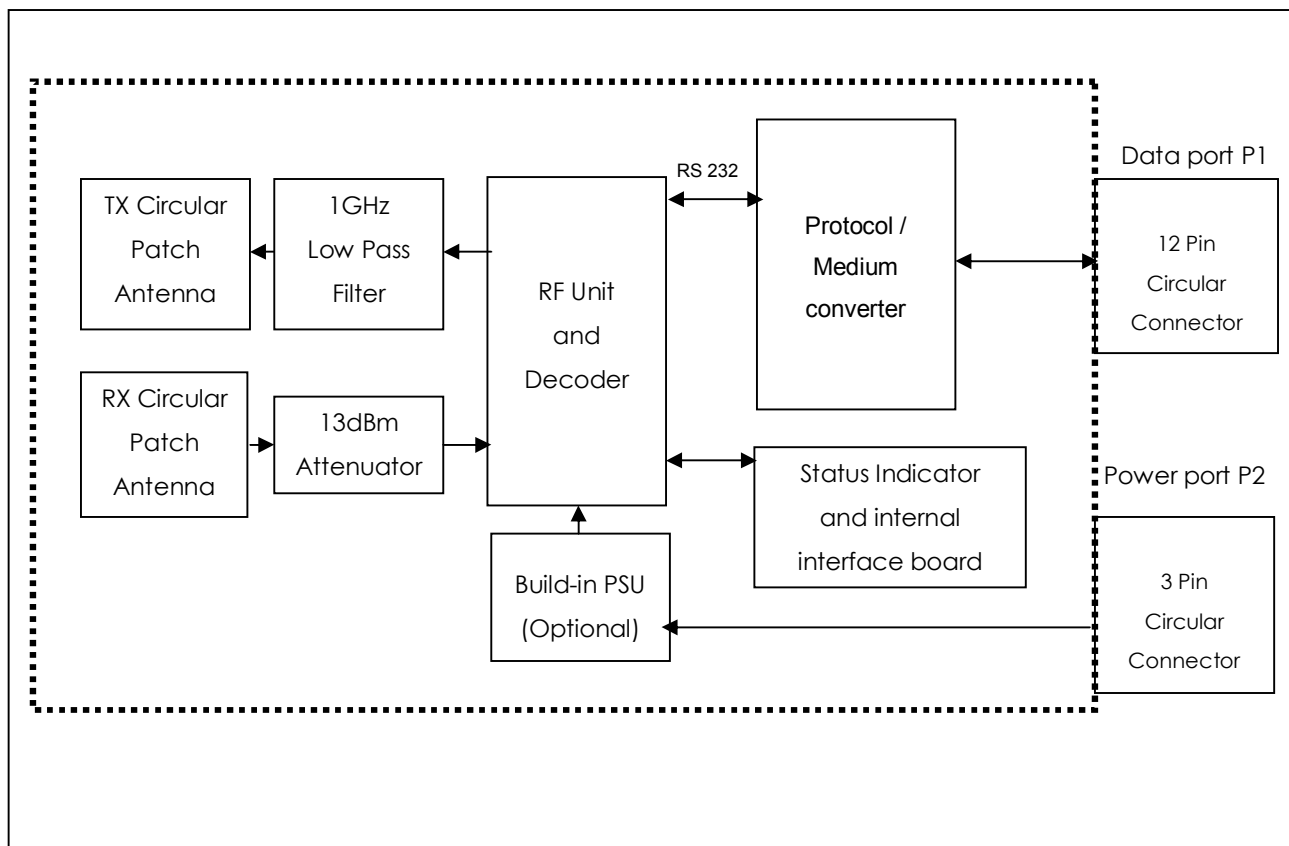


Figure 7 UHF Integrated Reader Overview

6. Installation and Set-up

Note: The following set-up is for demonstration purpose only. Installation and applications will be site dependant.

1. Install ShowTags on the controlling PC running on Windows™ 95,98 NT or 2000. It consists of a single .EXE file, which can be copied from the supplied 3.5" disk to any directory on the controlling PC and run from that directory. From time to time updates are available on the Web at <http://www.IPICO.com>
2. Start ShowTags. Check the serial port settings. The readers' serial port factory setting is 9600bps, no flow control, no parity, but it will remember the last setting used. The default setting for ShowTags is the same, but the setting can be changed and saved.
3. Mount the reader on an overhead structure facing downwards (height depending on reader range and tagged object size) or vertically on a pole to such height that the horizontal centreline of the reader is inline with the tags on the objects.
4. Connect the RS 232 serial cable (default option) from the reader to a serial port on the controlling PC. Refer to Figure 4 for RS 485/422 connection.
5. Connect the Power cable from the reader to the correct power source. Remember there are two Input power supply options – Mains AC or external DC 12V – Refer to Figure 2.or Figure 3 for the correct wiring diagram.
6. Apply power to the RF unit. Refer to the technical specification regarding the Input voltage requirements for the reader.
7. Present tags into the reader beam.
8. Use ShowTags as a debugging tool to view the tag reading results and to evaluate the different reader commands.
9. The User's application software can now be implemented.
10. Standard HP readers must be mounted in a Vertical orientation to comply with an IP 65 rating.

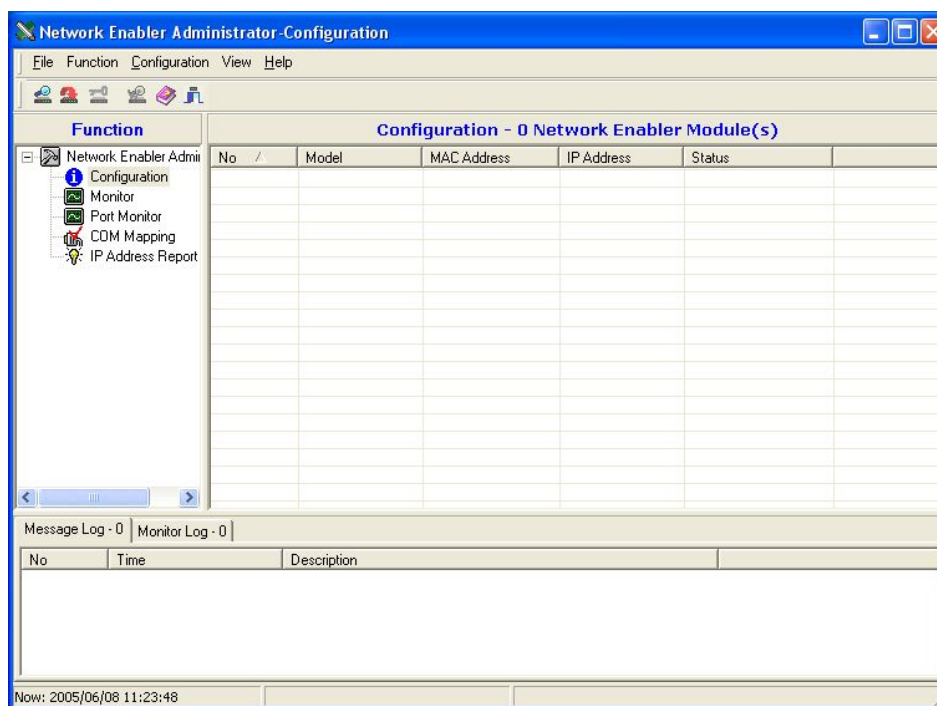
6.1 Quick start (Ethernet communication)

Connect the Ethernet cable to J20 on the Registration Reader and proceed as follows:

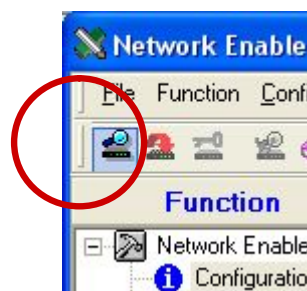
Note: The default factory settings are IP = 192.168.1.31 port 6543

In case the user wants to change IP/port settings of the reader, edit the file in Appendix 1 and upload the file to the reader by doing the following procedure:

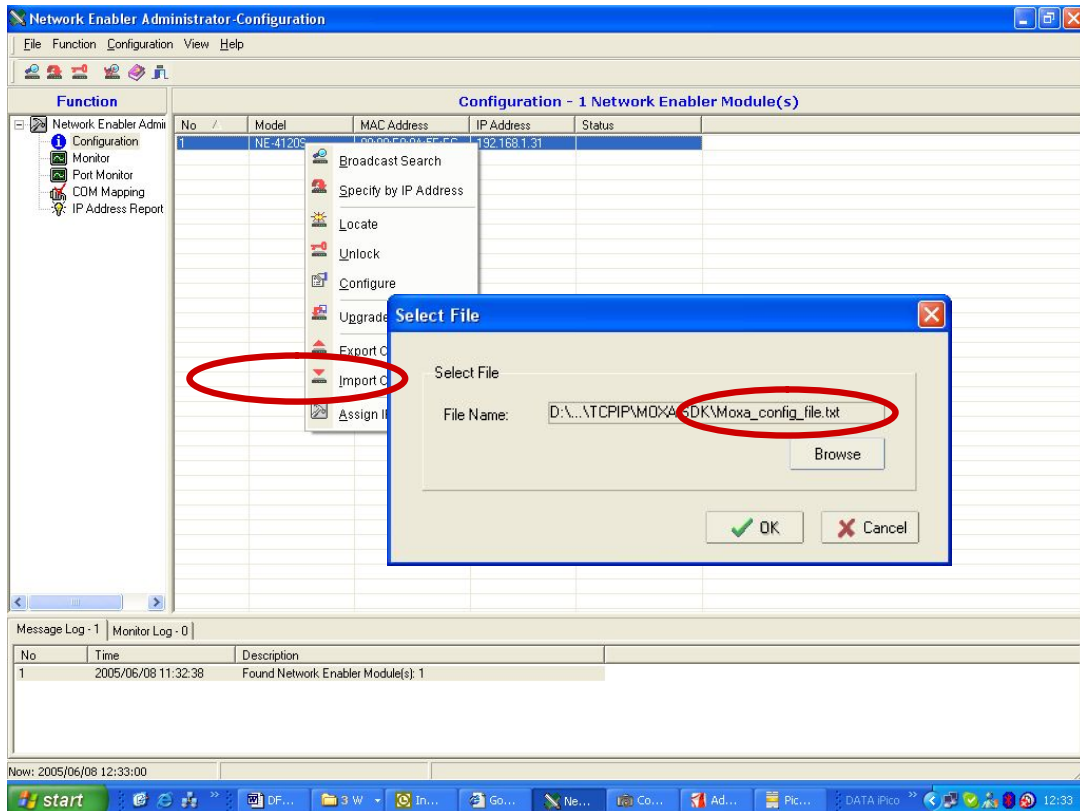
- a. Open the Moxa SDK tool. (Download from support at www.IPICO.com)



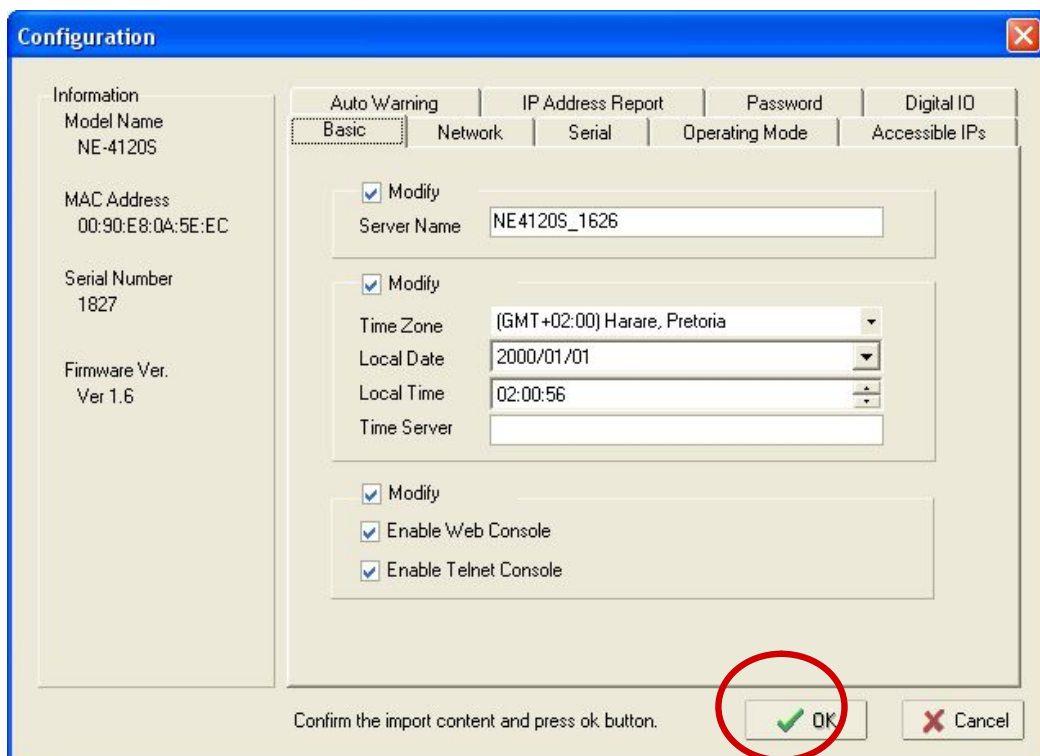
- b. Do a broadcast search and select the reader that is found



- c. Right click on selected reader and go to "Import Configuration"



d. Click on OK and wait for the upload to finish.



e. Default values in the .txt file are uploaded. Click on OK, accept the changes made and Exit the configuration tool.

8. Application notes

1. Some of the IPICO tag antenna formats are dipoles. Like dipoles, they have nulls end-on.
2. Tags should always be orientated in a plane orthogonal to the direction to the reader.
3. Reading speed depends on the tag version used. Please consult IPICO's support team or your local dealer regarding these specifications.
4. Up to 30 tags can be read per second. This depends however on the total number of tags present in the reader beam at the same time. The reading speed will reduce when more than 30 tags are present simultaneously.
5. V3 tags are recommended when a small numbers of fast moving tags are scanned (< 30 tags @ > 15 m/s). When a large numbers of tags must be scanned simultaneously, it is recommended to use V5 tags (> 120 tags @ < 3 m/s). Please consult your local dealer regarding these options.
6. Read ranges in excess of 20 m are achievable at 30 W EIRP (USA site licensed). At 4 W EIRP (USA unlicensed) the read range is about 8 m and at 500 mW, ERP (Europe) the read range is about 3 m.
7. Readers operating in small confined spaces can "jam" themselves due to unwanted reflections. Two readers operating simultaneously in close proximity from each other may also influence each other. Please consult IPICO's support team or your local dealer regarding possible multiplexing/screening strategies.
8. The standard dipole tags must be mounted at least 18 mm away from a metallic or conductive surface, fluids and human bodies. Refer to IPICO's range of packaged tags in order to plan an application.
9. Reflections from nearby conducting surfaces and multi-path propagation in particular can lead to nulls in the reader field.
10. Readers can be ordered with different data interfaces. Standard is RS232. Optional are Ethernet, Isolated Wiegand, Isolated RS485. Please consult your local dealer regarding such a configuration.
11. Please take note that EVI readers are fitted with 2 Linear polarised antennas and must be mounted correctly, namely horizontally. An arrow on the data plate shows the UP orientation. Note that there are 3 drainage holes on the bottom edge of the dome.

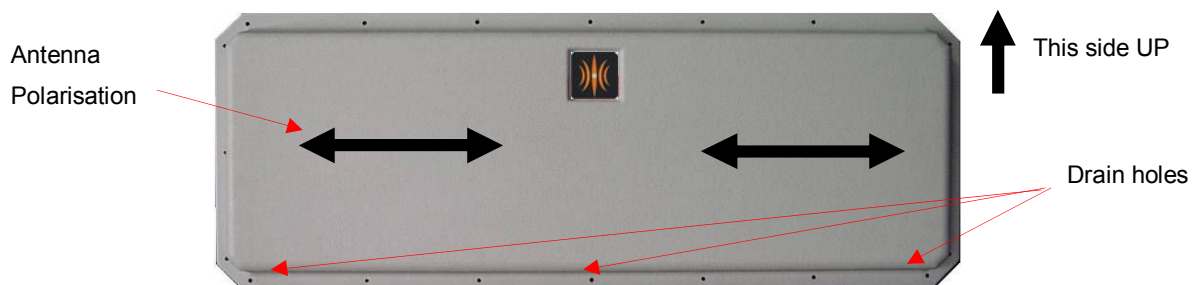


Figure 8 EVI Reader Orientation



Figure 9 EVI Reader Installation: Side read scenario



Figure 10 EVI Reader Installation: Overhead read scenario

Note:

Typical angle is also a function of height above ground and is site dependant. Surrounding structures may cause unwanted reflections or extended read capabilities. The installer needs to test and re-adjust for best performance.

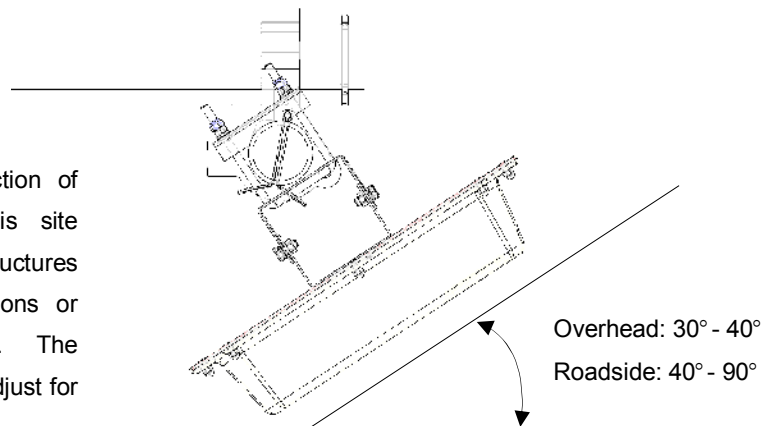


Figure 11 EVI Reader Installation angle

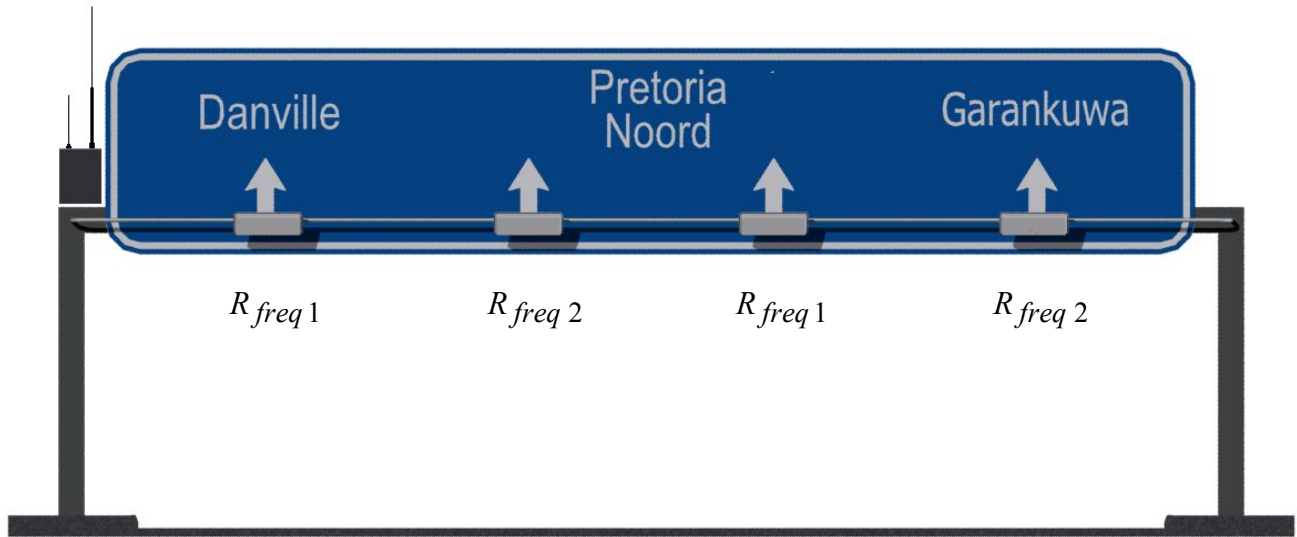


Figure 12 Example of multiple EVI reader installation for Free flow tolling/spotting

Note:

$R_{freq\ n}$ = Reader frequency allocations (these are country and site dependable)

	Fixed Frequency	Frequency Hopping
Free flow overhead EVI readers with Std decoders	$ R_{freq\ 1} - R_{freq\ 2} \geq 6\ MHz$	$ R_{(Freq\ hop\ seq\ 1)} - R_{(Freq\ hop\ seq\ 2)} \geq 6\ MHz$
Free flow overhead EVI readers with DSP decoders	$ R_{freq\ 1} - R_{freq\ 2} \geq 1\ MHz$	$ R_{(Freq\ hop\ seq\ 1)} - R_{(Freq\ hop\ seq\ 2)} \geq 1\ MHz$
Non Free flow I.e Side readers at Toll booths with Std decoders or dense reader applications	$ R_{freq\ 1} - R_{freq\ 2} \geq 6\ MHz$	$ R_{(Freq\ hop\ seq\ 1)} - R_{(Freq\ hop\ seq\ 2)} \geq 6\ MHz$
Non Free flow eg. Side readers at Toll booths with DSP decoders	$R_{freq\ 1} = R_{freq\ 2}$ Or $ R_{freq\ 1} - R_{freq\ 2} \geq 1\ MHz$	$ R_{(Freq\ hop\ seq\ 1)} - R_{(Freq\ hop\ seq\ 2)} \geq 1\ MHz$

Table 1 Frequency selection guide



Figure 13 Examples of sunshades for harsh environments



Figure 14 Typical ENP tag location and orientation

9. Troubleshoot

Visual indicator guide

- Steady RED light indicates Power ON but no processor/communication activity.
- Slow GREEN Flash at 1/6Hz indicates Internal processor working.
- Fast GREEN Flash at 1/2Hz indicates communication activity between PC and reader. The fast heartbeat will only start, once a command has been received by the reader.
- A random GREEN fast Flash indicates a valid Tag ID.

Symptom	Possible causes
Red LED Off	Power cord not connected or faulty
	Power source faulty
	Indicator board faulty
	Reader faulty
Steady Red Led with no tags in beam	Indicator board faulty
	Heartbeat of decoder stopped
	Reader faulty
Slow Amber flash with no communication possible between PC and reader	Communication Cable not connected or faulty wiring.
	Application software not running
	Baud rate incorrect
Cannot read a Tag although PC communicates with reader (fast heartbeat)	Transmitter not switched ON (Refer to reader protocol document).
	Faulty Tag
	Tag not orientated correctly. (Refer to par 9)
	Faulty Reader front end
Random AMBER fast Flash with no Tag in the beam	High levels of ambient RF noise operating in the same frequency spectrum as reader.
	Faulty Reader

Table 2 Troubleshoot guide

10. Maintenance

This is a low maintenance device. The user must make sure that the reader dome is kept clean and dry where possible. Any build-up of foreign substances, water or snow will degrade the performance of the unit.

11. Technical specification

Power supply requirement	<p>Mains input type: 90 - 264 VAC @ ~1.4A, 50/60 Hz</p> <p>Low voltage input type: 11.7 – 12.3 VDC @ 2.5 A max (typ 600mA for 500mW reader)</p> <p>(12V device is only reversed polarity protected up to 20V max. Provision must be made for additional surge protection and regulated power)</p>
Transmitter power	<p>USA unlicensed: 4 W EIRP (Licensed up to 30W EIRP)</p> <p>European unlicensed: 500 mW ERP</p> <p>South Africa: 4 W EIRP</p>
Operating frequency	<p>USA unlicensed: Frequency hopping in the 902-928 MHz ISM band</p> <p>i. VHY3271-1, Low band : 902.5-908.8 MHz, 64ch, 100 kHz channel spacing</p> <p>ii. VHY3271-2, Mid band : 915.3-921.6 MHz, 64ch, 100 kHz channel spacing</p> <p>iii. VHY3271-3, High band: 921.2-927.5 MHz, 64ch, 100 kHz channel spacing</p> <p>European unlicensed: Fixed frequency in the 869.4-869.65 MHz band</p> <p>South Africa: Fixed frequency at 915.3 MHz</p>
Antenna type	<p>Standard HP reader = Internal 8dBiC (circularly polarized) / (5 dBi linear)</p> <p>EVI reader = Internal 8dBil (linear polarized)</p>
Read range	<p>Typical read ranges that depends on reader placement and tags used.</p> <p>USA unlicensed: 6 – 8+ m</p> <p>European unlicensed: 1 – 3+ m</p> <p>South Africa: 6 – 8+ m</p>
Communication	<p>Binary or ASCII RS232 with programmable baud rate and flow control</p> <p>EVI is standard Ethernet enabled</p> <p>Optional: Isolated RS485/RS422, Ethernet, WLAN 802.11b, Fiber optical.</p>
Data storage	<p>Standard: Internal circular FIFO spool buffer for 64 tags. This data is transmitted to the PC as soon as the communication port is available.</p> <p>Optional: Embedded controller for local database and data manipulation (iP-DIMI-SA-4, 8 Or 32)</p>
Electrical interface	<p>12 Pin (P1) circular connector for DATA (Evaluation kits supplied with 6m cable with 9p D type connector on other side)</p> <p>3 Pin (P2) circular connector for POWER (Evaluation kits supplied with 6m cable with no connector on other side)</p>
Environmental	<p>Operating temperature range: -10 to +60 Deg C</p> <p>Storage temperature range: -20 to +85 Deg C</p> <p>Humidity: 5 to 95 % non-condensing</p> <p>IP rating: IP 65 (see mounting details)</p> <p>UV protection: Yes</p>
Physical	<p>Dimension: 305 (W) x 805 (L) x 60 (H) mm (Height excludes the mounting brackets)</p> <p>Weight: Approx. 6.5 Kg unpacked</p> <p>Weight: Approx 10 Kg Packed for shipping</p>
Mounting	<p>Two pole mounting brackets. Pole diameter less than 60mm.</p>

Table 3 Technical Specifications

12. Support

Ordering information

Description	Model
UHF High Performance reader	IP 3271
Frequency Band US (-1, -2 or -3)	
Specify other Frequency	
Power Supply	
12VDC	
Mains 90-264VAC 50/60Hz	
Communication interface	
RS 232	
Ethernet	
Wiegand	
RS 485	
Antenna type	
EVI (Std 4WEIRP)	
HP (Std 500mW ERP or 4WEIRP)	

NOTE: Please consult your local dealer for more information regarding the accessories, system design, frequency and RF power settings.

13. Technical Assistance

IPICO online <http://www.IPICO.com>

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14. Appendix 1: MOXA Ethernet converter Configuration file

This is the content of the Moxa config file.txt

```
[Network Enabler Configuration File]
CheckCode=cfg1
```

```
[Basic Information (not changeable)]
APID=0x80004100
HWID=0x4129
Serial No=162
MAC Address=00:90:E8:09:63:42
Firmware version=0x1040000
```

```
[Basic Settings]
Server Name=NE4120S_1626
Time Zone=7200
Time Zone index=31
Date_Year=100
Date_Month=0
Date_Day=1
Time_Hour=2
Time_Minute=0
Time_Second=56
Time_wMillisecons=0
Time Server=
Console Enabled=3
```

```
[Network Settings]
IP Address=192.168.1.31
Netmask=255.255.255.0
Gateway=192.168.1.1
IP Configuration=0
DNS Server 1=196.25.1.1
DNS Server 2=
```

```
[SNMP]
Enable SNMP=0
Community=public
Location=
Contact=
Trap=
```

```
[Mail]
Mail Server=mail.IPICO.co.za
Mail Server Login=1
User Name=jaco
Password=jaconel
From Address=NE4120S_162@NE4120S
To Address1=jaco@IPICO.co.za
To Address2=
To Address3=
To Address4=
```

```
[Accessible IP List]
Enabled=0
Rule1=0,,
Rule2=0,,
Rule3=0,,
Rule4=0,,
Rule5=0,,
Rule6=0,,
Rule7=0,,
Rule8=0,,
Rule9=0,,
Rule10=0,,
Rule11=0,,
Rule12=0,,
Rule13=0,,
Rule14=0,,
Rule15=0,,
Rule16=0,,
```

```
[Serial]
Port1=9600,3,0,1,0,
```

```
[Operating Mode]
Port1=10
```

```
[Operating Mode Option 2]
Port1=0,0x00,0x00,0
```

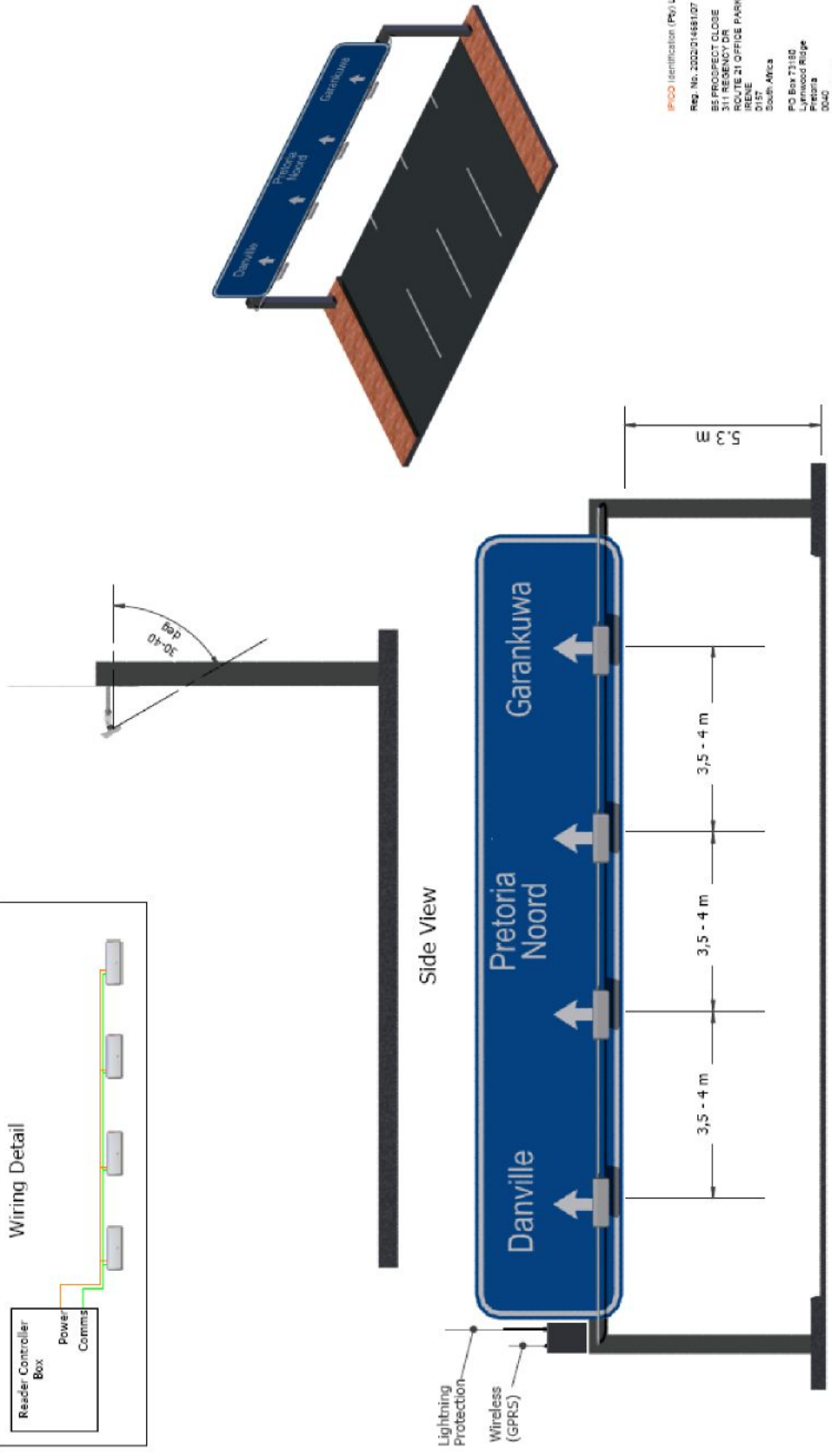
```
[Operating Mode Option 1]
Port1=0,7,4,6543,966
```

```
[Auto Warning]
Mail=0x1B
Trap=0x0
```

```
[Port Auto Warning]
Port0=0x03,0x00
```

```
[IP Address Report]
Server=
Port=4002
Period=10
```

```
[Password]
Password=
```

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A3	1 : 1	1.0	RJR	BLIZZARD									IPICO UHF HP READER MOUNTING OPTIONS
SHEET:		4 OF 6		RELEASE DATE NO.:		UNTESTED: 1. 0 TO 0.3		SEE SPECIFICATION		FINISH:		DRAWING NO.:	
				RELEASE		2. 0.3 TO 0.5		SEE SPECIFICATION		ABOVE 0.30		UHPMB-01-221105_04	
				RELEASE		3. 0.5 TO 0.7				ABOVE 0.70		REV: 1.0	
				RELEASE		4. 0.7 TO 0.9				ABOVE 0.90			
				RELEASE		5. 0.9 TO 1.0				ABOVE 1.00			
				RELEASE		6. 1.0 TO 1.2				ABOVE 1.20			
				RELEASE		7. 1.2 TO 1.5				ABOVE 1.50			
				RELEASE		8. 1.5 TO 2.0				ABOVE 2.00			
				RELEASE		9. 2.0 TO 3.0				ABOVE 3.00			
				RELEASE		10. 3.0 TO 5.0				ABOVE 5.00			
				RELEASE		11. 5.0 TO 10.0				ABOVE 10.00			
				RELEASE		12. 10.0 TO 15.0				ABOVE 15.00			
				RELEASE		13. 15.0 TO 20.0				ABOVE 20.00			
				RELEASE		14. 20.0 TO 30.0				ABOVE 30.00			
				RELEASE		15. 30.0 TO 50.0				ABOVE 50.00			
				RELEASE		16. 50.0 TO 100.0				ABOVE 100.00			
				RELEASE		17. 100.0 TO 150.0				ABOVE 150.00			
				RELEASE		18. 150.0 TO 200.0				ABOVE 200.00			
				RELEASE		19. 200.0 TO 300.0				ABOVE 300.00			
				RELEASE		20. 300.0 TO 500.0				ABOVE 500.00			
				RELEASE		21. 500.0 TO 1000.0				ABOVE 1000.00			
				RELEASE		22. 1000.0 TO 1500.0				ABOVE 1500.00			
				RELEASE		23. 1500.0 TO 2000.0				ABOVE 2000.00			
				RELEASE		24. 2000.0 TO 3000.0				ABOVE 3000.00			
				RELEASE		25. 3000.0 TO 5000.0				ABOVE 5000.00			
				RELEASE		26. 5000.0 TO 10000.0				ABOVE 10000.00			
				RELEASE		27. 10000.0 TO 15000.0				ABOVE 15000.00			
				RELEASE		28. 15000.0 TO 20000.0				ABOVE 20000.00			
				RELEASE		29. 20000.0 TO 30000.0				ABOVE 30000.00			
				RELEASE		30. 30000.0 TO 50000.0				ABOVE 50000.00			
				RELEASE		31. 50000.0 TO 100000.0				ABOVE 100000.00			
				RELEASE		32. 100000.0 TO 150000.0				ABOVE 150000.00			
				RELEASE		33. 150000.0 TO 200000.0				ABOVE 200000.00			
				RELEASE		34. 200000.0 TO 300000.0				ABOVE 300000.00			
				RELEASE		35. 300000.0 TO 500000.0				ABOVE 500000.00			
				RELEASE		36. 500000.0 TO 1000000.0				ABOVE 1000000.00			
				RELEASE		37. 1000000.0 TO 1500000.0				ABOVE 1500000.00			
				RELEASE		38. 1500000.0 TO 2000000.0				ABOVE 2000000.00			
				RELEASE		39. 2000000.0 TO 3000000.0				ABOVE 3000000.00			
				RELEASE		40. 3000000.0 TO 5000000.0				ABOVE 5000000.00			
				RELEASE		41. 5000000.0 TO 10000000.0				ABOVE 10000000.00			
				RELEASE		42. 10000000.0 TO 15000000.0				ABOVE 15000000.00			
				RELEASE		43. 15000000.0 TO 20000000.0				ABOVE 20000000.00			
				RELEASE		44. 20000000.0 TO 30000000.0				ABOVE 30000000.00			
				RELEASE		45. 30000000.0 TO 50000000.0				ABOVE 50000000.00			
				RELEASE		46. 50000000.0 TO 100000000.0				ABOVE 100000000.00			
				RELEASE		47. 100000000.0 TO 150000000.0				ABOVE 150000000.00			
				RELEASE		48. 150000000.0 TO 200000000.0				ABOVE 200000000.00			
				RELEASE		49. 200000000.0 TO 300000000.0				ABOVE 300000000.00			
				RELEASE		50. 300000000.0 TO 500000000.0				ABOVE 500000000.00			
				RELEASE		51. 500000000.0 TO 1000000000.0				ABOVE 1000000000.00			
				RELEASE		52. 1000000000.0 TO 1500000000.0				ABOVE 1500000000.00			
				RELEASE		53. 1500000000.0 TO 2000000000.0				ABOVE 2000000000.00			
				RELEASE		54. 2000000000.0 TO 3000000000.0				ABOVE 3000000000.00			
				RELEASE		55. 3000000000.0 TO 5000000000.0				ABOVE 5000000000.00			
				RELEASE		56. 5000000000.0 TO 10000000000.0				ABOVE 10000000000.00			
				RELEASE		57. 10000000000.0 TO 15000000000.0				ABOVE 15000000000.00			
				RELEASE		58. 15000000000.0 TO 20000000000.0				ABOVE 20000000000.00			
				RELEASE		59. 20000000000.0 TO 30000000000.0				ABOVE 30000000000.00			
				RELEASE		60. 30000000000.0 TO 50000000000.0				ABOVE 50000000000.00			
				RELEASE		61. 50000000000.0 TO 100000000000.0				ABOVE 100000000000.00			
				RELEASE		62. 100000000000.0 TO 150000000000.0				ABOVE 150000000000.00			
				RELEASE		63. 150000000000.0 TO 200000000000.0				ABOVE 200000000000.00			
				RELEASE		64. 200000000000.0 TO 300000000000.0				ABOVE 300000000000.00			
				RELEASE		65. 300000000000.0 TO 500000000000.0				ABOVE 500000000000.00			
				RELEASE		66. 500000000000.0 TO 1000000000000.0				ABOVE 1000000000000.00			
				RELEASE		67. 1000000000000.0 TO 1500000000000.0				ABOVE 1500000000000.00			
				RELEASE		68. 1500000000000.0 TO 2000000000000.0				ABOVE 2000000000000.00			
				RELEASE		69. 2000000000000.0 TO 3000000000000.0				ABOVE 3000000000000.00			
				RELEASE		70. 3000000000000.0 TO 5000000000000.0				ABOVE 5000000000000.00			
				RELEASE		71. 5000000000000.0 TO 10000000000000.0				ABOVE 10000000000000.00			
				RELEASE		72. 10000000000000.0 TO 15000000000000.0				ABOVE 15000000000000.00			
				RELEASE		73. 15000000000000.0 TO 20000000000000.0				ABOVE 20000000000000.00			
				RELEASE		74. 20000000000000.0 TO 30000000000000.0				ABOVE 30000000000000.00			
				RELEASE		75. 30000000000000.0 TO 50000000000000.0				ABOVE 50000000000000.00			
				RELEASE		76. 50000000000000.0 TO 100000000000000.0				ABOVE 100000000000000.00			
				RELEASE		77. 100000000000000.0 TO 150000000000000.0				ABOVE 150000000000000.00			
				RELEASE		78. 150000000000000.0 TO 200000000000000.0				ABOVE 200000000000000.00			
				RELEASE		79. 200000000000000.0 TO 300000000000000.0				ABOVE 300000000000000.00			
				RELEASE		80. 300000000000000.0 TO 500000000000000.0				ABOVE 500000000000000.00			
				RELEASE		81. 500000000000000.0 TO 1000000000000000.0				ABOVE 1000000000000000.00			
				RELEASE		82. 1000000000000000.0 TO 1500000000000000.0				ABOVE 1500000000000000.00			
				RELEASE		83. 1500000000000000.0 TO 2000000000000000.0				ABOVE 2000000000000000.00			
				RELEASE		84. 2000000000000000.0 TO 3000000000000000.0				ABOVE 3000000000000000.00			
				RELEASE		85. 3000000000000000.0 TO 5000000000000000.0				ABOVE 5000000000000000.00			
				RELEASE		86. 5000000000000000.0 TO 10000000000000000.0				ABOVE 10000000000000000.00			
				RELEASE		87. 10000000000000000.0 TO 15000000000000000.0				ABOVE 15000000000000000.00			
				RELEASE		88. 15000000000000000.0 TO 20000000000000000.0				ABOVE 20000000000000000.00			
				RELEASE		89. 20000000000000000.0 TO 30000000000000000.0				ABOVE 30000000000000000.00			
				RELEASE		90. 30000000000000000.0 TO 50000000000000000.0				ABOVE 50000000000000000.00			
				RELEASE		91. 50000000000000000.0 TO 100000000000000000.0				ABOVE 100000000000000000.00			
				RELEASE		92. 100000000000000000.0 TO 150000000000000000.0				ABOVE 150000000000000000.00			
				RELEASE		93. 150000000000000000.0 TO 200000000000000000.0				ABOVE 200000000000000000.00			
				RELEASE		94. 200000000000000000.0 TO 300000000000000000.0				ABOVE 300000000000000000.00			
				RELEASE		95. 300000000000000000.0 TO 500000000000000000.0				ABOVE 500000000000000000.00			
				RELEASE		96. 500000000000000000.0 TO 1000000000000000000.0				ABOVE 1000000000000000000.00			
				RELEASE		97. 1000000000000000000.0 TO 1500000000000000000.0				ABOVE 1500000000000000000.00			
				RELEASE		98. 1500000000000000000.0 TO 2000000000000000000.0				ABOVE 2000000000000000000.00			
				RELEASE		99. 2000000000000000000.0 TO 3000000000000000000.0				ABOVE 3000000000000000000.00			
				RELEASE		100. 3000000000000000000.0 TO 5000000000000000000.0				ABOVE 5000000000000000000.00			

