# **PARADOX IP REPORTING TO IPR512**

Version 1.0

April 28<sup>th</sup> 2020 Created by: Victor Maciuca

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## Preface

This document will explain Paradox IPR512 reporting in depth and will cover the following topics:

- Panel reporting configuration
- IPR512 configuration and operation
- Receivers output configuration for CMS

## **General presentation**

IP reporting to CMS was designed as a fast and reliable communication method, compared to the regular landline/GSM through DTMF reporting.

## **IP reporting structure**

For IP reporting, the following components are required:

- 1. Field communication devices (IP150 or/and PCS devices) which are connected on the panel's serial port
- 2. Hardware receiver IPR512
- Automation software which is connected through serial connection to IPR512. This software is not developed by Paradox and will communicate with our receiver through one of the following open source protocols: ADEMCO 685, SURGARD MLR2-DG and RADIONICS 6500

## Protocols

IPDOX protocol it's used between our field communication devices (IP150 or PCS) and our receivers. This is a proprietary protocol and due to security reasons, it cannot be shared for further integrations.

The protocols used on receivers' output are known protocols used in the physical security industry: ADEMCO 685, SURGARD MLR2-DG and RADIONICS 6500. Once the CMS software is compatible with one of these protocols, it can be integrated with our receivers.

## **1.** Reporting configuration for EVO panels

#### 1.1. Report codes configuration

Report codes can be programmed in Babyware, Panel programming -> Reporting -> Report Codes section. Reporting codes with 00 will not be transmitted and report codes with FF will be transmitted.

By default, all codes are 00 (no signal will be transmitted once the event occurs). These codes should be customized for each event.

If Contact ID report code format is used, then all events should be set as FF. Best practice: type "FF" in the main filed and press the extend button after. In this way all sub-fields will be automatically filled with FF code (Fig. 1). In this way the panel will follow a known Contact ID table for each report code.

Em Reporting			-		$\times$
<u>F</u> ile					
Reporting Paths Report Codes					^
Section	Description	Q Value			
📮 - Special Alarm		0			
3930	Emergency Panic	FF			
3931	Auxiliary Panic	FF			
- 3932	Fire Panic	FF			
- 3933	Recent Closing	FF			
- 3934	Police Code	FF			
3935	Zone Shutdown	FF			
3936	Duress	FF			
3937	Keypad Lockout Duration	FF			
🕀 Special Arming		0			
🕀 Special disarming		0			
Arm With Keyswich		0			
. Disarm With Keyswich		0			
					~
X Cancel			~	/ C	ж

Fig. 1 Report Codes



#### 1.2. Report codes format configuration

Report codes format can be configured in Panel programming -> Reporting -> Reporting paths -> Global Settings. The reporting codes format can be set for each receiver, from #1 to #4 (Fig. 2). Up to 4 receivers can be configured for reporting.

lie									
Reporting Paths Report Codes									
Call Direction Global Settings	andline and GSM	GPRS/IP	SMS (Text Mess	sages) Vo	ice (VDMP3)	PC Commu	nication (Baby	(Ware)	
Report Code Format				Auto Test	Report Every				
Phone #1 / Receiver #1	ADEMCO CON	ITACT ID	Every	00	00 days At	0:00	-		
Phone #2 / Receiver #2	ADEMCO CON	ITACT ID 🗸	1			L			
Phone #3 / Receiver #3 ADEM			RESS	O Every hour on the minute					
Phone #4 / Receiver #4	ADEMCO SLO	w ~							
				O Every		005 min. minu	tes when arm	ed	
Reporting Options						060 min. minu	tes when disa	rmed	
Account # Transmission	1	By Area	~						
Report zone restore	1	Bell Cut-Off	~						
Delay Alarm Transmission			000 sec.	O Every h	nour on the m	iinute	0 🌲		
Delay Power Failure Report			030 min.	1	Every 000 m	nin. minutes w	hen armed		
Power failure restore report delay			030 min.	]	Every 000 m	nin. minutes w	hen disarmed		
Reporting Options	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8	
Report System Disarming	Area 1	Area 2	Abuatr	Abarate	Abarate	Abarate	Abwaye	Area 8	
Recent closing	000 sec	000 sec	000 sec	000 sec	000 sec	000 sec	000 sec	000 sec	_
Recent closing	000 360	OUD SEC	OUU SEC	000 360	000 360	000 360	000 360	000 300	_

Fig. 2 Report Code Format

## 1.3. Central Station Info configuration

The receiver parameters need to be programmed in the Central Station Info section (Fig. 3) from the GPRS/IP tab. The following parameters should be programmed in Central station info tab:

a) Receiver's IP and port:

For IPR512, WAN 1 IP and port are mandatory to be filled. If both WAN ports are used on IPR512, both IPs and ports will need to be filled in Babyware.

- b) Receiver password by default the IPR512's password is 123456. This password is used only in registration step, not for receiver management. It can be changed from receiver's web interface.
- c) Register button after all receiver parameters are programed and sent to the panel, register button will be pressed.

- d) IP Profile is used to set the security profile polling and supervision time of the communication module. More details can be found in receiver management chapters 3.
- e) Area account is a 4 digits hexadecimal account used to identify the site or different areas of a system. All areas can be registered on the same account or different accounts for each area, if needed.

<u> </u>	Λ	Δ	Δ		
porting Paths Report Codes	[]	42	$\Delta$		[]
I Direction Global Settings	andline and GSM GPRS/IP SMS (Te	xt Messages) Voice	(VDMP3)	PC Commun	ication (BabyWare)
entral Station Info		ID Receiver #1			
WAN1 IP Address WAN1 IP Port	WAN2 IP Address WAN2 IP Port	IP Password	IP Profile		
82.76.223.153 16001	5. 12.170.162 16002	123456	03	Register	Registered
		IP Receiver #2			
192.168.1.246 16001	192.168. 1 .247 16002	123456	02	Register	<u>Registered</u>
		IP Receiver #3			
0.0.0.0 10000	0.0.0.0 10000	123456	00	Register	Registration Error
		IP Receiver #4			
0.0.0.0 10000	0.0.0.0 10000	123456	00	Register	Registration Error



## 1.4. Reporting options

The following reporting options (Fig.4) can be modified on panel programming:

- a) Reporting (GPRS/IP) checkbox this option is enabled by default. Once disabled, even if the reporting parameters are programmed there will be no signal sent to the receiver.
- b) Dialer Channel if dialer reporting is used also for the site, then dialer channel can be set as a backup to IP/GPRS reporting or in addition to the IP/GPRS reporting (same time)
- c) GPRS/IP Service Failure This option will set the behavior of the panel once the GPRS/IP service fails. The default option is Trouble Only. The option can be disabled or set as trouble when the system is disarmed and audible alarm when the system is armed.

Reporting Options		
Reporting (GPRS/IP)		
Dialer Channel	Dialer used as backup to GPRS/IP	O Dialer used in addition to GPRS/IP
GPRS/IP Service Failure Options	Trouble	Only 🗸

#### Fig. 4 Reporting options

#### 1.5. GPRS Service Provider Info

If a PCS module (GPRS/3G/LTE communication) is used for reporting, then the SIM card APN, username and password should be filled, in order to be able to connect on carrier's data network (Fig. 5). Access Point Name, Username and password credentials can be sent through SMS commands as well.

GPRS Service Provider Into-	Complete this section if you are usin	g a PCS module for GPRS communication
Access Point Name (APN)	Carrier's APN	12/32
User Identification	Carrier'sUsername	17 / 32
Password	Carrier'sPassword	17 / 32

Fig. 5 GPRS Service Provider Info

#### 1.6. Event call direction

There are 4 event types which needs to be programmed to be reported to one or multiple receivers: Arming/Disarming, Alarm/Restore, Tamper/Restore and Trouble/Restore. (Fig. 6)

For example, Arming/Disarming can be programmed to report to Receiver 1 and Tamper to report to Receiver 2.

Troubles can be programmed to have backup on another receiver.

A maximum of 4 IP receivers can be programmed for EVO panels. By default, the panel is programmed to report only to first receiver. If more than one receiver is programmed, like the case from point 1.3, then the event call direction should be programmed as well as for the second receiver.

and a select of the second sec								
le								
Reporting Paths Report Codes								
Call Direction Global Settings	andline and GSM	GPRS/IP	SMS (Text Mes	sages) Vo	ice (VDMP3)	PC Commu	inication (Baby	Ware)
Arming/disarming								
Arm/Disarm Events	Area 1 Area 1	Area 2 Area 2	Area 3 Area 3	Area 4	Area 5	Area 6	Area 7	Area 8 Area 8
hone #1 / Receiver #1								
hone #2 / Receiver #2		$\leq$						
hone #3 / Receiver #3								
Phone #4 / Receiver #4								
Backup on	None	None	None	None	None	None	None	None
Alarm Restore								
Alarm/Restore	Area 1 Area 1	Area 2 Area 2	Area 3 Area 3	Area 4	Area 5	Area 6	Area 7	Area 8 Area 8
hone #1 / Receiver #1								
hone #2 / Receiver #2								
hone #3 / Receiver #3								
hone #4 / Receiver #4								
ckup on	None	None	None	None	None	None	None	None
Tamper Restore								
Tamper Restore	Area 1 Area 1	Area 2 Area 2	Area 3 Area 3	Area 4	Area 5	Area 6	Area 7	Area 8 Area 8
hone #1 / Receiver #1								
hone #2 / Receiver #2								
Phone #3 / Receiver #3								
Phone #4 / Receiver #4								
ackup on	None	None	None	None	None	None	None	None
Trouble restore								
Event	Phone #1 /	Receiver #1 P	'hone #2 / Rec	eiver #2 Phor	ne #3 / Receiv	er #3 Phone #	4 / Receiver #	4 Backup
rouble/Restore All Areas	6	2						None
opecial Report Codes All Areas	5	7						None

Fig. 6 Report call direction

## 2. Reporting configuration for MG/SP panels

#### 2.1. Report codes configuration

Report codes can be programmed in Babyware, Panel programming -> Reporting -> Report Codes section. Reporting codes with 00 will not be transmitted and report codes with FF will be transmitted.

By default, all codes are 00 (no signal will be transmitted once the event occurs). These codes should be customized for each event.

If Contact ID report code format is used, then all events should be set as FF. Best practice: type "FF" in the main filed and press the extend button after. In this way all sub-fields will be automatically filled with FF code (Fig. 7). In this way the panel will follow a known Contact ID table for each report code.

Eile			
Reporting Paths Report Code	es		
Section	Q Description	Q Value	
- Special Alarm		FF o	
- 863	Emergency Panic	FF	
863	Auxiliary Panic	FF	
863	Fire Panic	FF	
<mark>863</mark>	Recent Closing	FF	
<mark>864</mark>	Zone Shutdown	FF	
<mark>864</mark>	Duress	FF	
864	Keypad Lockout Duration	FF	
864	Parademic Alarm	FF	
Special Arming		0	
- 860	Auto-arming (timed/no movement)	FF	
- 860	Late to Close (Auto-arming)	FF	
860	No Movement Auto-Arming Enabled	FF	
860	Partial Arming	FF	
861	Quick Arming	FF	
- 861	Arming via PC	FF	

Fig. 7 Report Codes on MG/SP panels



#### 2.2. Report codes format configuration

Report codes format can be configured in Panel programming -> Reporting -> Reporting paths -> Global Settings. The reporting codes format can be set for each receiver, maximum 2receivers can be configured for reporting. (Fig. 8).

Event Call Direction			Reporting Options	
Events	Phone #1 / Receiver #1	Phone #2 / Receiver #2	Contact ID Override	
Arm/Disarm			Report System Disarming	After an alarm
Alarm/Restore			Report zone restore	Bell Cut-Off
Tamper/Restore			Delay Alarm Transmission	0 sec
Trouble/Restore			Recent Closing Delay	0 sec.
Special Report Codes		V	Clear Events if Fail to Communicate Exceeds	0 sec
Report Code Format			Auto test report (day)(000 = di	sabled)
Phone #1 / Receiver #1	ADE	MCO CONTACT ID ~	Every 0 days at 00	0:00
Phone #2 / Receiver #2	ADE	MCO CONTACT ID	O Every hour on the minute	0
			O Every 5 minutes whe	en armed
			Every 60 minutes who	en <mark>d</mark> isarmed
			O Every hour on the minute	0
			Every 5 minutes wh	en armed

Fig. 8 Global settings

## 2.3. Central station info configuration

The receiver parameters need to be programmed in the Central Station Info section (Fig. 3) from the GPRS/IP tab. The following parameters should be programmed in Central station info tab:

a) Receiver's IP and port:

For IPR512, WAN 1 IP and port are mandatory to be filled. If both WAN ports are used on IPR512, both IPs and ports will need to be filled in Babyware.

- b) Receiver password by default the IPR512's password is 123456. This password is used only in registration step, not for receiver management. It can be changed from receiver's web interface.
- c) Register button after all receiver parameters are programed and sent to the panel, register button will be pressed.

- d) IP Profile is used to set the security profile polling and supervision time of the communication module. More details can be found in receiver management chapters 3.
- e) Area account is a 4 digits hexadecimal account used to identify the site or different areas of a system. All areas can be registered on the same account or different accounts for each area, if needed.

	٨		A		٨	٨		٨
orting Paths Report	Codes		-Λ		$\Lambda$	Λ		A
al Settings Landline	and GSM GPRS/IP	SMS (Text I	Mestages) Voice (VDN	1P3) (Pager	Communica	tion (BabyWa	re)	<u>17</u>
entral Station Info								
IP Receiver	WAN1 IP Address	WAN1 IP Port	WAN2 IP Address	WAN2 IP Port	IP Password	IP Profile	Register	Registration Status
IP Receiver #1	82.76.223.153	16001	5. 12.170.162	16002	123456	2	Register	Registered
IP Receiver #2	192.168.001.246	16001	192.168.001.247	16002	123456	3	Register	Unregistered
Backup IP Receiver	000.000.000.000	10000	000.000.000.000	10000	123456	0	Register	Registration Error
Area 1 IP Account #	3333							
			ADEAS ACCULAT					

## Fig. 9 Central station Info

## 2.4. Reporting options

Following reporting options (Fig. 10) can be modified on panel programming:

- f) Reporting (GPRS/IP) checkbox this option is enabled by default. Once disabled, even if the reporting parameters are programmed there will be no signals sent to receiver.
- g) Diale Channel if dialer reporting is used also for the site, then dialer channel can be set as a backup to IP/GPRS reporting or in addition to the IP/GPRS reporting (same time)
- h) GPRS/IP Service Failure This option will set the behavior of the panel once the GPRS/IP service fails. The default option is Trouble Only. The option can be disabled or set as trouble when the system is disarmed and audible alarm when the system is armed.

Reporting Options		
Reporting (GPRS/IP)		
Dialer Channel	Dialer used as backup to GPRS/IP	O Dialer used in addition to GPRS/IP
GPRS/IP Service Failure Options	Trouble	Only ~

Fig. 10 Reporting options

#### 2.5. GPRS Service Provider Info

If a PCS module (GPRS/3G/LTE communication) is used for reporting, then the SIM card APN, username and password should be filled, in order to be able to connect on carrier's data network (Fig. 11). APN, Username and password credentials can be sent through SMS commands as well.

GPRS Service Provider Info-	Complete this section if you are usin	g a PCS module for GPRS communication
Access Point Name (APN)	Carrier'sAPN	12/32
User Identification	Carrier'sUsername	17 / 32
Password	Carrier'sPassword	17 / 32

Fig. 11 GPRS Service Provider Info

## 3. IPR512 accounts and settings

Paradox IPR512 is a hardware receiver that can handle up to 1024 accounts. An account will contain an IP150/+ module, an PCS module or both modules (combo mode).

#### 3.1. Web interface login

In order to access the web interface of the receiver, the LAN IP should be accessed in a web browser. The default IP of the LAN port of the receiver is 192.168.1.250. If the receiver is installed in a network with a different IP class, it can be changed from receiver's keypad. The receiver's LAN IP can be found with IP Exploring Tool found on our website.

By default, the user is "admin" and the password is "admin" (Fig. 12). The password can be changed after first web interface login and it's used only for receiver management not for account's registration. Starting with version 2.96, receiver's password cannot be recovered using the "Forgot user password" in the login screen. For receivers with firmware 2.96 and above kindly contact Paradox support team and the recover procedure will be provided.

-) → C @	0 🔏 192.168.1.245:12000/login.html		🖂 🕁	∭\ ⊡ ⊖ ≡
CRM 🗎 Work 🗎 Server	r 🛅 Tools 🚞 Personal 🚦 R&D Tasks and Bugs 🔫 Printer			
		P 🔺 R 🔺 D O X°		
		SECURITY SYSTEMS		
		IPR512 Account Management ID: 99 Line: 34		
		Usemame: admin		
		Password:		
		Entropit yourr bassword 2		
		Login		
		246426		



**3.2.** Receiver configuration

#### **3.2.1.** Network configuration

The LAN/WAN IPs and ports can be configured from the Interfaces Configuration tab. (Fig.13)

The IPR512 receiver has 3 RJ45 network interfaces:

- 1. LAN HTTP web browser sessions are allowed on this interface
- 2. WAN1 for receiving events activated by default
- 3. WAN2 for connecting another WAN from a different ISP for redundancy. By default, the receiver has activated only LAN and WAN1 interfaces. If WAN2 is used it should be activated also.

	WAN1	WAN2	LAN
Interface enabled:			
Port:	16001	16002	12000
IP address:	192 . 168 . 1 . 246	192 . 168 . 1 . 247	192 . 168 . 1 . 245
Netm <mark>as</mark> k:	255 . 255 . 255 . 0	255 . 255 . 255 . 0	255 . 255 . 255 . 0
Gateway:	192 . 168 . 1 . 254	192 . 168 . 1 . 254	0.0.0
DNS primary:	192 . 168 . 1 . 254	192 . 168 . 1 . 254	0.0.0
DNS secondary:	8.8.8.8	8.8.8.8	0.0.0.0

Fig. 13 IPR512's IP interfaces configuration tab

#### 3.2.2. Output protocol

IPR512 receiver will not display the events received from communication devices on its interfaces. These events will be encapsulated in a known format and forwarded to central monitoring software (CMS).

The supported protocols are: ADEMCO 685, SURGARD MLR2-DG, and RADIONICS 6500. Communication with the 3<sup>rd</sup> party central monitoring software (CMS) will be done through serial connection on port COM1 of the receiver. The parameters should be set according to the protocol used and to the monitoring software requirements. (Fig. 14)

	Output prot	oco				
	Output:	Rad	dionics 6	500	Ý	]
	Header:	00				
	Trailer:	14				
	Receiver ID:	99				
	Line number:	34				
~	ACK/NACK		Wait for	ACK	4	sec
~	Test message		1	Every	30	sec
	Force Partition		Pa	rtition	1	

Fig. 14 Output protocol configuration

#### 3.2.3. Serial ports configuration

The IPR512 has 2 serial ports that can be configured (Fig. 15):

- COM1 port (DB25 connector) is used to forward events to the central monitoring software
- COM2(DB9 connector) is used to connect a printer or a PC with an RS232 serial port, running software to view/print events in plain text format.

	COM 1		COM 2 [ SERIAL O	UT J
Baud rate:	9600	~	9600	~
Data bits:	8	~	8	~
Parity:	No	~	No	~
Stop bits:	1	~	1	~
Flow:	None	~	None	~
			Enable (	debug out <mark>l</mark>

Fig. 15 Serial ports configuration

## 3.2.4. IPR512's other configuration

The following settings can be set on this tab (Fig.16)

- a) Receiver password password used for account registration. This password should be entered as well on the panel programming to register a module to the IPR512.
- b) Polling website by default is set to ipr512.paradoxmyhome.com and should be changed only when communicating in a closed network.

The polling interval can be set from 1 to 60 minutes and the attempts from 1 to 24. If the receiver will not be able to poll the website (for the number of attempts), it will report WAN1/2 Internet connection failure trouble.

c) Date and time – used to set receiver's date and time through an NTP server or manually.

eceiver password:	123456			U	ograde port: 10000
olling web site:	ipr512.p	aradoxmyhom	e.com		
	Interval (	1-60): 1	min	At	tempt(s) (1-24): 1
Date and Time —					
	NTP server	1			
• MIP	pool.ntp.or	g			
	Time zone	5			
	(GMT+02:	00) Athens, B	ucharest, Istanbu	II, Jerus	alem, Vilnius 🗸 🗸
	Day: 04	Month: 03	Year: 2020		Time: 17 : 27
	as time				Consult DST table
Daylight savir	iga unite				T
Daylight savir	Day: 00	Month: 00	N/A	× .	Time: 00 : 00

Fig. 16 – Other configuration

#### 3.3. IPR512's accounts management

Up to 1024 accounts can be registered to an IPR512 receiver. An account can be created with an IP module, a PCS module or both (combo mode) (Fig.17). Once two modules (one PCS and one IP module) are installed in combo mode they will be registered under the same account.

The edit option will allow to change the security profile of the account. Delete option will remove the account from the list. If there is no need to restore the deleted account in future, it should be removed from View/Restore deleted modules as well, otherwise the account number will not be available to be used again.

	Online (2)	Offline (0)	🎯 Must Upda	ite (0) 🛛 🌞 Combo (0)					1	Edit	🙆 Delete
	Account #	Panel	Panel SN	Security profile	IP device	Device SN	Module ID	Last poll time	Last IP address	Registe	red on
	1111	EVOHD V7.30	07003AC5	Medium Security (40 min)	IP150 V5.02	710745F0	00:19:BA:0E:63:DF	26-Mar-20 12:22:51	5.12.170.162	26-Mar-	20 11:12:44
	5555	MG5000 V4.90	201A3E54	Maximum Security (90 sec)	IP150 V5.02	710358CC	00:19:BA:06:A6:33	26-Mar-20 12:30:11	5.12.170.162	26-Mar-	20 11:20:36
odu	les per page	20 ~		<	22	1 of 1				Proudly	made in Canada 🖡

Fig. 17 IPR512's accounts management

#### 3.4. Security profiles

There are five security profiles by default with specific polling times and supervision times. These security profiles can be modified using the Edit button or other profiles can be added using Add button (Fig. 18).

The reporting module (IP150/PCS) sends a presence message to the receiver at intervals defined on the module polling time. If the receiver does not receive any presence messages within the receiver supervision time, the receiver will report a supervision loss of the account.

The ID of the polling profile needs to be added as the IP profile in Babyware or in section programming.

ecuri	ty profiles					
he IP r	eporting device sends a presence message to th	e receiver at intervals defined by the module polling time.	If the receiver does not receive any	🔶 Add	📝 Edit	O Delete
ID	Name	Module polling time	Receiver supervision time	Modules	s using this pro	file
00	No Supervision	6 hours	Not supervised	0 modul	es	
01	Low Security	20 minutes	2 hours	0 modul	es	
02	Medium Security	10 minutes	40 minutes	1 modul	es	
03	High Security	2 minutes	10 minutes	0 modul	0 modules	
04	Maximum Security	25 seconds	90 seconds	1 modul	es	
05	Custom profile	15 minutes	50 minutes	0 modul	es	

#### Fig. 18 Security profiles

#### 3.5. Events configuration

There are two main categories of events which can be customized on the receiver side (Fig. 19):

- Account events account supervision loss/restore and account registration/deletion can be signaled
- Receiver events these events should be configured per the CMS recommendations.
   Receiver events will be reported on a specific account which should be configured in the same page.



		🖌 Edi
Events description	Reported	CID
Account supervision loss	~	AA1
Account supervision restore	×	AA2
Account registration	×	BB1
Account deleted	×	BB2
Account #: 9999 Reporting format: CID La Save		
		Ed
Event description	Reported	Report CID
Event description Account database reached 75%	Reported	Report CID
Event description Account database reached 75% Accounts database reach 100%	Reported ✓	Report CID 00A 00B
Event description Account database reached 75% Accounts database reach 100% Account cannot register, database is full	Reported ✓ ✓	Report CID 00A 00B
Event description Account database reached 75% Accounts database reach 100% Account cannot register, database is full Automation software communication failure	Reported	Report CID 00A 00B
Event description Account database reached 75% Accounts database reach 100% Account cannot register, database is full Automation software communication restore Automation software communication restore	Reported	Report CID     00A     00B
Event description Account database reached 75% Accounts database reach 100% Account cannot register, database is full Automation software communication failure Automation software communication restore Backup restore from memory card	Reported ✓ ✓	Control CID     CO     OOA     OOB     OO
Event description           Account database reached 75%           Accounts database reach 100%           Accounts database reach 100%           Account cannot register, database is full           Automation software communication failure           Automation software communication restore           Backup restore from memory card           IPR512 power up	Reported ✓ ✓	Report CID         00A           00B         00B
Event description  Account database reached 75%  Accounts database reach 100%  Accounts database reach 100%  Account cannot register, database is full  Automation software communication failure  Automation software communication restore Backup restore from memory card  IPR512 power up  LAN network connection failure	Reported	Ed     Report CID     00A     00B
Event description           Account database reached 75%           Accounts database reach 100%           Account cannot register, database is full           Automation software communication failure           Automation software communication restore           Backup restore from memory card           IPR512 power up           LAN network connection failure           LAN network connection restore	Reported	Report CID           00A           00B
Event description Account database reached 75% Account database reach 100% Account annot register, database is full Automation software communication failure Automation software communication restore Backup restore from memory card IPR512 power up LAN network connection failure LAN network connection restore Memory card error (no card or read/write fail) Memory card leatore	Reported	Report CID         00A           00B         00B
Event description           Account database reached 75%           Accounts database reach 100%           Accounts database reach 100%           Accounts database reach 100%           Automation software communication failure           Automation software communication restore           Backup restore from memory card           IPRS12 power up           LAN network connection failure           LAN network connection restore           Memory card error (no card or read/write fail)           Memory card restore           MET searce failure	Reported	Edi     Report CID     00A     00B     00
Event description Account database reached 75% Accounts database reach 100% Accounts database reach 100% Account cannot register, database is full Automation software communication failure Automation software communication restore Backup restore from memory card IPR512 power up LAN network connection failure LAN network connection restore Memory card error (no card or read/write fail) Memory card restore NTP server failure NTP server failure	Reported	Report CID     00A     00B     00



#### 3.6. Receiver status

Receiver status tab it's used for troubleshooting and important settings as backup or clear database. (Fig. 20)

The receiver information status shows the serial number, the MAC address of the network interfaces, firmware and hardware versions.

Additional actions can be done as follows:

- Export system logs when requested by Paradox Support Team for investigation
- Export accounts in .csv format
- Backup on SD Card backup accounts and settings of the SD card
- Clear database will remove all accounts in the receiver
- Restore to factory default will restore the factory setting including deletion of all accounts registered

leceiver l	nformation			- (1)				
Serial #	MAC address	WAN1	WAN2	Current version	Check for latest version	Bootloader	Hardware	Registered on
74001703	00:19:BA:0B:E0:C8:	00:19:BA:0B:E0:C9:	00:19:BA:0B:E0:CA:	V2.96.000 04-Feb-2019	Click here	V2.05.003	V1.01	02-Mar-2018

Fig. 20 Receiver status

#### 3.7. Search engine

IPR512 has a built-in search engine (Fig. 21) which is helpful for account management. The operator can search by a single account, an account range (e.g. From 1000 to 1010) or by a specific account or by a module ID (MAC address e.g. Module ID = 0019ba0e63df).

Account #	from	to
O Account #	-	
O Module ID		
Show all accord	ounts	

Fig. 21 Search engine

## 4. Backup/restore procedures for Paradox IPR512 recevier

#### 4.1. Backup/restore for IPR512 receiver

It is possible to backup and restore data from old to new IPR512. To achieve that on NEW IPR512 please enter Backup menu -> Enter password (admin default) -> Restore data from memory card. Based on backup file size this might take some time to finish. Once done the IPR512 will reboot.

Please note that network configuration should be imported as well, however please double check WAN configuration to be the same with old IPR512 otherwise the reporting modules will fail to reach IPR512. It should not be necessary to register again the modules.

Please be advised that along with accounts and network setup, also the IPR512 password will be imported from backup file.

#### 4.2. Backup from IPR512 and restore to IPRS7

This chapter will explain the steps that need to be followed in order to import IPR512 accounts to IPRS7 receiver.

Versions used: IPR512 2.90.005 or above IPRS7 4.11.1 or above -> beta version

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#### Procedure:

 Please connect with a browser to IPR512 web interface and make a manual backup (Backup on SD Card button below – Fig. 22) of data to SD Card (please make sure that SD Card is inserted into IPR512). This will ensure that latest IPR512 database is exported to SD Card.

Main men	u		Search		F	Receiver inf	o	
Accounts			Account #	from to		D- Line:		99-34
Security pro	files		Account #		V	/ersion		2.90.005
Receiver co	nfiguration		Module ID		T	ime:		12:01
Event config	guration		Show all account	s	A	Accounts used		440 of 1024
Receiver st	tatus		Co		н Г	'rotiles used: )eleted module	iq.	7 of 32 0 of 5
View/Restor	re deleted modules		60					0010
Change pas	sword	Logout					bles occurring	I
itatus Tr	eceiver is experiencin ouble group Trouble arial Cannot c	g 1 troubles. description ommunicate with the automa	ation software.					
eceiver l	nformation							
Serial #	MAC address			Firmware		Bootloader	Hardware	Registered on
74001703	00:19:BA:0B:E0:C8:	00:19:BA:0B:E0:C9:	00:19:BA:0B:E0:CA:	V2.90.005 04-Feb-2019	Check for latest version	V2.05.003	V1.01	02-Mar-2018
	-1.0 - 41							

Fig. 22 Backup on SD Card

2. Please remove the SD card from IPR512 and insert it into a PC with IPRS7 installed. From IPRS7 interface, press Recycle Bin and select Convert IPR512 SD Card option (Fig. 23).



Fig. 23 Convert IPR512 SD Card

3. Paradox IPR512 DB conversion tool will appear (Fig. 24). Click on Import from SD Card button. This will list all valid backups available on SD card. Select the latest backup (shown with bold in the list). Once the backup is selected, please click Save to ACC File button. This should generate an ACC file that needs to save locally on PC.



Fig. 24 IPR512 DB conversion tool

4. From IPRS7 please select Import ACC file (Fig. 25) and select the ACC file exported at previous step

A Paradox I	PR512 DB Conversion Tool V	er. 2018.4.1.1		- [	ı ×
		S T E M	X <sup>®</sup>		
This app depending	will convert IPR512 data g of the type of source	abase to an " vou have.	.acc" file, Select the c	corresponding butt	on
PD Ir	mport from SD Card				
BB .					
🖵 Im	nport from image file				
1	Save to ACC File				
Backup ID	Backup Date	IPR512 ID	IPR512 MAC Address	Accounts Count	Latest
	2/26/2019 1:21:25 PM	99	00:19:BA:0B:E0:C8	526	
	2/26/2019 1:30:44 PM	99	00:19:BA:0B:E0:C8	526	
	2/26/2019 1:31:18 PM	99	00:19:BA:0B:E0:C8	526	
	4/22/2019 12:02:06 PM	99	00:19:BA:0B:E0:C8	528	
	4/22/2019 12:02:40 PM	99	00:19:BA:0B:E0:C8	527	*

Fig. 25 – Import ACC file

5. Once the importing process is completed, please click Refresh button in IPRS7 to show imported accounts.

P IPR:	5-7 V4.11.1 [My 9	iite]	D	o x	тм				60	- 🗆 X
Area Area Area Area Area Area Area Area										
					•	•				
Ever		ccounte (Module	e: Online: 520. (	Iffline: 2)						C Refresh
	tue	Account #	▲ @ ID	Profile ID	Protocol ID	Panel Type	Panel Serial #		Module Type	Module Seria
	Account # [2B	CBI	10	1 Tollie ID	THOLOCOTED	r aner type	Tallel Genal#		would type	Widdle Gena
- (1)	Active	2BCB	12	00	ADEMCO CID	EV0192	0504C781	3.10	IP150	710252A6
- @	Active	2BCB	13	00	ADEMCO CID	EV0192	0504C781	3.10	PCS250G	7B11A11B
	Account # [2B	43]								
- 🔞	Active	2B43	53	00	ADEMCO CID	SP6000	290CB503	6.80	PCS250	7B1075F8
- 🕲	Active	2B43	54	00	ADEMCO CID	SP6000	290CB503	6.80	IP150	71078097
	Account # [2B	56]								
- 🕲	Active	2B56	61	00	ADEMCO CID	SP7000	2A01F64F	6.90	IP150	71012DC2
- 🕲	Active	2B56	62	00	ADEMCO CID	SP7000	2A01F64F	6.90	PCS250	7B1075E2
	Account # [2B	55]								
- 🕲	Active	2B55	64	00	ADEMCO CID	SP6000	290CB522	4.94	IP150	71012DB0
- 🕲	Active	2B55	65	00	ADEMCO CID	SP6000	290CB522	4.94	PCS250	7B1075E5
										>
•	Date and Tim	e	Event CID #	Activity Type	Q Activit	tv Loa		Additional Info		Q
	4/22/2019, 3:0	4/22/2019, 3:02:47 PM 1 000		Backup Accou		ints backup	s backup 0000			
	4/22/2019, 3:02:20 PM		3 000	WAN Commun	ication Link r	estored		0000		
	4/22/2019, 3:0	2:03 PM	1 000	Operator	Login			admin		
	4/22/2019, 3:0	1:57 PM	1 000	Automation Sof	tware Link l	ost		0000		

Fig. 27 Imported accounts

#### 5. IPR512 network requirements

We found that in practice and in some monitoring stations the IPR512 unit is not running on isolated networks and the IPR512 has to handle other messages broadcasted in the network that might not be of interest.

This is making the unit to process unnecessary packets and therefore consuming processing resources, at some point causing the unit to reboot.

To cope with that Paradox is STRONGLY recommending isolating the network physically and if not possible then to create VLAN with distinct subnets for each IPR512 WAN and LAN ports. The protocols that needs port forward are: LAN TCP only and WAN UDP only.

Please check following diagrams with details that need to be implemented to isolate the network, using VLANs (Fig. 28) or using routers (Fig. 29).



Fig. 28 Network isolation using VLANs





Fig. 29 Network isolation using routers

