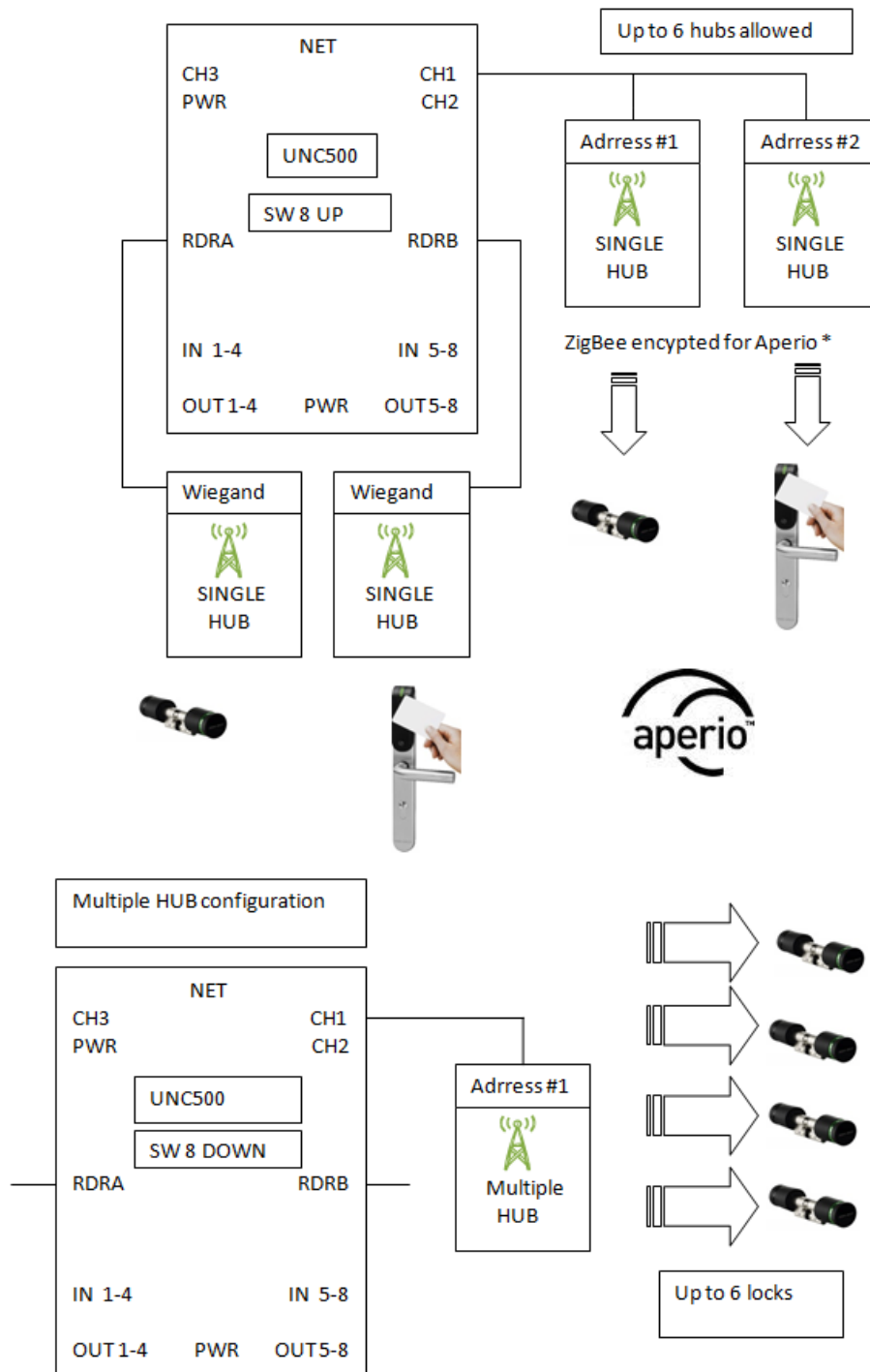**Technical Guide**

Aperio Lock and Hub Configuration

NOTE: Channel must be set to "Aperio"... Not DNET.

Single Hub Funtionality (1-1) - DIP Switch 8 should be ON.

Multiple Hub Solution for Aperio-Axiom dipswitch 8 off

With dipswitch 8 in the down (off) position the protocol and addressing will follow the "one to several" method as per AAWL-134_Aperio_EAC_protocol_RS485_Rev_F3.pdf.

If a multiple hub is being used and dipswitch 8 is in the up (on) position only the first lock will be properly addressed. The D-NET will only support additional IOC'S and Safesuite Keypads. Any RC-2's above address 1 will be considered Aperio devices.

Mapping – maximum 6 locks per UNC500

Since a variable number of locks can be installed on an Aperio hub, without software support there is no practical way of determining in Axiom the relationship between access points and Aperio hardware.

To avoid complicating the solution the UNC500 will only address a single hub and assign a virtual RC2 to every 2 locks. The first RC2 will be on board hardware of the UNC500.

Lock Address	RC2 address	Side A or B
1	2	A
2	2	B
3	3	A
4	3	B
5	4	A
6	4	B

Limited Functionality

The locks only function briefly after a card has been presented so functionality is limited.

The integration will only support the basic access control functionality of granting access, denying access and access schedules.

Auto-relock, Disable forced entry and RTE Bypass DC would be unavailable for Access Points other than those belonging to the internal RC-2.

Card formats, facility code fallback, In/Out, Reverse Data would only be used for the internal RC-2.

Targeted Upgrade

Each firmware upgrade file (.rbh) will be created for a specific serial numbered UNC500. If a unit is upgraded and has a mismatching serial number the telnet protocol will not allow the user to select an Aperio application for a communication channel.

AxiomV version 5.2.55 is compatible with UNC500 panels - Therefore only Versions 5.2.55 and higher are supported to work with Aperio

Firmware Upgrade Procedure

Copy the firmware upgrade file to C:\Program Files\RBH\AxiomV\Bin. The file should have a "Tnnn" in the filename. The "Tnnn" indicates that the file is meant for a specific serial number of controller. The number is displayed on a yellow sticker in the unit but can also be found by using the IPLocator program.

Once you have confirmed that the file is meant for a specific controller you may follow the firmware upgrade procedure through the Axiom software.

Once you have confirmed the firmware upgrade the file will sent to the unit and processed. This takes approximately 4 minutes.

Confirming File Acceptance

If the file has been accepted the unit will re-boot and go offline for a short interval. The interval will be longer for panels that are connected through C-NET than directly. Select STATUS on the UNC500 controller and confirm that the Firmware Version is correct.

How to Change Ethernet Parameters for NC500 –V40

Set the dip switches to all zeroes to start.

Connect an Ethernet cable from your computer or lap top through a hub or switch or directly. Temporarily change your local area connection settings/ properties/ internet protocol/ properties for an ip address of 192.168.168.20. Remember to restore the ip address when finished.

Apply power to the NC500 and note that the diagnostic lights are alternately flashing.

In a dos window type the following "telnet 192.168.168.125".

If a connection is made the following message will be displayed.

Telnet Opened on port 23
2 MEG RAM detected.

User Parameters

A password is required in order to change user parameters. The default password is password. The password can be changed by the user. After entering the password the following items are available for the use to alter.

Name	Defaults	Description and notes
IP ADDRESS	192.168.168.125	Local Ethernet address.
SUBNET MASK	255.255.255.0	Local Ethernet mask
IP GATEWAY	0.0.0.0	For future use when DNS option becomes available.
PORT NUMBER	3002	Primary port number.
ALT PORT NUMBER	3003	Alternate port number applies to "LAN" application.
CH1 APPLICATION	HOST	Com channel #1 application located on the side opposite the power input.
CH2 APPLICATION	DNET	Com channel #2 application located below #1.
CH3 APPLICATION	NCNET	Com channel #3 application located on the same side as the power input. To use this channel the three jumpers must be in the "R" position. If you are using the legacy "C-NET" this value must be "NONE".
Telnet Password	password	This is a string of up to 10 characters that allows the user access to this program.

Applications

Name	Description
NONE	No application
DNET	Device net for communication with axiom peripherals. This application <u>must</u> be assigned to one of the com channels.
NCNET	For non-arcnet comms between NC500. When a panel doesn't have an ARCNET chip installed the three jumpers should be moved to the position "R".
HOST	For direct comms with host computer – this will not disable Ethernet
OSDP	Open source device protocol for communicating with rs485 readers. Not implemented yet.
LAN	Ethernet socket to rs485 converter. If this application is chosen you will be asked to enter a baud rate.

Aperio Application

The only way to use the Aperio Application is to select the application for a communication channel.

You may only choose one channel for any application.

Once you have been able to connect with the panel while the DIP switches are set to zero through telnet you should see the following screen.

After entering "password" you may change the parameters. When selecting applications for the communication channels, use the "space" bar to toggle through the options