

MODEL 3000 / ACCESS 4000 MEMORY CONFIGURATIONS. V4

A significant feature of the 3000/Access 4000 products is the ability to adapt the memory to suit the requirements of the particular system installation.

Memory Size.

Definitions: The Memory installed in Model 3000 / Access 4000 Control Modules has traditionally been specified in Bytes. Some manufacturers choose to specify memory capacity in Bits, thereby making the memory size sound much larger. (There are 8 Bits in a Byte of memory) This can create confusion for the specifier or installer.

In order to allow memory capacity to be compared in different products, memory sizes for the '3000/4000 are now being defined in both formats. The original "Byte" format will still be provided first, followed by the "Bit" format in brackets.

Initially, the Installer must choose the appropriate Memory Size to suit the size of the installation.

The 3000 is fitted with 32k (256kBit) Memory in the factory. but can be upgraded to 128k (1MBit) or 512k (4MBit) if required.

The Access 4000 is fitted with 128k (1MBit) in the factory but can be upgraded to 512k (4MBit) when necessary.

Memory Configuration

Secondly, the Installer has the option to choose an appropriate Memory Configuration so that the available memory is utilized in the most effective way for each particular system. In most cases the "Standard" configuration offers a practical mix of modules and items for the majority of installations. "Access", "Enlarged", "Special" and "Alarms" configurations cater for systems that have a greater emphasis on particular applications, while maintaining the concept of fully integrated systems.

Determining the Memory Size and Configuration.

System Information can be viewed at an LCD Terminal by Pressing <MENU>, <2> while logged off (or just <MENU> if V2 or earlier). The Memory information is provided in the following format:

RAM: 128K-00-04.01

This string represents the: - RAM size. e.g. 32K, 128K or 512K.

- Memory configuration option selected:

00 = Standard. 01 = Access. 02 = Enlarged.

03 = V2 Standard. 04 = V2 Access. 05 = Special. 06 = Alarms.

- Firmware version used when Memory configured (defaulted)

Notes: 1) Firmware Version 00.00 = configuration performed before this feature was added.

2) If not 00.00, Firmware Version in this information string must match Firmware version fitted to Panel.

Choosing the right configuration.

The Memory Configuration Selection Guide tables on the following pages provide a summary of the different configurations in each memory size, providing suggested applications and numbers of the basic modules and items.

Full Memory configuration details are also provided for each of the three memory sizes in the larger tables that follow the summaries. Once a configuration is chosen with the summary information, the full table should be checked to ensure that the configuration is suitable for all aspects of the system.

IMPORTANT NOTE:

The following system features are only available in the "Access 4000" version of the product, regardless of Memory size installed:

- "Card only" Users.

- Lift Access Control.

- Dedicated Door Interlocking logic.

- Dedicated, Zoned Air-conditioning control logic.

Memory configuration changes

Memory configuration options have been further enhanced in Version 4 to provide for additional modules and features and provide more flexibility for the wide variety of installations where the product is now used.

The configurations currently available for each Memory size are “Standard”, “Access”, “Enlarged”, “Special” and “Alarms”.

V4 Changes

Changes from V3.5 to V4 were only made in 512k (4MBit) configurations to:

- Add C-Bus Auxiliaries to all 512k (4MBit) configurations.
- Increase the Zone Input, Standard Door, Intelligent Door and Lift Car List capacity of the 512k (4MBit) “Special” configuration.
(Providing a configuration that supports 128 Intelligent Doors & 96 Standard Doors)
- Provide for up to 8 Intelligent Doors, 64 Calculated Auxiliaries and 48 Lift Car Lists in the 512k (4MBit) “Enlarged” configuration.

For Sites upgrading from V2 where it is important to preserve the V2 Memory configuration, the “V2 Standard” and “V2 Access” Memory configurations are available. These options largely maintain the V2 configurations and add a token amount of the newer V3 to V4 options where possible. Full details of the “V2” configurations are found on page 9.

Note that in all 32k (256kBit) and 128k (1MBit) configurations there is no difference between V3.5 and V4, and that the changes in the 512k configurations are minimal as detailed above and in the tables.

V3.5 Changes

Changes from V3 to V3.5 were primarily made to:

- Accommodate the Analogue Input Module and the Intelligent 4 Dr Access Module in 32k (256kBit) Memory configurations.
- Add the “Alarms” configuration to 128k (1MBit) and 512k (4MBit) configurations. This provides more Zone Inputs by increasing the number of “B” type Expanders (32 Zone Expanders) in each configuration.
The 512k (4MBit) “Alarms” configuration also provides more TimeZones, Auxiliary Lists, Menu Groups, Phone Numbers and Function Zones and still allows for 128 Doors via a combination of Standard and Intelligent Reader Modules.

V3 Changes

Changes from V2 to V3 were primarily made to:

- Accommodate the Analogue Input Module and Intelligent 4 Door Access Module (Avail. V3.5) options.
- Add Home Zones, Counters and DTMF Remote Control.
- Provide more flexibility in all three Memory size options with some changes to the existing configurations and the utilization of the “Special” configuration for field use.

V2 Changes

In addition to the changes listed above, other changes made when V2 was released also need to be taken into account. The main changes made from V1 to V2 were to:

- Accommodate the 16 Zone (E type) and 32 Zone (B type) Expander module options. (Note that there is no physical difference between E and B type Expanders. A DIP switch is used to select whether the Expander will support 16 Zones/Auxiliaries or 32 Zones/Auxiliaries.)
- Add in support for 24,576 Card only Users (512k [4MBit] Access)
- Add Mini Expanders, SpreadNet, Interlocks and Airconditioning control.
- Provide more flexibility in the 32k (256kBit) and 512k (4MBit) Memory size options.

Upgrading or Re-configuring the Memory

Note: Memory Size, Memory configuration and Control Module PCB Type can be checked from an LCD Terminal. See “System Information” in the System Overview section for details.

Type 2 Control Module Boards.

Two IC chips are supplied to upgrade the Memory Size; the “RAM” chip itself and the “PIC Micro chip” (U14) to enable the additional memory. This table provides details of the chipsets for each Memory size and can be used to ensure that the correct PIC Micro is fitted.

If features unique to Access 4000, or other special features are required, this table can also be used to ascertain whether the Control Module is configured as a Model 3000 or Access 4000, or has any special options enabled.

<u>Memory Size</u>	<u>Product</u>	<u>SRAM</u>	<u>PIC Micro Chip</u>	<u>Notes</u>
32k (256kBit)*	3000	DS1230	CEPIC_1 Vx.xx	x.xx = Version number.
128k (1MBit)*	3000	DS1245	CEPIC_2 Vx.xx	
128k (1MBit)	Access 4000	DS1245	CEPIC_3 Vx.xx	
512k (4MBit)*	3000	DS1250	CEPIC_4 Vx.xx	
512k (4MBit)	Access 4000	DS1250	CEPIC_5 Vx.xx	
Special Options:				
128k (1MBit)	Access 4000	DS1245	CEPIC_6 Vx.xx	High Level Lift Interface.
512k (4MBit)	Access 4000	DS1250	CEPIC_7 Vx.xx	Geoquip.

* Not currently available in Australia and New Zealand.

Type 0 (Australia & NZ only) and Type 1 Control Module Boards.

Two IC chips are supplied to upgrade the Memory Size; the “RAM” chip itself and the “Memory Size GAL” chip (U5) to enable the additional memory. This table provides details of the chipsets for each Memory size and can be used to ensure that the correct GAL is fitted.

If features unique to Access 4000 are required, this table can also be used to ascertain whether the Control Module is configured as a Model 3000 or Access 4000 by checking the Options GAL - U4.

<u>Memory Size</u>	<u>Product</u>	<u>SRAM</u>	<u>Mem. Size GAL (U5)</u>	<u>Options GAL (U4)</u>
32k (256kBit)	3000	DS1230	U5-2	U4-0
128k (1MBit)	3000	DS1245	U5-5	U4-0
128k (1MBit)	Access 4000	DS1245	U5-5	U4-1
512k (4MBit)	3000	DS1250	U5-6	U4-0
512k (4MBit)	Access 4000	DS1250	U5-6	U4-1

General Information.

When upgrading the Memory size or choosing a new Memory configuration for an existing system, care must be taken to ensure that any existing programming that must be preserved, is not lost.

Extreme care should be exercised if also upgrading the Control Module firmware from V1 to V4, as the Memory configurations now differ quite significantly and the Control Module PCB will also have to be upgraded from Type 0 to Type 1 or later.

If upgrading from V2 to V4 there are also configuration changes that will need to be checked. The Control Module Type will also need to be checked, as it may have been a Version 1 panel (Type 0 PCB) that has been previously upgraded to V2. (Australia and NZ only)

The *Programmer's Reference* section of the manual provides details of the procedures for upgrading and/or re-configuring the memory. This information can be found under “Memory Defaulting” [<MENU>, 7, 5, 2]. The procedure will require a PC with Upload/Download software installed.

Memory Configuration Selection Guide

32k (256kBit) Summary. V3.5 & V4

V3.5/V4 Config.	Description	Users.	Areas.	Standard / Intelligent Drs. (Total Doors)	LCD Terminals	Total Zones on Expander Modules.	DTMF Remote Controls	Review Events
32K (256kBit) Standard	-Intruder alarm: 4 Expanders/1 Mini Exp. -4 Door Access control. -Extra Areas (24) -Extra DTMF codes (8)	100. 50 with names	24	4 / 0 (4)	8	88	8	300
32K (256kBit) Access	-8 Door Access control. -Intruder Alarm: 3 Expanders/No Mini Exp. -Extra Review Memory (550 Events)	100. 50 with names	16	8 / 0 (8)	8	64	4	550
32K (256kBit) Enlarged	Similar to Access. -Up to 8 Intelligent Doors. -2 Mini Expanders only.	100. 50 with names	8	4 / 8 (12)	8	32	4	550
32K (256kBit) Special	-Extra DTMF codes (8) Home Auxes (16) HomeZones (16) (for Domestic installations) -4 Door Access control. -Intruder Alarm: 2 Expanders/3 Mini Exp.	50 with names.	16	4 / 0 (4)	8	72	8	300

128k (1MBit) Summary. V3.5 & V4

V3.5/V4 Config.	Description	Users	Areas	Total Doors. Total Lifts.	Standard Doors.	Intelligent Doors.	LCD Terminals	Total Zones on Expander Modules.
128K (1MBit) Standard	-Large intruder alarm 10 Expanders. 5 Mini Expanders. -32 Door Access control -Extra User Codes (2000)	2000. 100 with names	96	32 3	32	0	32	264
128K (1MBit) Access	-64 Door Access control. -Intruder Alarm 8 Expanders. 4 Mini Expanders.	1000 All with names	32	64 6	64	0	16	192
128K (1MBit) Enlarged	-Enlarged Intruder alarm 14 Expanders. 10 Mini Expanders. -Extra Wireless Zones (128) -16 Door Access control -Extra Menu Groups (16) -Extra HomeZones (64)	1000. 100 with names	96	16 3	16	0	32	400
128K (1MBit) Special	-64 Door Access control. -Intelligent Reader module option* (Up to 32 Doors) -Intruder Alarm with additional Mini Expanders 3 Expanders. 16 Mini Expanders.	1000 All with names	32	64 4	16	32	16	192
128K (1MBit) Alarms	-Enlarged Intruder alarm 15 Expanders. ("B" type) 4 Mini Expanders. -Extra Wireless Zones (64) -16 Door Access control -Extra Menu Groups (16) -Extra HomeZones (64)	1000. 200 with names	96	16 3	16	8	32	512

512k (4MBit) Summary. V4

Potentially, a maximum of 250 Modules can be connected to the LAN in 512k (4MBit) Memory configurations. Note that the total numbers of Modules currently available in some 512k (4MBit) configurations may exceed this figure. (In practice the maximum number of modules installed in a single system will be determined by the module types used and the amount of system activity generated)

V4	Description	Users	Card Only Users	Areas	Total Doors Total Lifts.	Standard Doors.	Intelligent Doors.	LCD Terminals	Total Zones on Expander Modules.
512K (4MBit) Standard	-Extremely large intruder alarm configuration: 64 Expanders. 24 Mini Expanders. -128 Door Access control -Max Wireless Zones (208)	4000 All with names	0	250	128 16	128	0	99	1536
512K (4MBit) Access	-240 Door Access control. -Additional Card Users. -Intelligent Reader module option (Up to 32 Doors) -Very Large Intruder Alarm 25 Expanders. 10 Mini Expanders.	500 All with names	24576	128	240 16	150	32	48	560
512K (4MBit) Enlarged	-176 Door Access control -Very Large Intruder alarm 32 Expanders. 16 Mini Expanders.	4000 All with names	0	128	176 16	128	8	48	768
512K (4MBit) Special	-176 Door Access control. -Additional Card Users. -Intelligent Reader module option* (Up to 128 Doors) -Very Large Intruder Alarm 24 Expanders. 16 Mini Expanders.	4000. 2000 with names	8192	128	176 16	96	128	64	896
512K (4MBit) Alarms	-Extremely Large Intruder Alarm 64 "B" type Expanders. 16 Mini Expanders. -128 Door Access control. -Intelligent Reader module option (Up to 32 Doors) -Extra TimeZones, Menu Groups & Function Zones.	4000 All with names	0	200	128 16	96	32	75	2176

32k (256kBit) Memory Configurations. V3.5 & V4

V3.5 / V4. 32k (256kBit)	Standard	Access	Enlarged	Special	Alarm
Users	100	100	100	50	50
User Names	50	50	50	50	50
User Types	16	16	16	8	8
Card Only Users *	0	0	0	0	0
Areas	24	16	8	16	16
Doors	4	8	16	4	4
Lift Cars *	0	0	0	0	0
Site Codes	3	3	3	3	3
TimeZones	8	8	8	8	8
Holidays	8	8	8	8	8
Diaries	5	5	5	5	5
Review Memory	300	550	550	300	300
Counters	4	0	0	4	4
Area Lists	16	16	8	16	16
Doors Lists	8	16	16	8	8
Siren Lists	8	8	2	8	8
Floor Lists *	0	0	0	0	0
Lift Car Lists *	0	0	0	0	0
Auxiliary Lists	2	2	2	2	2
Menu Groups	8	8	8	8	8
Access Groups	8	8	8	8	8
Process Groups	16	16	16	16	16
Interlock Groups *	0	0	0	0	0
Comms Tasks	5	5	5	5	5
Phone Numbers	6	6	6	6	6
DTMF Controls	8	4	4	8	4
Function Zones	32	16	16	32	32
Calculated Auxes	16	16	16	16	16
Home Auxiliaries	8	8	8	16	16
Home Zones	8	0	0	16	16
LCD Terminals	8	8	8	8	8
Expander 32Z	1	1	0	1	1
Expander 16Z	3	2	0	1	1
Reader Modules	2	4	2	2	2
Mini Expanders	1	0	2	3	3
Analogue Modules	0	0	1	0	0
Intelligent Readers	0	0	2	0	0
Wireless Network Modules	0	0	0	0	0
AirCon Control *	0	0	0	0	0

NOTES: 1) Only Users with names have Expiry dates in the 32k Memory configurations.
2) * Only available in Access 4000.

128k (1MBit) Memory Configurations. V3.5 & V4

V3.5 / V4 128k (1MBit)	Standard	Access	Enlarged	Special	Alarms
Users	2000	1000	1000	1000	1000
User Names	100	1000	100	1000	200
User Types	32	64	32	64	48
Card Only Users *	0	0	0	0	0
Areas	96	32	96	32	96
Doors	32	64	16	64	16
Lift Cars *	3	6	3	4	3
Site Codes	6	5	6	6	5
TimeZones	32	32	32	32	32
Holidays	16	16	16	16	16
Diaries	10	10	10	10	10
Review Memory	2000	2000	2000	2000	2000
Counters	8	8	16	8	8
Area Lists	96	32	96	32	96
Doors Lists	48	64	32	64	32
Siren Lists	32	16	32	16	32
Floor Lists *	24	48	24	48	24
Lift Car Lists *	6	12	6	8	6
Auxiliary Lists	32	32	32	32	32
Menu Groups	8	8	16	8	16
Access Groups	16	16	16	16	8
Process Groups	32	32	32	32	32
Interlock Groups *	16	32	12	32	8
Comms Tasks	6	6	6	6	8
Phone Numbers	8	8	8	8	12
DTMF Controls	16	16	16	16	16
Function Zones	32	16	32	16	32
Calculated Auxes	32	16	32	16	32
Home Auxiliaries	64	32	64	32	32
Home Zones	32	16	64	16	64
LCD Terminals	32	16	32	16	32
Expander 32Z	4	2	6	1	15
Expander 16Z	6	6	8	2	0
Reader Modules	16	32	8	8	8
Mini Expanders	5	4	10	16	4
Analogue Modules	2	4	4	4	4
Intelligent Readers	0	0	0	8	2
Wireless Network Modules	2	2	8	2	4
AirCon Control *	2	4	4	4	4

NOTES: 1) Only Users with names have Expiry dates in the 128k Memory configurations.]
2) * Only available in Access 4000.

512k (4MBit) Memory Configurations. V4

V4. 512k (4MBit)	Standard	Access	Enlarged	Special	Alarms
Users	4000	500	4000	4000	4000
User Names	4000	500	4000	2000	4000
User Types	128	250	250	250	250
Card Only Users *	0	24576	0	8192	0
Areas	250	128	128	128	200
Doors	128	240	176	176	128
Lift Cars *	16	16	16	16	16
Site Codes	16	16	32	16	32
TimeZones	64	64	64	64	96
Holidays	32	16	16	16	16
Diaries	16	32	32	32	16
Review Memory	6500	6500	6500	6500	6500
Counters	16	16	32	16	16
Area Lists	250	128	128	128	200
Doors Lists	128	240	240	240	128
Siren Lists	128	64	64	64	128
Floor Lists *	128	200	250	250	64
Lift Car Lists *	16	32	48	64	16
Auxiliary Lists	32	32	32	32	64
Menu Groups	32	32	32	32	64
Access Groups	32	32	32	32	32
Process Groups	128	64	64	64	64
Interlock Groups *	48	64	64	64	32
Comms Tasks	8	8	8	8	10
Phone Numbers	16	16	16	16	32
DTMF Controls	16	16	16	16	16
Function Zones	64	32	32	32	128
Calculated Auxes	64	32	64	32	64
Home Auxiliaries	128	128	128	128	128
Home Zones	64	32	128	32	128
C-Bus Auxiliaries	48	32	64	64	64
LCD Terminals	99	48	48	64	75
Expander 32Z	20	5	8	16	64
Expander 16Z	44	20	24	16	0
Reader Modules	64	75	64	48	48
Mini Expanders	24	10	16	16	16
Analogue Modules	8	8	8	8	8
Intelligent Readers	0	8	2	32	8
Wireless Network Modules	13	4	4	4	8
AirCon Control *	4	4	4	4	4

NOTES: 1) Only Users with names have Expiry dates.
2) * Only available in Access 4000.

V2 Upgrade Memory Configurations.

V4	32K (256kBit) V2 Std	32K (256kBit) V2 Access	128K (1MBit) V2 Std	128K (1MBit) V2 Access	512K (4MBit) V2 Std	512K (4MBit) V2 Access
Users	100	100	2000	1000	4000	500
User Names	100	100	100	1000	4000	500
User Types	16	16	32	64	128	250
Card Only Users *	0	0	0	0	0	24576
Areas	32	16	96	32	250	128
Doors	4	8	32	64	128	240
Lift Cars *	0	0	3	6	16	32
Site Codes	3	3	6	5	32	32
TimeZones	8	8	32	32	64	64
Holidays	8	8	16	16	16	16
Diaries	5	5	5	5	32	32
Review Memory	200	400	2000	2000	6500	6500
Counters	4	0	4	4	32	8
Area Lists	16	16	96	32	250	128
Doors Lists	8	16	48	64	128	240
Siren Lists	16	16	32	16	128	64
Floor Lists *	0	0	24	48	128	250
Lift Car Lists *	0	0	3	6	16	32
Auxiliary Lists	2	2	32	32	32	32
Menu Groups	16	16	16	16	64	64
Access Groups	16	16	32	32	64	64
Process Groups	16	16	32	32	128	64
Interlock Groups *	0	0	16	32	48	64
Comms Tasks	5	5	6	6	8	8
Phone Numbers	6	6	12	12	32	32
DTMF Controls	4	4	8	8	16	16
Function Zones	32	16	32	16	64	32
Calculated Auxes	16	16	32	16	64	32
Home Auxiliaries	8	8	64	32	128	128
Home Zones	16	8	16	16	64	32
C-Bus Auxiliaries	0	0	0	0	32	32
LCD Terminals	8	8	32	16	99	48
Expander 32Z	1	1	3	2	20	5
Expander 16Z	3	2	9	6	44	20
Reader Modules	2	4	16	32	64	99
Mini Expanders	1	0	5	4	24	10
Analogue Modules	0	0	2	2	4	4
Intelligent Readers	0	0	0	0	0	0
W'less Netw Mod	0	0	2	2	13	4
AirCon Control *	0	0	2	4	4	4

IMPORTANT NOTES:

- 1) Only intended to be used if the V2 Memory configuration must be preserved when upgrading Control Module firmware from V2 to V4 or later.
- 2) * Only available in Access 4000.