Title:

Core Requirements for RC3600 Data Entry Release 2.0

A/S REGNECENTRALEN

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Abstract:

This manual gives directions in calculating core requirements for RC3600 Data Entry Release 2.

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1. INTRODUCTION. 1

This manual gives directions in calculating core requirements for RC3600 Data Entry Release 2.0.

Logically, the core requirements can be divided into two,

a) requirements during work on the key stations.
b) requirements, independent of the work, socalled permanent requirements.

Working requirements are the same no matter on which configuration the system is working, whereas permanent requirements depend on the configurations only.

Section 2 deals with the working areas, depending on the modes of the key stations.

Section 3 describes the permanent requirements in single processor configurations, memory sizes: 64, 96 and 128 KB.

Section 4 describes the permanent requirements in processor expansion (dual processor) configurations, memory sizes: 64+64, 64+96 and 64+128 KB.

1.1 Notes. 1.1

All configurations given in section 3 and 4 are minimum configurations, which means that additional hardware and software must be handled separately.
Even when the operator device (i.e. TTY) is used as system printer, a printer driver is needed.
Key stations mentioned as standard are RC480, RC825, RC827, or RC828.

2. CORE REQUIREMENTS DEPENDING ON THE MODE OF THE STATIONS. 2.

When a key station is idle, it does not require any core area. A key station is idle, if it is in stopped or login mode, or if no supervisor program is running/ waiting.

2.1. Key, Rekey, or Edit Modes. 2.1.

Each key station requires

- one register record area
- one or two data records area(s)
  (one if keying, two if rekeying or editing)
- one stack for temporary variables, pointers etc.
- one format program.
- one image program, if desired.

The size of register and data record areas can be calculated as described in Format Language Guide, appendix II. As data records can be defined of different sized (subformat depended) the system reserves space for the largest data record within the format in question.

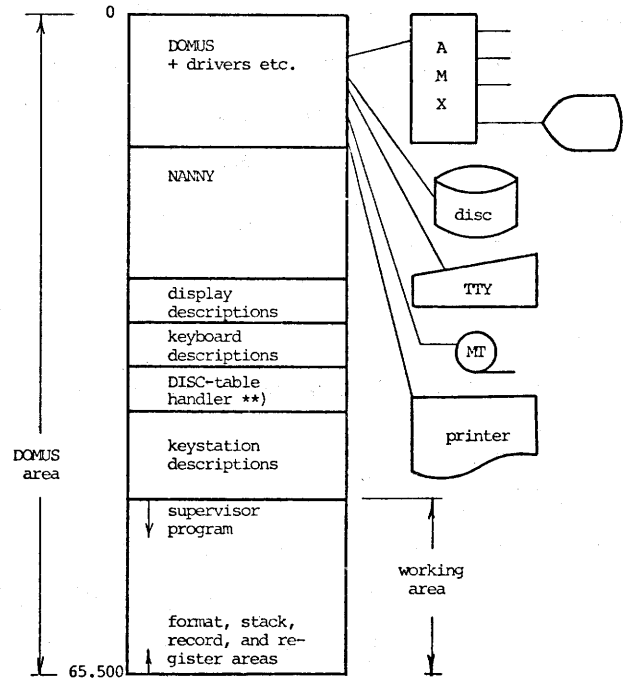
As a standard, stack areas take 50 bytes, but if NANNY is loaded with STACK-parameter this size can be changed. Usually when DISC-tables are used the stack area must be greater.

The supervisor program TRANSLATE informs about the sizes of the translated format and possible image. You may calculate the sizes in advance (see, Format Language Guide, appendix I). If a format is used on more than one key station, it is only loaded once. An image connected to a format is loaded if at least one key station requires it; but it is not transferred to core, if no key station demands it.

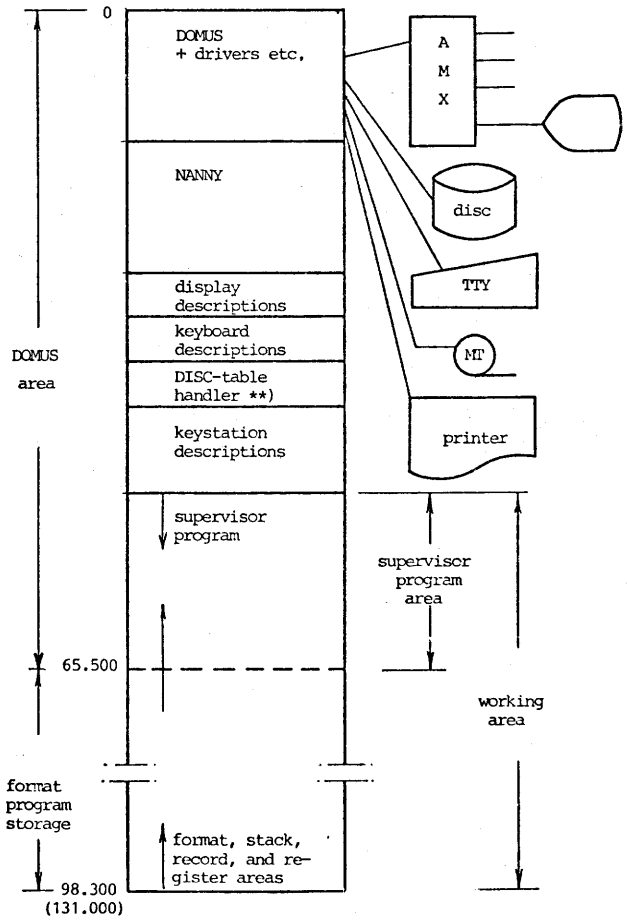
All areas are reserved in the cpu where NANNY is situated.

3. SINGLE PROCESSOR. 3.

Configuration I, with 64 KB memory:



Configuration II, with core expansion 96 or 128 KB memory:



**) may be absent.

3.1 Example with 8 Key Stations. 3.1

6 RC825 + 2 RC828 connected via AMX,
DISC-tables are used, max. 3 active simultaneously,
stack size is 100 bytes (non-standard).

fixed part:		
operating system, drivers etc.	19.700 B	
NANNY	21.300 B	41.000 B
variable part:		
RC825 descriptions	850 B	
RC828 descriptions	850 B	
5-8 key stations (area p. + AMX)	4.700 B	
8 key station descriptions	3.600 B	
DISC-table handler	600 B	
3 area processes for DISC-tables	480 B	11.080 B
working area within DOMUS area		13.420 B
		65.500 B

3.2 Example with 16 Key Stations. 3.2

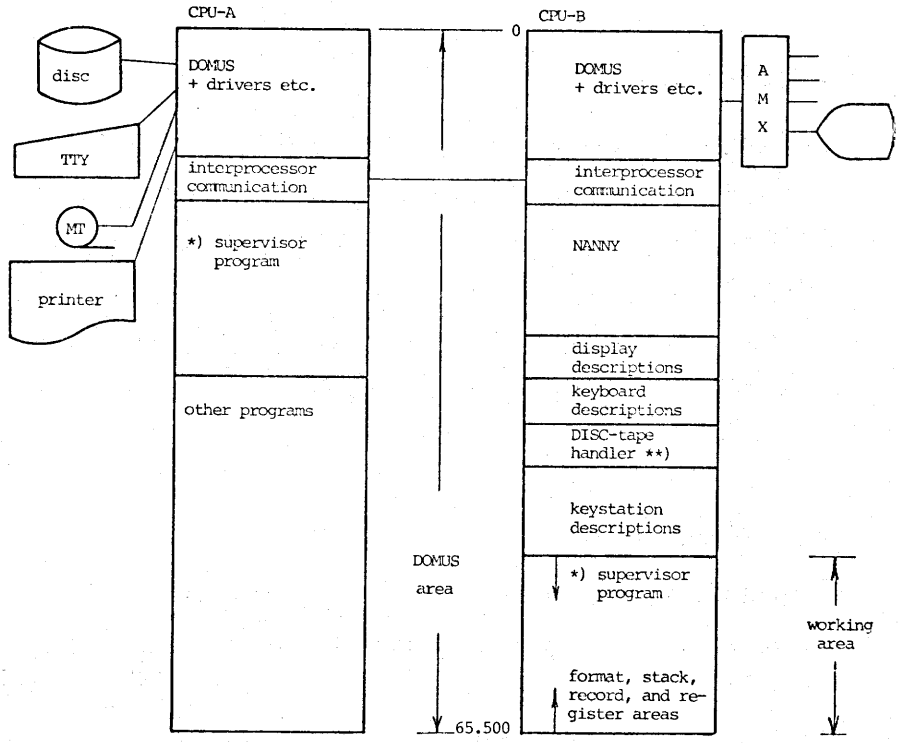
16 RC828 connected via AMX,
DISC-tables not used,
standard stack size.

fixed part:		
operating system, drivers etc.	19.700 B	
NANNY	21.300 B	41.000 B
variable part:		
RC828 descriptions	850 B	
13-16 key stations (area p. + AMX)	7.800 B	
16 key station descriptions	7.200 B	15.850 B
working area within DOMUS area		8.650 B
		65.500 B

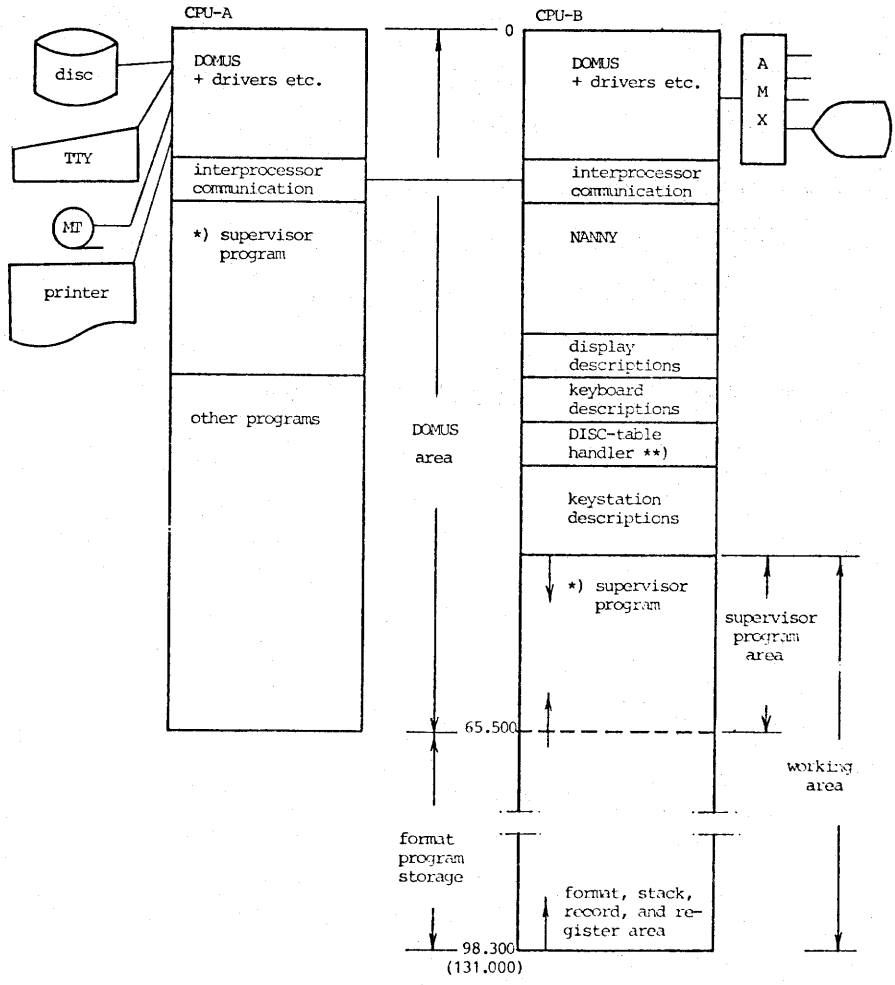
Configuration I is not recommendable as standard supervisor programs can not be executed simultaneously with working on the other key stations.

4. PROCESSOR EXPANSION.

Configuration I, with 2*64 KB memory:



Configuration II, with core expansion 64 KB + 96 or 128 KB memory:



*) supervisor programs can be executed in CPU-A or CPU-B.
**) may be absent.

Requirements in CPU-B: 4.

- fixed part:
  - RC3600 DOMUS system, incl. drivers (FPAR, FPAX), coroutine monitor, TIME, core dump, and supervisor look up (if supervisor programs are executed in CPU-B) 16.000 B
  - Data Entry Master Program NANNY 21.300 B

- variable part:
  - for each type of standard key stations:
    display description 250 B
    keyboard description 600 B
  - multiplexer for RC3682(AMX)* depending on number of key stations:
    1-8 key stations 2.200 B*
    9-16 key stations 2.800 B*
    17-24 key stations 3.300 B*
    *if RC3683 multiplexer (TMX) is used add 900 B
  - per key station (description) 450 B
  - if DISC-tables are used:
    - DISC-handler 600 B

With a configuration simular to I, it is not recommend- 4.1
able to execute supervisor programs in CPU-B, because usually a working area of 14.450 B - 8.000 B = 6.450 B is not sufficient for format, records etc. for 17 key stations. So supervisor programs must be loaded in the free DOMUS area in CPU-A:

free DOMUS area	26.590 B
standard supervisor program	8.000 B
available for other programs	18.590 B

The use of working area in CPU-B is equal to that given in 3.1 except the size (14.450 B versus 13.420 B) and the fact that no supervisor program is executed in the area.