SIEMENS

SIMADYN D

Hardware

Manual

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4 Coupling memory module

Kapitelüberschrift

4.1 Coupling memory modules MM11, MM3, MM4 4-2

4.1 Coupling memory modules MM11, MM3, MM4

Order No.

MM11: 6DD1611-0AD0

MM3: 6DD1611-0AF0

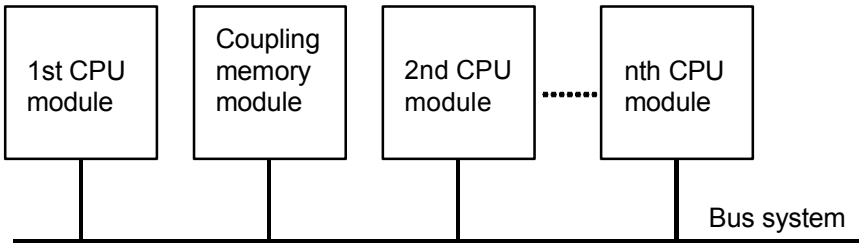
MM4: 6DD1611-0AG0

Application

A coupling memory module has a data memory (RAM), which is used to transfer data via the CPU modules. A coupling memory module must always be used if there is more than one CPU module in a subrack, and if the CPU modules wish to transfer data within the module. For instance, using configured „$ connections“, „coupling memory module coupling“ or if several CPU modules access a CS7 serial interface.

Slot

A coupling memory module can be inserted at any slot between the first and second CPU module.



Features

	MM11	MM3	MM4
Bus connection	L bus, C bus	L bus, C bus	L bus, C bus
Memory size	2 * 64 Kbytes	2 * 64 Kbytes	2 * 2 Mbytes
Other functions		• System error-relay; • Radio clock	System error-relay;

- Data is buffered against power failure using a back-up battery (3.4 V) in the subrack
- Integrated bus termination for the C bus and L bus

4.1.1 Real-time clock in the MM3 coupling memory module

The MM3 coupling memory module includes, in addition to the buffer function, also a real-time clock, which can be set and synchronized via a

- DCF-77 radio signal

An additional dual port RAM connected to the **L bus** provides the clock time to other functions in the CPU modules (e. g. message system). To realize this, the MM3 must be configured as real-time source on the 1st CPU module with function block RTCM.

Data back-up

The clock time (time of day) is buffered by the subrack back-up battery.

MM3 + MM4

An MM3 can be inserted, **together with an MM4** in a SIMADYN D subrack to use the large MM4 memory, and to utilize the buffered real-time clock of the MM3. In this case, the MM3 can be inserted at any subrack slot. The MM3 memory is not used.

Front panel elements

- 10-digit, 7-segment displays H1 - H10 for seconds, minutes, hours, months, days located under one another in pairs (from top to bottom)
- 2 keys to manually set the clock
- 4 LEDs for status displays
- Screw/plug-in terminal (X5) for **system error signal relay**:
  When a CPU module identifies a fatal error, normal operation is aborted; the subrack goes into the STOP condition,
  the relay opens when an error occurs
- Screw/plug-in terminal (X6) is prepared for IRIG-B audio signal;
  this functionality has still not been implemented!
- BNC socket (X7) for DCF-77 antenna connection
- 1 double test socket for the reset signal (X10/X11) to reset the module (caution: This must only be used for test purposes!)

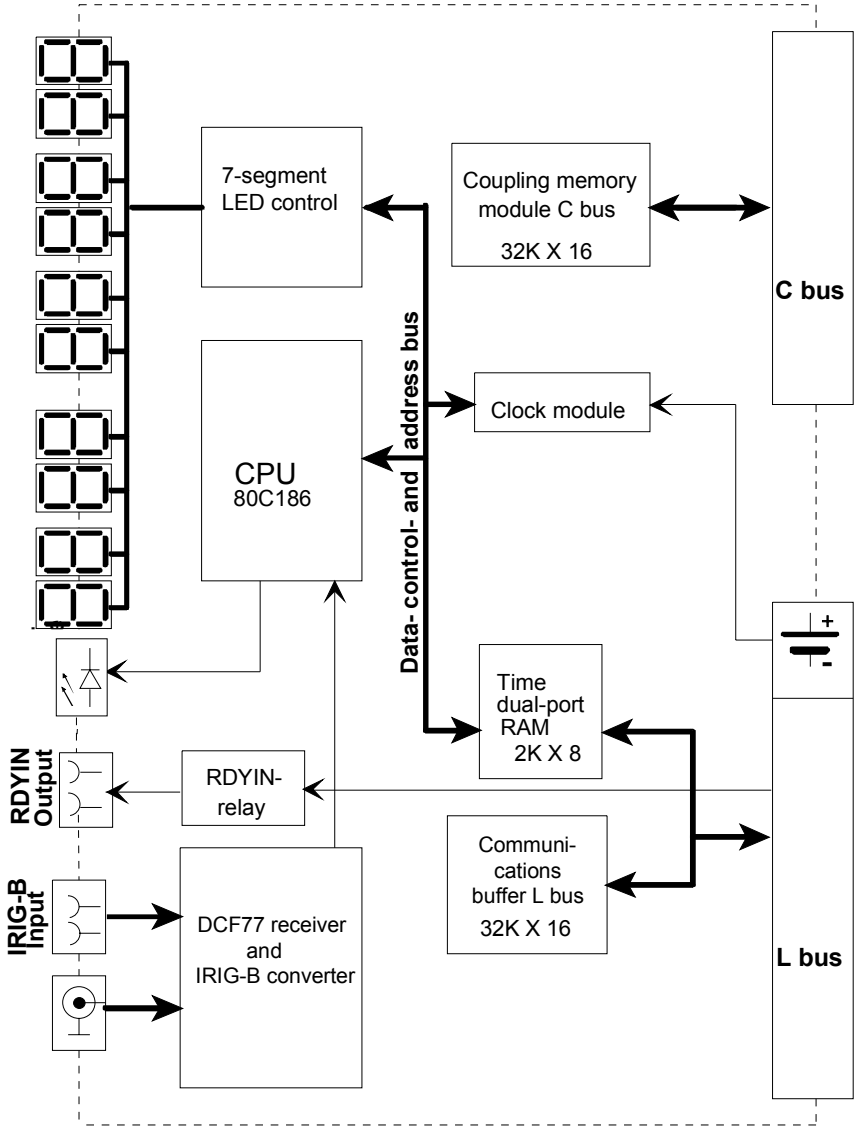


Fig. 4-1 MM3 block diagram

Note: Led H1 (seconds) is located at the top, H10 (days) at the bottom!

Radio clock DCF-77

The time is synchronized (time of day setting) via antenna using the **DCF-77 radio signal**. This signal can be received in Central Europe.

A differentiation is made between the following antennas:

- antenna for inside installation
- antenna for outside installation

The antenna must be aligned so that optimum reception is guaranteed. Generally, this is towards Frankfurt/Main, where the signal transmitter is located. The BNC socket X7 at the front panel is used to connect the antenna.