Errata 3

Manual: 24977

Manual Index: 02

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1. Reference: Page 1 - 5, Chapter 1.3.1, Text

The referenced information is revised as follows.

The paragraph:

Standard memory configurations of up to 256 MB of SDRAM are available. Flash memory for integrating the initial bootloader and ROMable operating systems are provided . Additionally, NVSRAM and Disk On Chip (by M-Systems) can be placed on two DIL sockets for memory expansion purposes.

is changed to read:

Standard memory configurations of up to 256 MB of SDRAM are available. Flash memory for integrating the initial bootloader and ROMable operating systems are provided. Additionally, NVSRAM, M-Systems' DiskOnChip (obsolete) and Kontron's IDE NANDrive™ DIP modules can be placed on two DIL sockets for memory expansion purposes.

2. Reference: Page 1 - 6, Chapter 1.3.1, Text

The referenced information is revised as follows.

The text:

- memory expansion sockets for Flash memory, M-Systems' DiskOnChip, NVSRAM, or EPROM

is changed to read:

- memory expansion sockets for Flash memory, M-Systems' DiskOnChip (obsolete), Kontron's IDE NANDrive™ DIP module, NVSRAM, or EPROM

3. Reference: Page 1 - 12, Chapter 1.7, Table 1-2

The referenced information is revised as follows.

The table row:

Flash Disk	DiskOnChip from M-Systems (refer to current data sheet of M-Systems for types available)

is changed to read:

Flash Disk	• DiskOnChip from M-Systems (obsolete) • IDE NANDrive™ DIP module (128 MB) from Kontron

4. Reference: Page 2 - 5, Chapter 2.2.4

The referenced information is revised as follows.

The section:

2.2.4 Memory Expansion Sockets (DIL600)

The CP321 provides two, 32-pin DIL sockets on which to place Flash, SRAM, non-volatile SRAM, or other DIL600 devices on the board. Access to this memory is controlled by the on-board logic.

The following devices may be added to the CP321 via the 32-pin DIL600 socket:

- standard EPROM devices;
- standard Flash memory of up to 512 kB (e.g. the AMD29F010 and AMD29F040);
- the NV SRAM from Dallas Semiconductor;

These devices are available in the temperature range -40°C to +85°C for the industrial environment and guarantee a minimum data retention of 10 years (e.g. DS1250Y-100).

In addition, as an option, socket 2 also comes with 36 pins. This can be done to provide the possibility of using 1 MB and 2 MB NVSRAM from Dallas Semiconductor (DS1265/70). These devices can then be accessed in pages of 512 kB.

- DiskOnChip 2000 Flash memory.

  This type of Flash memory from M-Systems comes in versions with two different height profiles: low profile or high profile. The low profile modules can be used with all variants of the CP321 with their options. The high profile modules can only be used in conjunction with the CP320-IO1. If the CP320-TR1/TR2 is also installed with the CP320-IO1, then only one module can be installed and only on socket 2.

  Refer to the current M-Systems data sheets for types available.

To prevent these devices from dislodging from their sockets due to shock or vibration it is possible to secure them using a wire strap.

is changed to read:

2.2.4 Memory Expansion Sockets (DIL600)

The CP321 provides two, 32-pin DIL sockets on which to place Flash, SRAM, non-volatile SRAM, or other DIL600 devices on the board. Access to this memory is controlled by the on-board logic.

The following devices may be added to the CP321 via the 32-pin DIL600 socket:

- standard EPROM devices;
- standard Flash memory of up to 512 kB (e.g. the AMD29F010 and AMD29F040);
- the NV SRAM from Dallas Semiconductor;

  These devices are available in the temperature range -40°C to +85°C for the industrial environment and guarantee a minimum data retention of 10 years.

  In addition, as an option, socket 2 also comes with 36 pins. This can be done to provide the possibility of using 1 MB and 2 MB NVSRAM from Dallas Semiconductor (DS1265/70). These devices can then be accessed in pages of 512 kB.

- DiskOnChip 2000 Flash memory (obsolete)

  This type of Flash memory from M-Systems comes in versions with two different height profiles: low profile or high profile. The low profile modules can be used with all variants of the CP321 with their options. The high profile modules can only be used in conjunction with the CP320-IO1. If the CP320-TR1/TR2 is also installed with the CP320-IO1, then only one module can be installed and only on socket 2.

- Kontron's IDE NANDrive™ DIP module (128 MB)

To prevent these devices from dislodging from their sockets due to shock or vibration it is possible to secure them using a wire strap.

5. Reference: Page 2 - 14, Chapter 2.3.6, Text

The referenced information is revised as follows.

The text:

Two, 32-pin DIL600 sockets are provided for the addition of various types memory expansion devices with access times of less than 150ns.

The devices which have been tested and approved for these connectors are as follows:

- DIL type Flash memory (up to 512 kB)
- DIL SRAM (up to 512 kB) e.g. Samsung KM684000BLP-7
- NVSRAM (up to 512 kB) e.g. DALLAS DS1250Y-100)
- EPROM (up to 512 kB) e.g. 27C040
- M-Systems DiskOnChip 2000

Optionally, Socket 2 can be expanded to 36 pins to allow the use of 1 MB or 2 MB NVSRAM from Dallas Semiconductor (DS1265/70)

is changed to read:

Two, 32-pin DIL600 sockets are provided for the addition of various types of memory expansion devices with access times of less than 150ns.

The devices which have been tested and approved for these connectors are as follows:

- DIL type Flash memory (up to 512 kB)
- DIL SRAM (up to 512 kB) e.g. Samsung KM684000BLP-7
- NVSRAM (up to 512 kB) e.g. DALLAS DS1250Y-100)
- EPROM (up to 512 kB) e.g. 27C040
- M-Systems DiskOnChip 2000 (obsolete)
- Kontron’s IDE NANDrive™ DIP module (128 MB)

If socket 2 is implemented as a 36-pin DIL600 socket, a 1 MB or 2 MB NVSRAM from Dallas Semiconductor (DS1265/70) can be placed on it.

6. Reference: Page 2 - 15, Chapter 2.3.6, Table 2-8

The referenced information is revised as follows.

The table:

Table 2-8: DIL 32 Pinout for Various Devices

Pin	4M-bit Flash	Disk OnChip	NV SRAM	4M-bit Eprom		4M-bit Eprom	NV SRAM	Disk OnChip	4M-bit Flash	Pin
1	A18	N/C	A18	VPP		VCC	VCC	VCC	VCC	32
2	A16	N/C	A16	A16		A18	A15	WE_	WE	31
3	A15	N/C	A14	A15		A17	A17	N/C	A17	30
4	A12	A12	A12	A12		A14	WE	N/C	A14	29
5	A7	A7	A7	A7		A13	A13	N/C	A13	28
6	A6	A6	A6	A6		A8	A8	A8	A8	27
7	A5	A5	A5	A5		A9	A9	A9	A9	26
8	A4	A4	A4	A4		A11	A11	A11	A11	25
9	A3	A3	A3	A3		OE_	OE_	OE_	OE_	24
10	A2	A2	A2	A2		A10	A10	A10	A10	23
11	A1	A1	A1	A1		CE_	CE_	CE_	CE_	22
12	A0	A0	A0	A0		D7	D7	D7	D7	21
13	D0	D0	D0	D0		D6	D6	D6	D6	20
14	D1	D1	D1	D1		D5	D5	D5	D5	19
15	D2	D2	D2	D2		D4	D4	D4	D4	18
16	GND	GND	GND	GND		D3	D3	D3	D3	17

is changed to read:

Table 2-8: DIL 32 Pinout for Various Devices

Pin	4M-bit Flash	Disk OnChip	NV SRAM	4M-bit Eprom	NANDrive	NANDrive	4M-bit Eprom	NV SRAM	Disk OnChip	4M-bit Flash	Pin
1	A18	N/C	A18	VPP	A18	VCC	VCC	VCC	VCC	VCC	32
2	A16	N/C	A16	A16	NC	WE_	A18	A15	WE_	WE	31
3	A15	N/C	A14	A15	NC	NC	A17	A17	N/C	A17	30
4	A12	A12	A12	A12	NC	NC	A14	WE	N/C	A14	29
5	A7	A7	A7	A7	NC	NC	A13	A13	N/C	A13	28
6	A6	A6	A6	A6	NC	NC	A8	A8	A8	A8	27
7	A5	A5	A5	A5	NC	NC	A9	A9	A9	A9	26
8	A4	A4	A4	A4	NC	NC	A11	A11	A11	A11	25
9	A3	A3	A3	A3	A3	OE_	OE_	OE_	OE_	OE_	24
10	A2	A2	A2	A2	A2	NC	A10	A10	A10	A10	23
11	A1	A1	A1	A1	A1	CE_	CE_	CE_	CE_	CE_	22
12	A0	A0	A0	A0	A0	D7	D7	D7	D7	D7	21
13	D0	D0	D0	D0	D0	D6	D6	D6	D6	D6	20
14	D1	D1	D1	D1	D1	D5	D5	D5	D5	D5	19
15	D2	D2	D2	D2	D2	D4	D4	D4	D4	D4	18
16	GND	GND	GND	GND	GND	D3	D3	D3	D3	D3	17

7. Reference: Page 4 - 4, Chapter 4.1.3

The referenced information is revised as follows.

The section:

4.1.3 Resistor Settings for Non-standard Socket Devices

The default pinouts of sockets 1 and 2 are designed for use with standard DIL Flashes and M-Systems DiskOnChip. However, in order to accommodate the various possible devices it is necessary to install resistors as jumpers to configure the board for proper operation.

Table 4-2: Resistor Settings for Socket 1

USED SOCKET DEVICE	R42	R40	R63	R57	R38	R68	R69
Flash / DiskOnChip (default)	Open	Open	Open	Set	Set	Open	Set
NVSRAM	Open	Open	Set	Open	Set	Set	Open
4 Mbit EPROM	Set	Set	Open	Open	Open	Open	Set

Table 4-3: Resistor Settings for Socket 2

USED SOCKET DEVICE	R26	R28	R25	R22	R24	R27	R29
Flash / DiskOnChip (default)	Open	Open	Open	Set	Set	Open	Set
NVSRAM	Open	Open	Set	Open	Set	Set	Open
4 Mbit EPROM	Set	Set	Open	Open	Open	Open	Set



Note...

All resistors are 0 ohm.

is changed to read:

4.1.3 Resistor Settings for Non-standard Socket Devices

The default pinouts of sockets 1 and 2 are designed for use with standard DIL Flashes, M-Systems' DiskOnChip (obsolete), and Kontron's IDE NANDrive™ DIP module. However, in order to accommodate the various possible devices it is necessary to install resistors as jumpers to configure the board for proper operation.

Table 4-2: Resistor Settings for Socket 1

USED SOCKET DEVICE	R42	R40	R63	R57	R38	R68	R69
Flash / DiskOnChip (obsolete) / IDE NANDrive™ DIP module (default)	Open	Open	Open	Set	Set	Open	Set
NVSRAM	Open	Open	Set	Open	Set	Set	Open
4 Mbit EPROM	Set	Set	Open	Open	Open	Open	Set

Table 4-3: Resistor Settings for Socket 2

USED SOCKET DEVICE	R26	R28	R25	R22	R24	R27	R29
Flash / DiskOnChip (obsolete) / IDE NANDrive™ DIP module (default)	Open	Open	Open	Set	Set	Open	Set
NVSRAM	Open	Open	Set	Open	Set	Set	Open
4 Mbit EPROM	Set	Set	Open	Open	Open	Open	Set



Note...

All resistors are 0 ohm.

8. Reference: Page 4 - 6, Chapter 4.2, Text

The referenced information is revised as follows.

The text:



Note...

Write access to the upper area addresses is only possible using byte-wide write commands.

is changed to read:



Note...

- Write access to the upper area addresses is only possible using byte-wide write commands.
- When the memory expansion socket is used for NVSRAM, byte 0xFFF0 0000 (J1 installed) or byte 0xFFF8 0000 (J1 removed) is reserved for the output of post codes to the CP321-Post. Data should not be stored at either of these locations.