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Elan Digital Systems Ltd.

TECHNICAL BULLETIN NO.44

GENERAL

- Please read this bulletin carefully and completely.
- We have many new important announcements and prices to give to you.

GENERIC ARRAY LOGIC

A recent publication by Nortronic DTV (a UK distributor for NS) included a list of bipolar PAL devices which have direct GAL equivalents. Since we support most of the NS (National Semiconductor) GALs on our 5-145, you may be able to use this list to help convert customers from bipolar devices to GALs and in that way you can sell them our programmer. Remember that the NS GALs are identical with Lattice and SGS Thomson.

We also have a piece of software (on 5 1/4 or 3 1/2 disk) written by National Semiconductor called PLAN 2, this software can be copied and released to customers free of charge. PLAN 2 allows you to convert PAL JEDEC files to their respective GAL JEDEC files. If anyone would like a copy of this software please contact Pat White at Elan.

NOTE:- 7ns GAL's are now available. These parts can now directly compete with the fast bipolar parts. Also GAL prices have been dropping, so that with their lower power consumption they are more advantageous to use than the bipolar equivalents.

Some devices which we had planned to support on our -145 ZIFPAC have been delayed to allow some other higher priority work to be done. We apologise for this delay but believe that we will be able to include the most popular devices by the end of this year. In the meantime you will note that we have introduced some other support earlier than planned. We would like to suggest that, before you turn

customers away, you try to find an alternative equivalent device which we do already cover for the customer to use. We can help you with this. Please FAX or telephone.

NEC SUPPORT

We have given you a long list of adapters to use with our low cost N75P Programmer (for the NEC 75P 4-bit OTP micros and 77P speech chips). The following adapters are now normally available from stock :

N1 uPD77P56G
N3 uPD75P56CS
N5 uPD75P008CU
N7 uPD75P108CW
N8 uPD75P108G
N9 uPD75P116CW
N10 uPD75P116GF
N11 uPD75P216ACW
N12 uPD75P308GF
N14 uPD75P32GF
N15 uPD75P316GF
N17 uPD77P56CR
N18 uPD77P56G

All other NEC adapters will still have a minimum 6 week delivery. The Elan N75P Programmer is now listed in the new NEC European shortform catalogue offering support for NEC's range of 4 bit micros. Elan has the best support available (excluding NEC's own very expensive equipment). The alternative Japanese Promac programmer is also very expensive.

ELAN DISTRIBUTORS: you should meet with your local NEC sales offices and make them aware of our products and the very wide support we can offer their NEC customers. Once you have a customer using the low cost NEC programmer you will also have a potential customer for our EF-PER Series, so NEC can help you to sell.

INTEL APPROVALS

Intel have completed their Full Approvals of all the latest EPROMs and Flash devices on our complete EF-PER Series, including:

- EPROMs - D27C240, D27C040
- Flash - D28F010, N28F010, D28F020, N28F020

This now means that neither Data I/O nor Stag can offer better Approved coverage of Intel product than we can.

WE ARE STILL FIRST WITH INTEL.

EF-PER SERIES SUPPORT

LATEST RELEASE E5.01 (memory devices)

We have a provisional list of devices that are to be added in firmware release E5.01, this release is due at the beginning of October. It will also offer "save and restore" functions which are not lost when changing between firmware cartridges E5.01 and EP1.02. This is an added selling feature.

The following devices are already supported on E5.01 under other selections but are now going to have their own display selection:

INTEL 87C257
TOSHIBA 27128A
TOSHIBA 57256A
XICOR 28C256
ATMEL 28C16
MICROCHIP 28C16A
HITACHI HN462732

The following new devices will be added on E5.01 pending samples:

AMD 27C2048
AMD 28F512
AMD 28F010
NATIONAL 9817A
NATIONAL 27C128B
ATMEL 29C256
SIGNETICS 27HC641 with A102

WARNING - INTEL 27C011

A U.K. customer reported problems on programming these devices. Examination by Intel reveals a mask design fault. These

devices are very susceptible to U.V. light and must be covered by an opaque label immediately after erasure.

If this procedure is followed no programming problems should occur. There is no problem with our programmers.

LATEST RELEASE EP1.02 (PLD devices)

Devices added are:

AMD PALCE22V10			
AMD PALCE26V12			
ALTERA EP1800	A180 adapter required		
ALTERA EP1810	" " "		
INTEL 5C180	" " "		
TEXAS EP1810	" " "		

NOTE: Please warn customers who may be tempted to use competitors' programmers that AMD PALCE devices have undergone a series of die shrinks resulting in changes to programming voltages. The -145 supports the latest devices now (it automatically reads the device I.D.).

Our new A180 Adapter is now available for shipment. It can only be plugged into the 5-145, and is an active adapter which supports test vectors on the 68 pin EP1800 family devices as listed above.

We will also be releasing in October a new A116 Adapter for the Xilinx 1736 and 1765 Serial EPROM parts. This will allow 1 or 2 chips to be programmed together on a -145 ZIFPAC. Deliveries on new orders for this Adapter will start in November.

UNIVERSE 1000 SUPPORT

We can confirm that we are still actively supporting 3 Universe Stacks: L-Stack, P-Stack and G-Stack. You can confidently continue to sell these products in single or multiple stacks, such as the 1011, 1012, 1013, 1122, 1123 etc. Since the L-Stack and P-Stack cover bipolar parts, for which there are now very few new devices being introduced, you will find that our coverage is extremely good and complements our EF-PER Series.

P-STACK NOW COVERS 40pin EPROMS

Elan's new A111 Adapter may be used in the 32pin socket of the Model 1012 (P-Stack) to automatically program 1 Meg 40pin 16 bit parts using existing 1/2 size 8 bit algorithms. Only the Texas parts are excluded.

Also the new A115 Adapter may be used in the 32pin socket to program some 2 and 4 Meg 40pin parts, but delivery on this is currently 8 weeks minimum.

These extra adapters should open up new opportunities for you to sell the P-Stack.

G-STACK EXPANSION

The G-Stack can now offer support for the 32 pin 2 and 4 megabit devices.

Devices in G3.35 are:

INTEL 27C020
INTEL 27C040
AMD 27C020
TOSHIBA 57C4000D

In addition to this you can use the A111 Adapter to program the 16 bit 40 pin devices in a single socket. These are too wide to be used in a row for gang, and the cost would also be more expensive than buying a 4-940 or a 5-940.

SOCKET CONVERTERS

Elan U.K. has been able to sell our A86 Socket Converter to DATA I/O customers because DATA I/O does not provide support for 32 pin PLCC EPROMS. Support from Data I/O is not promised until next year.

The A111 Adapter for 1 Meg 16 bit 40 pin EPROMs may also be used with our other 32 pin programmers such as the 5-132 and 3-132. Though we don't recommend it, you could also put the A111 on top of an A32 Adapter to extend the capability of the C41, E12C and E9C. It would really be better, and be more secure, for your customers to buy a new 3-142, 5-142 or 5-940 for the full range of 40 pin EPROMs. The list of parts covered by the A111 Adapter with existing firmware are:

AMD 27C1024
Catalyst 27C210
Hitachi 27C1024
Intel 27C210
Intel 27210