

Here is the pinout of the IIE auxiliary slot, transcribed from the 1985 edition of the IIE Technical Reference, sorted into numeric order.

Note that the diagram in the IIE Technical Reference has the pin numbering laid out in an arbitrary order, grouping pins by function rather than in strict numeric order. I assume that the physical pin numbering is in the same order as for the standard slots.

1	3.58M
2	VID7M
3	SYNC'
4	PRAS'
5	VC
6	C07X'
7	WNDW'
8	SEGA
9	RA7
10	RA1
11	ROMEN1
12	ROMEN2
13	RA4
14	RA5
15	VID7
16	MD7
17	MD6
18	VID6
19	VID5
20	MD5
21	MD4
22	VID4
23	PHI0
24	CLRGAT'
25	80VID'
26	EN80'
27	ALTVID'
28	SEROUT'
29	ENVID'
30	+5V
31	GND
32	14M
33	PCAS'
34	LDPS'
35	R/W80
36	PHI1
37	CASEN'
38	VID3
39	MD3
40	MD2
41	VID2
42	VID1
43	MD1
44	MD0
45	VID0
46	RA6
47	H0

48	RA3
49	RA2
50	AN3
51	RA0
52	R/W'
53	Q3
54	SEGB
55	FRCTXT'
56	RA9'
57	RA10'
58	GR
59	7M
60	ENTMG'

Here is a brief description of the function of each group of pins. If you need much more information than this, you will have to get hold of a IIE Technical Reference, or "Understanding the Apple IIE" by Jim Sather. I have omitted the signal loading details. (Most signals can drive two LSTTL loads on the card in the auxiliary slot.)

3.58M is the video colour reference signal.

PHI0, 14M, PHI1, Q3 and 7M are the standard system timing signals.

VID7M clocks video dots out of the 74166 parallel to serial shift register.

SYNC' is the video horizontal and vertical sync signal.

PRAS' and PCAS' are the multiplexed RAM row and column address strobes.

VC is the third low-order vertical counter bit.

C07X' is the reset signal for the hand controllers (paddles).

WNDW' is the video non-blank window.

SEGA is the first low-order vertical counter bit

RA0-RA7 is the multiplexed RAM address bus.

ROMEN1 and ROMEN2 are the enable signals for motherboard ROMs.

MD0-MD7 is the internal (unbuffered) data bus.

VID0-VID7 is the video data bus.

CLRGAT' is the colour-burst gating signal.

80VID' enables 80-column display timing.

EN80' enables auxiliary RAM.

ALTVID' is the alternative video output to the video summing amplifier.

SEROUT' is the video serial output from the 74166 parallel-to-serial

shift register.

ENVID' is normally low; driving this line high disables the character generator such that the video dots from the shift register are all high (white), and alternative video can be sent out via ALTVID'.

+5V and GND are the usual supply rails.

LDPS' is the strobe to the video parallel-to-serial shift register. This signal goes low to load the contents of the video data bus into the shift register.

R/W80 is the read/write signal for RAM on the card in this slot.

CASEN' is the column address enable. This signal is disabled (held high) during accesses to memory on the card in this slot.

H0 is the low-order horizontal byte counter.

AN3 is the output of annunciator 3.

R/W' is the 65C02 read/write signal.

SEGB is the second low-order vertical counter bit.

FRCTXT' is normally high; pulling this line low enables 14 MHz video output even when GR is active.

RA9' and RA10' are character generator control signals from the IOU.

GR is the graphics mode enable signal.

ENTMG' is normally low; pulling this line high disables the master timing from the PAL device.