

## SMS Card connections/functionality

from Tim Coslet, as of July 1, 2004

Return to [Home page](#)

Type	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	REF	Etch	Layout	Symbol	Transistors	Function	IBM Description	Where Used	Where Used	Where Used	
	-	-	-	-	-	-	-	-	GND	-	+12V	-12V	M/+30V	-36V	+12V	-			II Fig. #			Power Bus		1620 Model I G	1620 Model II	1401	
ACY	-	-	-	-	-	-	O1	-	GND	-	-	-12V	-	-	-	-	370169	-	5	IS	036	600mA Current Source	Alloy-Current Source	-	-		
AFB	spare	R1	R2	R3	R4	R5	R6	spare	GND	spare	spare	spare	spare	spare	+12V	spare	371948	-	5	R	-	Hex Pullup +12V 34.3ohm 3W	Alloy-Resistor Card, 34.3ohm 3 Watt	-	-		
AFR	I1	O1	I5	-	I2	O2	I6	O6	GND	O4	O5	-	+12VM	I3	O3	I4	371943	493239	6	LD, DI	033	Hex Lamp Driver 15mA	CTRL Light Driver N Type	1620	-		
AHK	I2	I1	O3	I1	I3	I3	O1	I2	GND	O4	PDR	-12V	+12VM	O2	I4	I4	370322	492867	.	I, A, O	033	Quad 2 Input Open Collector NAND	CTRL-Inverter "N" 2 Way Extender	1620	N/A		
AHS	O2	-	O1	I1	-	I2	-	-	GND	-	-	-12V	+12VM	-	-	-	370336	-	6	DCM	042 071	Dual Magnet Driver 1.35A	Alloy Clutch Magnet Driver	-	-		
AHT	I1	I1	O1	I2	I2	I3	O3	O2	GND	-	RST	-12V	+12VM	I3	-	-	370337	-	6	DPM	026 083	Triple 2 Input Latched Magnet Driver 220mA	Alloy Punch Magnet Driver	-	-		
AHU	O3C	O3R	O1	I3	I2	-	-	O2C	GND	I2	I3	-12V	+12VM	I1	I1	O2R	370386	-	.	V	033	Triple 2 Input XNOR	CTRL PNP Exclusive "OR"	-	N/A		
ALY	-	-	I1	-	-	-	O1	-	GND	-	-	-	+30V	-	+12V	-	370552	493173	5	DP, IS	050	Gated 270mA Current Source	Alloy-Current Source	1620	-		
ARW	I1	I1	I1	I1	O1	I2	I2	I2	GND	O2	I2	-12V	+30V	-36V	-	-	372122	484803	6	SWD	083 086	Dual 4 Input Open Collector OR Buffer 270mA	Alloy-Switch,Decoder	1620	-		
ASJ	-	B	B	B	B	-	C	C	C	C	-	E	E	E	E	-	370841	-	shown	-	108	Power Transistor for Power Supply series regulator	6V and 12V Series Transistor	N/A	-		
ASN	-	-	-	-	N	N	-	-	-	-	P	P	-	-	-	-	370845	-	shown	-	-	3100uF Filter Capacitor w/ 2.4K Bleeder	6V and 12V Series Filter 3100 UF	N/A	-		
AXV																	372244	484995	.			030 278			1311	N/A	
AYE																	372298	399607	.			100 102			1311	N/A	
AYF																	372313	399635	.			026 028 033			1311	N/A	
AYG																	372314	399637	.			026 033 134			1311	N/A	
AYH																	372315	399639	.			033 044 083			1311	N/A	
AYJ																	372296	399603	.			026 033 083 084 086			1311	N/A	
AYQ	ICB	O1C	-	-	OCE	O2C	I1E	I2E	-	-	-	-12V	+12VM?	-36V	-	-	372309	399627	.			089 101	(Dual or Differential) Power Amplifier/Driver		1311	N/A	
AYU	E	O5	O4	O3	O2	O1	-	I3	GND	I1	I2	-12V	+12VM	-36V	I5	I4	372318	399643	.			029	Penta Driver		1311	N/A	
AYV	-	-	O-12R	O-36R	O+12MR	-	-	-	GND	-	-	-12V	+12VM	-36V	-	-	372319	399645	.			-	Triple Bypass Capacitor/"pullup" Resistor		1311	N/A	
AYX	O2	O2R	O3	I2	I1	-	-	O1	GND	I1	I2	-12V	+12VM	I3	I3	O1R	372388	399727	.			033 101	Double Open Collector 2 Input		1620	N/A	



DEV	O7	O5	I116	I216	O6	I317	I317	I417	GND	I116	I417	-12V	+12VM	I5	I5	I216	370214	484023	6	-	101	Dual 2/2 Input AND/OR, Single 2 Input NAND	SDTRL MUP	1620	-		
DEW	I1	O1	O6	O3	O4	O5	O2	I2	GND	I6	I	-12V	+12VM	I3	I4	I5	370211	484017	6	-	101 106	Penta 2 Input NAND w/ Common Input (L), Inverter	SDTRL MUP	1620	-		
DFA	*S2	Q1	*Q1	*Q2	Q2	Q2U	*S2	*R2	GND	*S1	*S1	-12V	+12VM	Q1U	*R1	*R1	370224	-	4	L	045	Dual Buffered RS Flip-Flop	SDTRL MUP Number 12	-	-		
DFB	I316	I316	*I4	O4	*I5	O5	O6	*I6	GND	I215	I215	-12V	+12VM	I114	I114	I114	370206	484009	6	-	101	Triple 2 Input AND w/ Not Input OR	SDTRL MUP	1620	-		
DFC	I1	I1	O3	O4	O2	O1	I	I3	GND	I2	I2	-12V	+12VM	I3	I4	I4	370205	484007	6	-	101	Quad 3 Input NAND w/ 1 Common Input (G)	SDTRL MUP	1620	-		
DFD	*Q1	*S1	Q2	*Q2	R1	R1	Q1	*R1	GND	*R2	*S2	-12V	+12VM	R2	R2	R2	370204	484005	6	AL	045/101	Dual RS Flip-Flop	SDTRL MUP Number 15	1620	-		
DFE	I2	I2	O1	I1	I1	I2	O2	I2	GND	I2	I2	-12V	+12VM	I3	I3	O3	370201	484003	.		101	Dual 2 Input NAND, Single 6 Input NAND		1620	N/A		
DFG	O1	O2	O3	I3	I3	I3	I3	I3	GND	I1	I1	-12V	+12VM	I2	I2	I3	370209	484015	.		101	Dual 2 Input NAND, 3/2 Input AND/OR		1620	N/A		
DFP	I314	I314	I314	O4C	I5	O4R	I114	I214	GND	O5	I114	-12V	+12VM	I214	I214	I114	370228	484047	6	-	IP	101 106	3/3 Input Open Collector AND/OR w/ Pulldown, Inverter	SDTRL MUP	1620	-	
DFR	O1	O2R	I1	I2	O2	O1R	O4R	I3	GND	+?V	O3	-12V	-	I4	O4	O3R	370226	484043	.		083	Quad Emitter Follower		1311	N/A		
DGA	O2	O1	O3	I2T	I3T	I3	GND	I4T	GND	I2	O4	-	+12VM	I1	I1T	I4	370242	484069	6	DT	101	Quad Open Collector NAND Line Receiver	Terminator Gated Without Loads	1620	-		
DGT																	370380	484027	.		102			1311	N/A		
DGV																	370378	484029	.		102			1311	N/A		
DGW																	370377	484029	.		102			1311	N/A		
DGX																	370376	484031	.		102			1311	N/A		
DHB																	370348	484123	.		102			1311	N/A		
DHC																	370372	484123	.		102			1311	N/A		
DHE	TC-0	I1	O1R	TC-0.3US	TC-3US	TC-30US	TC-C	TC-0.3MS	GND	I1	I1	-12V	+12VM	O1C	TC-3MS	TC-30MS	370262	484089	6	SS	033 101	Open Collector Programmable Falling Edge Triggered One Shot w/ Pulldown	SDTRL - Single Shot 0.15 Usec. to 65 Msec.	1311	-		
DHU																	372169	399591	.		102			1311	N/A		
FL	I1	I1	I1	I1	O1	I2	I2	I2	GND	O2	I2	-12V	+30V	-36V	-	-	371396	492949	.	SWD	083 086	Dual 4 Input Open Collector OR Buffer 270mA	Alloy-Switch,Decoder	1620	N/A		
FM	I11	I2	IO1	O2E	I1	-	-	-	GND	-	-	-12V	-	-36V	-	-	371397	492947	5	D	083 091/087	Gated 270mA Current Switch w/Emitter Follower	Alloy-Driver,Current	1620	-		
FP	R1A	R1B	R2A	R2B	R3A	R3B	R4A	R4B	-	-	-	-	-	-	-	-	371453	-	5	R	-	Quad Resistor 40.2ohm 2W	Alloy-Load Resistor	-	-		
FQ	-	-	I1	-	-	-	O1	-	GND	-	-	-	+30V	-	+12V	-	371454	493173	.	DP	050	Gated 270mA Current Source	Alloy-Current Source	1620	N/A		
GJ	-	-	-	-	-	-	-	-	GND	-C1	+C2	-C3	-	-	+C4	-C5	371501	491477	.		-	Penta Capacitor 10uf 20VDC		1311	N/A		

MH	O4	I3	O3R	O2	O3C	I4R	I1C	I4C	GND	I1R	O1C	-12V	+12VM	I2R	I2C	O1R	371487	492793	5	I, A, O	033	Quad Inverter	CTRL- Inverter, Power - PNP	1620	-	
MX	I2	I1	O3	I1	I3	I3	O1	I2	GND	O4	O2R	-12V	+12VM	O2C	I4	I4	371661	492867	5	E, A, O	033	Quad 2 Input Open Collector NAND	CTRL-Inverter "N" 2 Way Extender	1620	-	
NN	O1E	P2	P1	I1	-	PDR	-	-	GND	-	+12V	-12V	-	-	-	-	371678	492893	5	AM/R	033 083	100mV Gated Sense Amplifier	CTDL-Sense Amplifier,Buffer	1620	-	
NP	I1	I1	O1	I2	I2	I3	O3	O2	GND	-	-	-12V	+12VM	I3	-	-	371684	492905	5	DP	078	Triple 2 Input NAND SCR Relay Driver	CTRL-Driver,Relay Thyatron V.M.	1620	-	
PF	I1D	O1L	O2L	I1	I2	O1C	I2D	O2C	GND	-	+12V	-12V	-12VM?	-	-	-	371750	-	5	D	026 083	Dual Lamp/Relay Driver	CTRL-Drivers,VM,Light or Relay	-	-	
PG	O1	O1	-	I1	-	*O1	*O1	-	GND	-	-	-12V	+12VM	-	-	-	371777	-	5	SW	026 083	Balanced Driver	Control-Selector,Brake or Clutch	-	-	
PH	O1	I1	O2	I2	O4	O3	I4	I3	-	-	+12V	-12V	-	-	+12V	-	371778	-	2	AM	033 083	Quad Emitter Follower (Photodiode Amplifier)	CTRL-Emitter Followers,Low Current	-	-	
PJ	PD1	PD2	O1	O1	O2	O2	I1	I2	GND	-	-	-12V	+12VM	-	-	-	371779	-	5	D	028	Dual Open Collector Driver w/Pulldown Resistor	Control-Drivers,Brake and Clutch	-	-	
PK	O1	-	I1B	I1E	-	-	-	I1R	GND	-	-	-12V	+12VM	-	-	-	371780	-	2	AM	033 083	Latch w/Emitter Follower Input	Control-Lock Circuit-Photosense	-	-	
QU	C	POS	OUT	E	REF	EE	CC	ADJ	D1A	D1K	D2A	D2K	FILTER	-	-	-	-	-	-	-	?PNP	Voltage Regulator		-	N/A	
RE	VO1	VI1	J1	J1	spare	I1	-	O1	spare	-	-	-	-	spare	spare	spare	371699	492955	5	THER	-	Overtemperature Switch	Alloy-Thermoswitch N/C 122F	1620	-	
TAB	I4	I2	I3	O4	O2	O3	O1	I1	GND	-	-	-12V	+12VM	-	-	-	370066	-	.	DL	030	Quad Emitter Follower Line Driver	SDTRL 93ohm Coax Line Driver-Dispersed Loads	-	N/A	
TAF	-	-	O1R	O1	-	-	-	-	GND	-	-	-12V	+12VM	-	-	-	370365	492915	.	OSC	033 039/106	1MHz Crystal Oscillator	SDTRL-Oscillator, One MC	1620	N/A	
TAG	I2	I1	O3	I1	I3	I3	O1	I2	GND	O4	O2R	-12V	+12VM	O2C	I4	I4	370366	492867	5	E, A, O	039/101	Quad 2 Input NAND	SDTRL-2Way Inverter	1620	-	
TAH	I1	I1	O2C	O3	O1	I2	I2	I2	GND	I1	O2R	-12V	+12VM	I3	I3	I3	370367	492909	5	E, A, O	039/101	Triple 3 Input NAND	SDTRL-3 Way Inverter	1620	-	
TAJ	RG1	Q	*R	RP1	RG2	RP2	RR1	*S	GND	SG2	SP2	-12V	+12VM	*Q	SP1	SG1	370364	-	.	TB	039	AC Coupled RS Flip-Flop	SDTRL-Trigger, Binary	-	N/A	
TAK	O4	I3	O3R	O2	O3C	I4R	I1C/-	I4C/-	GND	I1R	O1C	-12V	+12VM	I2R	I2C/-	O1R	370368	-	.	I	039	Quad Inverter	SDTRL-Inverter, Power-PNP	-	N/A	
TAL	PDR	CAP	I1	O1	PDD	-	-	-	GND	-	-	-12V	+12VM	-	-	-	370370	492911	.	DSP	025/033 039/101/106	One Shot	SDTRL-Generator, Sample Pulse	1620	N/A	
TAR	O3	I1	I1	O2	I2	I2	-	-	GND	-	O1	-12V	+12VM	I3	I3	-	370105	-	5	V	101	Triple 2 Input XOR	SDTRL-Exclusive "OR"	N/A	-	
TAS	I1	I1	O1R	-	-	-	-	-	GND	I1	O1	-12V	+12VM	-	-	I1	370106	-	5	-	101	4 Input Open Collector Even Parity Checker	SDTRL-Exclusive "OR" (Pyramid)	N/A	-	
TBD	I1	O2A	O2B	OCB	I2	O1A	OCA	O1B	GND	IE	+12V	-12V	-	-	+12V	-	370171	-	7	SW	071 083	Dual ?	SDTRL-Alloy Switch	-	-	
TBN	I1R	I1C	-	TC-0	TC-C	TC-s	TC-f	TC-vs	GND	O1R	O1	-12V	+12VM	-	-	TC-m	370291	-	6	SS	101 033	Open Collector Programmable Falling Edge	SDTRL Single Shot Variable	N/A	-	



WF	I1	I1	I1	I1	O1	I2	I2	I2	GND	O2	I2	-12V	+30V	-36V	-	-	371789	-	.	SWD	083 086	Dual 4 Input Open Collector OR Buffer 270mA	Alloy-Switch,Decoder	-	N/A	
WG	II1	I2	IO1	O2E	I1	-	-	-	GND	-	-	-12V	-	-36V	-	-	371790	-	5	D	083 091	Gated 270mA Current Switch w/Emitter Follower	Alloy-Driver,Current	-	-	
WJ	II1D	II1R	O1	-	O2	-	I2R	I2D	GND	-	-	-12V	-	-	+12V	-	371881	493181	5	D	071 083	Dual 300mA 12V Driver	Alloy-Driver, 12V	1620	-	
WM	O1	-	O2	-	-	I1	-	I2	GND	-	-	-12V	-	-	+12V	-	371882	493183	7	AMP	033 083	Dual Open Collector Sense Amplifier	Alloy-Sense Amplifiers, Single Shot	1620	-	
WY	II+	-	II-	-	-	O1	-	*II	GND	-	-	-12V	-	-	+12V	-	371900	493199	7	AMP	015 033/129 065	Gated Open Collector Sense Amplifier	Alloy-Amplifier, Pre Sense No. 2	1620	-	
YAR	D1	D2	D3	D4	D5	D6	D7	D8	-	-	-	-	COMMON	-	-	-	370321	-	5	DIODE CARD	-	Octal Common Cathode Diode Package	CF Diode Card	-	-	
YGB	NEG	NEG	NEG	NEG	NEG	NEG	NEG	POS	POS	POS	POS	POS	POS	POS	-	BIAS	370576	484337	1	OV	026 086	Crowbar	Overvoltage Protection 12 Volt	1620	-	
YGC	NEG	NEG	NEG	NEG	NEG	NEG	NEG	POS	POS	POS	POS	POS	POS	POS	-	BIAS	370577	484339	1	OV	026 086	Crowbar	Overvoltage Protection 36 Volt	1620	-	
YGH	D1	D2	E	C	V	DCOMMON	-	IN	-	?	POS	R	-	-	NEG	-	370609	484335	6	AM	026 028 036/113	Voltage Regulator	36 Volt Diff Amplifier	1620	-	
YGJ	D1	D2	E	C	V	DCOMMON	-	IN	-	?	POS	R	-	-	NEG	-	370610	484335	6	AM	026 028 036/113	Voltage Regulator	12 Volt Diff Amplifier	1620	-	
YGK																	370611	-	.	AM	026 028 036	Voltage Regulator	20 Volt at 15 Amp Diff Amplifier	-	N/A	
YGN	E	COM12	RC	C	D1	D2	-	COM34	-	ZA	IN	D3	D4	RB	ZC	-	370614	484369	.	AM	026 028 036	Voltage Regulator	30 Volt Diff Amplifier	1620	N/A	
YGQ	C	COM12	E	DC	-	R	-	ZA	O	IN+	-	DA1	-	DA2	IN-	IN-	370616	-	N/A	-	026 028 036	Voltage Regulator	3 Volt Marginal Check Diff Amplifier	N/A	-	
YJA	spare	R1	R2	R3	R4	R5	R6	spare	GND	spare	spare	spare	spare	spare	+12V	spare	370788	492345	5	R	-	Hex Pullup +12V 40.2ohm 3W	Alloy-Resistor Card, 3 Watt [MARS Resistor Load Matrix]	1620	-	
YJB	spare	R1	R2	R3	R4	R5	R6	spare	GND	spare	spare	spare	spare	spare	+12V	spare	370789	492345	.	R	-	Hex Pullup +12V 17.2ohm 3W	Alloy-Resistor Card, 3 Watt	1620	N/A	
YKE	OE	O5	O4	O3	O2	O1	IE	I3	GND	I1	I2	-12V	+12VM	-36V	I5	I4	372317	399643	.		029	Penta Driver w/ common control		-	N/A	
YKF	II	II	II	II	II	II	II	II	GND	-	II	-12V	+12VM	-36V	II	O1	372306	399621	.		033 083	10 Input Open Collector OR		1311	N/A	
YKJ																	372304	399617	.		065 101 104			1311	N/A	
YNE																	372614	747261	.		033 101 102			1311	N/A	
YNS	O1C	O1R	IDA	ODC	O	ODA	IDC	IM	GND	-	-	-12V	+12VM	IP	-	-	372690	747551	.		033	Unknown Open Collector w/ pulldown (complex)		1311	N/A	
ZGT	OUT-	OUT-	-	-	X	X	SENSE-	SENSE+	-	-	-	OUT+	-	OUT+	BULK	BULK	372596	-	8	-	026 086 119	Voltage Regulator (Note: pins H & M may be swapped)	12V Power Supply Amplifier	N/A	-	
ZKV	II	T1	R1-2A	R1-1A	PD	R1-1AR	R1-1B	R1-2B	GND	-	-	-12V	-	CAP	DC	-	372687	-	6	O-SS/R	033 173 194	One Shot controlled Reed Relay (0.4 sec retriggerable)	ETM Delay Circuit	N/A	-	
	J1	J2	J3	J4	J4	J5	J6	J6	-	-	J5	-	-	J3	J2	J1	-	747175	.		-	Jumpers		1311	N/A	

*Last Updated on 7/1/2004*  
*By ed*