

c18/g18 and c18/g20 Pinout Comparison – rev 0.4

The tables on the following pages contain pin-to-pin comparison of different c18 interface connectors, and their g18 or g20 equivalents.

c18/g18 28 pin connector comparison

c18 Pin #	g18 pin #	c18 Signal Name * UART names are referenced to PC, as c18 is a DCE device.	g18 Signal name	c18 Signal Description
1	1	VCC	Vcc (3.0-6.0V)	4.0VDC nominal (3.6-4.5V)
2	2	VCC	Vcc (3.0-6.0V)	4.0V DC nominal (3.6-4.5V)
3	4	UIM_RESET	SIM CR RESET	UIM_RESET
4	3	UART2_RXD_UIM_DATA	SIM CR I/O DATA	UART2 RXD (from OEM to PC) or UIM DATA
5	6	UIM_CR_DET	SIM CR DET	UIM sense detection
6	5	UIM_PWR_PH (3V ONLY)	SIM CR Vcc (3/5V)	UIM_PWR / Power Hold (Power Status)
7	8	IGNITION	TurnOn/Standby (TS)	TS (Turn on/Stand by) or IGNITION
8	7	UART1_DTR	RS232 – DTR	5V tolerant
9	10	WAKE_UP	Wake up/ GPRS coverage indicator	
10	9	UART2_TXD	Man test	(from PC to OEM)
11	11	GND	GND	Power Ground
12	12	GND	GND	Power Ground
13	14	UART1_DCD	RS232 – DCD	
14	13	UART1_RI	RS232 – RI	
15	16	USB_D+	RXD UART2	USB D+ signal
16	15	USB_D-	TXD UART2	USB D- signal
17	18	AUDIO_OUT_ONOFF	Analog audio out and power on/off	Analog Audio_Out and on/off (600Ω Load impedance)
18	17	AGND	Analog Audio GND	Analog Audio GND
19	20	UART2_RTS	DSC – Enable	(from OEM to PC)
20	19	AUDIO_IN	Audio in	Analog Audio_In (Input impedance: >10kΩ)
21	22	GPS_ANT_PWR_28	DSC – Downlink	External Power for the Active GPS Antenna Serial 0 Ohm resistor for disconnection
22	21	UART1_DSR	RS232 – DSR	
23	24	UART2_CTS_UIM_CLK	SIM CR CLOCK	UART2 CTS or UIM_CLK
24	23	USB_VBUS_28	DSC – Uplink	5V nominal. Serial 0 Ohm resistor to disconnect USB_VBUS
25	26	UART1_RXD	RS232 – RXD	(from OEM to PC)
26	25	UART1_TXD	RS232 – TXD	5V tolerant (from PC to OEM)
27	28	UART1_RTS	RS232 – RTS	5V tolerant
28	27	UART1_CTS	RS232 – CTS	

Note: Odd/even pin number assignments are flipped between the c18 and the g18, but the physical locations are identical on the connector – see pin location drawings at the end of this document.

c18/g18 36 pin connector comparison

pin #	c18 Signal Names * UART names are referenced to PC, as c18 is a DCE device.	g18 Signal Names	c18 signal description
1	USB_VBUS	TX ENABLE	USB Power, 5.0V nominal
2	USB_D+	RXD UART2	USB D+ signal
3	USB_D-	TXD UART2	USB D- signal
4	UART1_TXD	RS232 - TXD	5V tolerant (from PC to OEM) input
5	UART1_RXD	RS232 - RXD	(from OEM to PC)
6	UART1_DTR	RS232 - DTR	5V tolerant input
7	UART1_DCD	RS232 - DCD	
8	UART1_RTS	RS232 - RTS	5V tolerant input
9	UART1_CTS	RS232 - CTS	
10	UART1_DSR	RS232 - DSR	
11	UART1_RI	RS232 - RI	
12	UART2_TXD	MAN TEST	5V tolerant (from PC to OEM)
13	AUDIO_IN	Analog Audio In	Analog Audio_In (Input impedance: >10K Ω)
14	AUDIO_OUT_ONOFF	Analog Audio Out and On/Off	Analog Audio_Out and on/off (600 Ω Output impedance)
15	WAKE_UP	Wake up	
16	UIM_CR_DET	SIM CR DET	UIM Card sense detection
17	UIM_PWR_PH (3V Only)	SIM CR Vcc (3/5V)	UIM_PWR/POWER HOLD (Power Status)
18	UIM_RESET	SIM CR RESET	UIM_RESET
19	UART2_RXD_UIM_DATA	SIM CR I/O DATA	UART2 RXD (from OEM to PC) or UIM_DATA_I/O
20	UART2_CTS_UIM_CLK	SIM RC CLOCK	UART2 CTS or UIM_CLK
21	IGNITION	TS (Turn on / Standby)	TS (Turn on / stand by) or IGNITION
22	UART2_RTS	DSC ENABLE	
23	OPT1	DSC DOWNLINK	Serial 0 Ohm res. to disconnect the pin from G18 customer product
24	OPT2	DSC UPLINK	Serial 0 Ohm res. to disconnect the pin from G18 customer product
25	AGND	Analog Audio GND	Analog Audio GND
26	GND	GND	Power Ground
27	GND	GND	Power Ground
28	GND	GND	Power Ground
29	GND	GND	Power Ground
30	VCC	Vcc (3.0-6.0V)	4.0V DC nominal (3.6-4.5V)
31	VCC	Vcc (3.0-6.0V)	4.0V DC nominal (3.6-4.5V)
32	VCC	Vcc (3.0-6.0V)	4.0V DC nominal (3.6-4.5V)
33	VCC	Vcc (3.0-6.0V)	4.0V DC nominal (3.6-4.5V)
34	GPS_ANT_PWR	GPS Ant. PWR (3/5V)	External Power for active GPS Antenna
35	GPIO5	RX for differential GPS RTCM	MSM5100 GPIO_INT30
36	GPIO9	GPS 1pps	MSM5100 GPIO_INT26

c18/g20 70 pin connector comparison

Pin #	c	g	Remarks
1	GND	GND	
2	GND	GND	
3	GND	GND	
4	GND	GND	
5	VCC	VCC	
6	VCC	VCC	
7	VCC	VCC	
8	VCC	VCC	
9	UART1_RT\$	RTS_N	
10	USB_VBUS\$	USB_DET	USB_DET. is actually USB_VBUS on g20 models with integrated transceiver
11	UART1_RXD	RXD_N	
12	USB_D+	N.C	N.C. is actually USB_D+ on g20 models with integrated transceiver
13	UART1_DSR	DSR_N	
14	USB_D-	N.C	N.C. is actually USB_D- on g20 models with integrated transceiver
15	UART1_CTS	CTS_N	
16	WAKE_IN_N	WAKEUP_IN_N	
17	UART1_DCD	DCD_N	
18	PCM_DIN_GPIO1	PCM_DIN	
19	UART1_DTR	DTR_N	
20	PCM_DOUT_GPIO2	PCM_DOUT	
21	UART1_TXD	TXD_N	
22	PCM_CLK_GPIO3	PCM_CLK	
23	UART1_RI	RI_N	
24	PCM_FS_GPIO4	PCM_FS	
25	RESOUT_N	RESET_N	
26	WAKE_OUT_N	WAKEUP_OUT_N	
27	BL_SINK	BL_SINK	Different current sink capability
28	KEYSENSE0_N	KBC1_N	Keypad signals – compatible, but character map tables are different
29	GPIO5	CHRG_DIS	
30	KEYSENSE1_N	KBC0_N	Keypad signals – compatible, but character map tables are different
31	UART2_RT\$	CHRG_SW	
32	KEYSENSE2_N	KBR0_N	Keypad signals – compatible, but character map tables are different
33	UART2_TXD	CHRG_STATE	
34	KEYSENSE_INT0_N	KBR1_N	Keypad signals – compatible, but character map tables are different
35	GPS_ANT_PWR	CHRG_DET_N	
36	KEYSENSE_INT1_N	KBR2_N	Keypad signals – compatible, but character map tables are different
37	ENT_MUTE_GPIO6	ENT_MUTE	

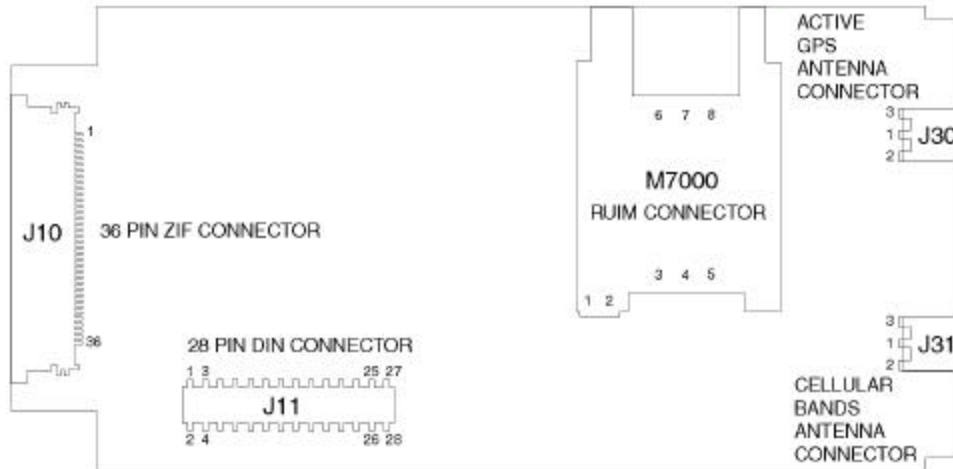
38	KEYSENSE_INT2_N	KBR3_N	Keypad signals – compatible, but character map tables are different
39	GPIO7	TX_EN_N	
40	KEYSENSE_INT3_N	KBR4_N	Keypad signals – compatible, but character map tables are different
41	FOOTSWITCH_GPIO8	ANT_DET	
42	KEYSENSE_INT4_N	KBR5_N	Keypad signals – compatible, but character map tables are different
43	VIBRATOR	VIB_OUT	
44	UIM_RESET	SIM_RST_N	
45	ADC1	CHRG_TYP	
46	UART2_CTS_UIM_CLK	SIM_CLK	
47	ADC2	THERM	
48	UIM_PWR_PH	SIM_VCC	c18 (3V only), g20 (3V/1.8V)
49	LCD_EL_EN	GPRS_DET_N	
50	UIM_CR_DET	SIM_PD	
51	IGNITION	IGN	
52	UART2_RXD_UIM_DATA	SIM_DIO	
53	AUDIO_OUT_ONOFF	ON_OFF_N	In c18, this line serves as aux. audio out as well
54	LCD_CS_N	LCD_CS	
55	HEADSET_INT_N	HDST_INT_N	
56	LCD_DATA	LCD_DATA	
57	HEADSET_MIC	HDST_MIC	
58	LCD_CLK	LCD_CLK	
59	AGND	MIC_GND	
60	LCD_RS	LCD_RS	
61	MIC_IN+	MIC	
62	OPT1	SPI_IRQ_N	
63	MIC_IN-	ALRT_N	
64	OPT2	SPI_DIN	
65	HEADSET_SP	ALRT_P	
66	GPIO9	SPI_CLK	
67	EARPIECE	SPKR_N	
68	AUDIO_IN	SPI_DOUT	
69	EARPIECE+	SPKR_P	
70	KEYB_DRV	SPI_CS	

Colors are used throughout the tables to denote the level of compatibility for each of the pins, according to the legend below:

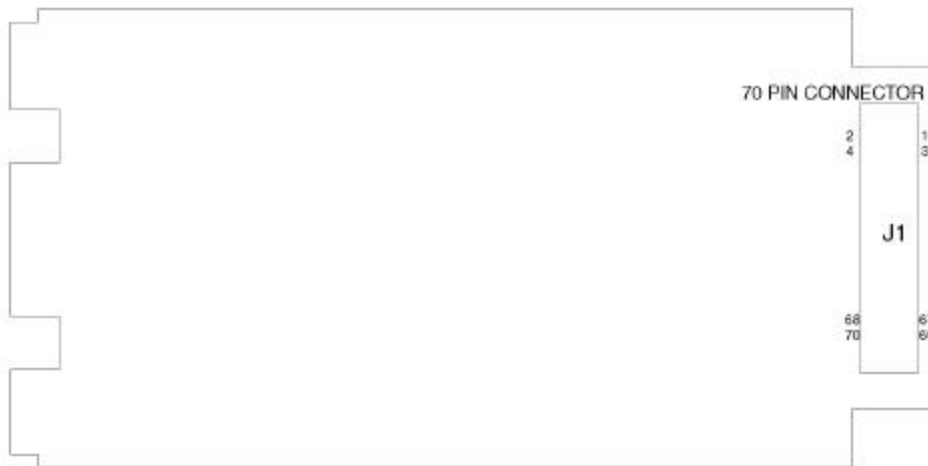
LEGEND:

	No difference
	Some difference
	Difference

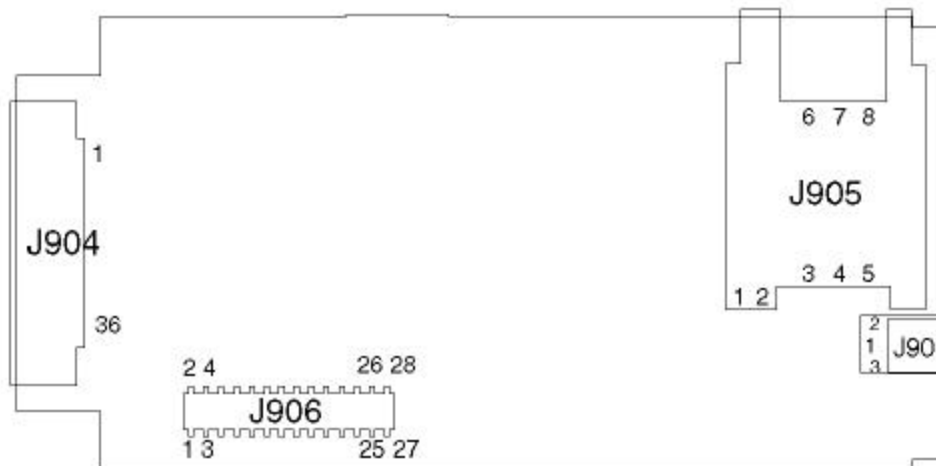
c18 connectors pin location (top view):



c18 Connectors pin location (bottom view):



g18 Connectors pin location (top view):



g20 Connector pin location:

