U1
C8051F310-GQ
Silicon Laboratories

LQFP-32
C8051F310

P1.1_DIO2 17 P2.1
P1.0_DIO1 18 P2.0
P2.7_ATN   19 P1.7
P2.6_SRQ   20 P1.6
P2.5_IFC   21 P1.5
P2.4_NDAC 22 P1.4
P2.3_NFRD 23 P1.3
P2.2_DAV   24 P1.2

P2.2 16
P2.3 15
P2.4 14
P2.5 13
P2.6 12
P2.7 11
P3.4 10
P3.3 9

P3.2 8
P3.1 7
P3.0 6
RST   5
VDD   4
GND   3
P0.0 2
P0.1 1

P1.1 P1.0 P0.7 P0.6 P0.5 P0.4 P0.3 P0.2
25 26 27 28 29 30 31 32

P2.1_EOI
P2.0_REN
CNTRL_OEn
LED1
485_RXD
485_TXD
485_TX_EN
LED2

uP_C2D
uP_C2CK +3.3V

CB1
0.1uF
GND1

LEDs
VCC
LED2 GRN   LED1 RED
R5 330 R4 330
LED2
LED1

U2
Texas Instruments
SN74CB3T3245DWR

R1 1K CNTRL_OEn 19 OE   3.3V 20 +3.3V CB3 0.1uF GND1
+3.3V   1 NC1

P2.0_REN 2 A1 B1 18 REN
P2.1_EOI 3 A2 B2 17 EOI
P2.2_DAV 4 A3 B3 16 DAV
P2.3_NFRD 5 A4 B4 15 NFRD
P2.4_NDAC 6 A5 B5 14 NDAC
P2.5_IFC 7 A6 B6 13 IFC
P2.6_SRQ 8 A7 B7 12 SRQ
P2.7_ATN 9 A8 B8 11 ATN
                GND 10 GND1

U3
Texas Instruments
SN74CB3T3245DWR

R2 1K DATA_OEn 19 OE   3.3V 20 +3.3V CB4 0.1uF GND1
+3.3V   1 NC1

P1.0_DIO1 2 A1 B1 18 DIO1
P1.1_DIO2 3 A2 B2 17 DIO2
P1.2_DIO3 4 A3 B3 16 DIO3
P1.3_DIO4 5 A4 B4 15 DIO4
P1.4_DIO5 6 A5 B5 14 DIO5
P1.5_DIO6 7 A6 B6 13 DIO6
P1.6_DIO7 8 A7 B7 12 DIO7
P1.7_DIO8 9 A8 B8 11 DIO8
                GND 10 GND1

GPIB
5552224-1
Tyco Electronics/Amp
CONN PLUG CHAMP 24POS VERT (GPIB)

GND1 12 SHIELD GND 24 GND1
ATN   11 ATN   GND 23
SRQ   10 SRQ   GND 22
IFC   9 IFC   GND 21
NDAC   8 NDAC   GND 20
NRFD   7 NRFD   GND 19
DAV   6 DAV   GND 18
EOI   5 EOI   REN 17 REN
DIO4   4 DIO4   DIO8 16 DIO8
DIO3   3 DIO3   DIO7 15 DIO7
DIO2   2 DIO2   DIO6 14 DIO6
DIO1   1 DIO1   DIO5 13 DIO5

JTAG
HEADER 5X2
+3.3V R3 4K7 GND1 VCC GND1
uP_C2D TCK   2 1
TDO   4 3 TMS
       6 5 TDI
       8 7
       10 9 uP_C2CK
R6 4K7 GND1

U4
Analog Devices
ADM2483BRWZ

CB5 0.1uF +3.3V
GND1 1 VDD1   VDD2 16 +5V CB6 0.1uF GND2
       5 DE   NC14 14
       6 TX   NC11 11
       7 PV   NC10 10
       3 RX   A   12 RS485A
       4 REn   B   13 RS485B
       2 GND1   GND2 15 GND2
GND1   8 GND1   GND2 9 GND2
ISOLATION GALVANIC

RS485
3M
N2510-6002RB
+5V F1 Bourns Inc. MF-MSMF030-2 300ma

GND2 10 9
       8 7
       6 5
RS485B 4 3
       2 1 EXT_PWR
              RS485A

U5
Texas Instruments
REG102GA-3.3
250ma

CB2 0.1uF +3.3V
GND1 2 Vout   Vin 1
       4 NR/Adj Enable 5
C6 10nF TAB
       3 GND
          GND
GND1

U6
CUI Inc
VBT1-S5-S5-SMT

VCC +5V
5 +Vout +Vin 2
C4 4.7uF
4 -Vout -Vin 1 C3 4.7uF
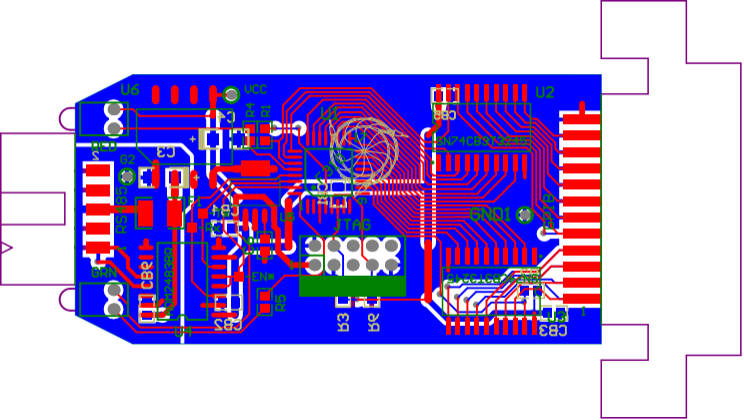GND1 8 NC8 NC3 3 GND2
       7 NC7 NC6 6

EXTERNAL GROUND

PCB OUTLINE Conforms to:
PACTEC Enclosures plastic case
DB25 - DB9 (3.234")
Manufacturer Part No: CNM-0103 BLACK KIT
Newark Part Number: 91F5266

Comment	Designator	Footprint	Quantity
4.7uF	C3, C4	1206P	2
10nF	C6	0805	1
0.1uF	CB1, CB2, CB3, CB4, CB5, CB6	0805	6
MF-MSMF030-2	F1	1812	1
CONN PLUG CHAMP 24POS VERT (GPIB)	GPIB	5552224-1	1
HEADER 5X2	JTAG	IDC10/RA	1
RED	LED1	LED-DIALIGHT	1
GRN	LED2	LED-DIALIGHT	1
1K	R1, R2	0805	2
4K7	R3, R6	0805	2
330	R4, R5	0805	2
RS458	RS485	IDC10/EDGE-SHROUD	1
TRIUMF LOGO	TLOGO	TRIUMF LOGO1	1
C8051F310	U1	LQFP32	1
SN74CB3T3245	U2, U3	DW020	2
ADM2483BR	U4	SOL-16	1
REG102GA-3.3	U5	SOT-223-5	1
VBT1-S5-S5-SMT	U6	VBT1-S5-SMT	1