
iChip CO2128 with EBI Flash and Motorola GSM G24 Modem

Revision History

Version	Date	Description
1.0	April 2008	Original release
2.0	September 2008	Changed from 1Mb Flash to 2Mb Flash

Introduction

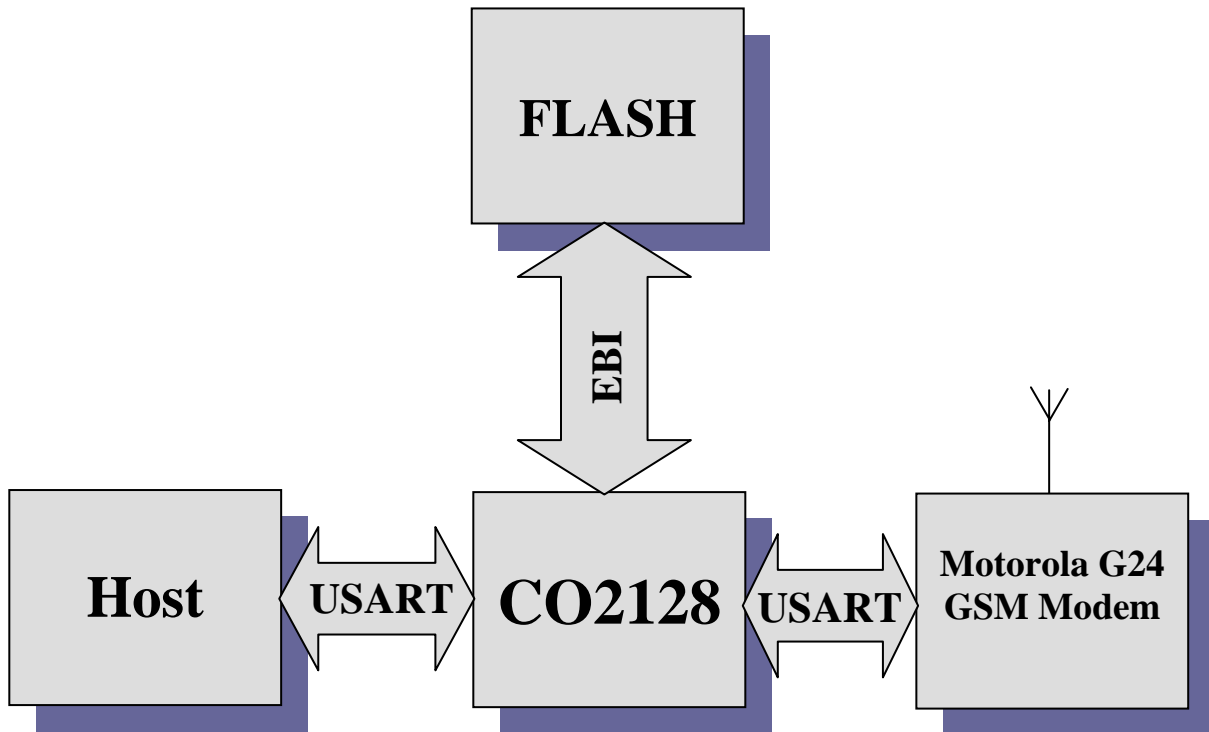
This Reference Design demonstrates the iChip™ CO2128 IP Controller™ connected to a host processor via USART, to a flash memory chip via EBI interface, and to Motorola's GSM G24 modem via USART.

Connect One's AT+i™ commands are accepted at baud rates of up to 3Mbps.

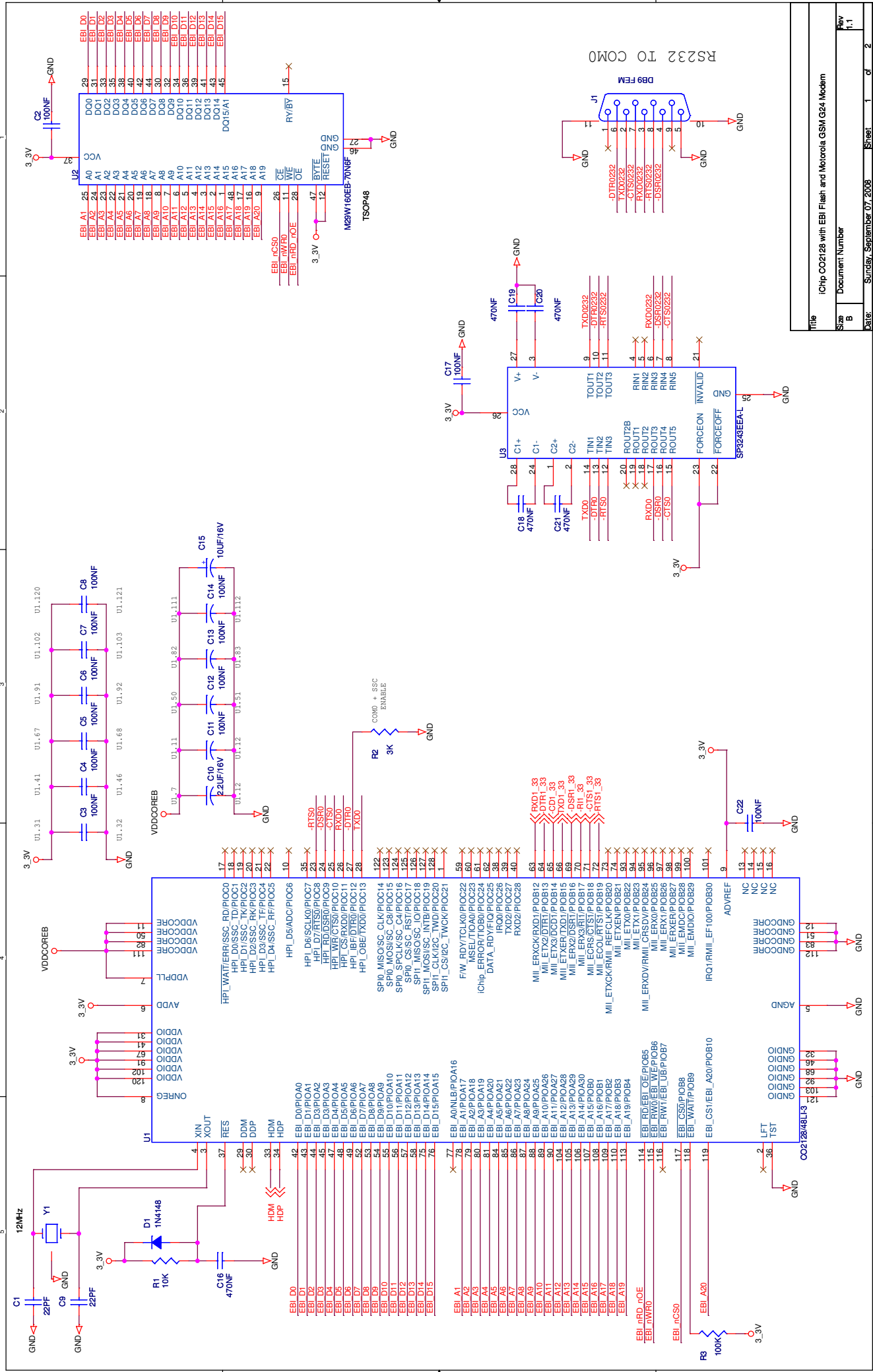
Features

- Supports serial host interface speeds of up to 3Mbps (250K, 1M, 1.5M, 3M)
- SSL3/TLS1 security implemented in hardware provides better performance
- Data and Internet connection through the Motorola GSM G24 modem
- Operates at the industrial temperature range
- RoHS-compliant

Block Diagram



Schematics



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Bill of Materials

<i>Item</i>	<i>Qty</i>	<i>Reference</i>	<i>Part</i>	<i>Manufacturer</i>
1	2	C1,C9	22PF	Any
2	27	C2, C3, C4, C5, C6, C7, C8, C11, C12, C13, C14, C17, C22, C27, C28, C31, C32, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45	100NF	Any
3	1	C10	2.2UF/16V	Any
4	3	C15,C33,C46	10UF/16V	Any
5	5	C16,C18,C19,C20,C21	470NF	Any
6	2	C23,C24	100uF	Any
7	1	C25	33pF	Any
8	1	C26	10pF	Any
9	1	C29	100UF/16V	Any
10	1	C30	1000UF/16V	Any
11	2	C34,C35	47pF	Any
12	1	D1	1N4148	Any
13	1	D2	1N4001	Any
14	1	D3	G.LED	Any
15	2	D4,D5	LED	Any
16	1	D6	CDDFN4-T05	Bourms
17	1	E1	ANTENNA	50 Ohm, VSWR 1.5:1, Gain≥0dBi
18	1	F1	RXE020	Any
19	1	J1	DB9 FEM	Any
20	1	J2	DC-JACK-MALE	Any
21	1	J3	Molex 52991-0708	Molex
22	1	J4	11_MMCX-50-1-2/111_OH	Huber-Suhner
23	1	R1	10K	Any
24	1	R2	3K	Any
25	1	R3	100K	Any
26	1	R4	2.49K 1%	Any
27	1	R5	1.21K 1%	Any
28	2	R6,R7	27	Any
29	2	R8,R9	15k	Any
30	1	R10	100	Any
31	3	R11,R13,R15	470	Any
32	1	R12	300	Any
33	1	R14	4.7K	Any
34	1	S1	PB SW	Any
35	1	U1	CO2128/48LI-3	ConnectOne

36	1	U2	M29W160EB-70N6F	Numonyx
37	1	U3	SP3243EEA-L	Sipex
38	1	U4	MIC29302WU	Micrell
39	1	U5	LT1086CM	Linear Tech.
40	2	U6,U8	NC7S04/SC70	Fairchild
41	3	U7,U9,U10	FXLP34L6X	Fairchild
42	1	U11	SIM_CONNECTOR	Any
43	1	U12	LM1117T-3.3	National
44	1	Y1	12MHz	Any 50ppm