
iChip CO2128 with EBI Flash and Siemens HC25 GSM Modem

Revision History

Version	Date	Description
1.0	May 2008	Initial version
2.0	September 2008	Changed from 1Mb Flash to 2Mb Flash

Introduction

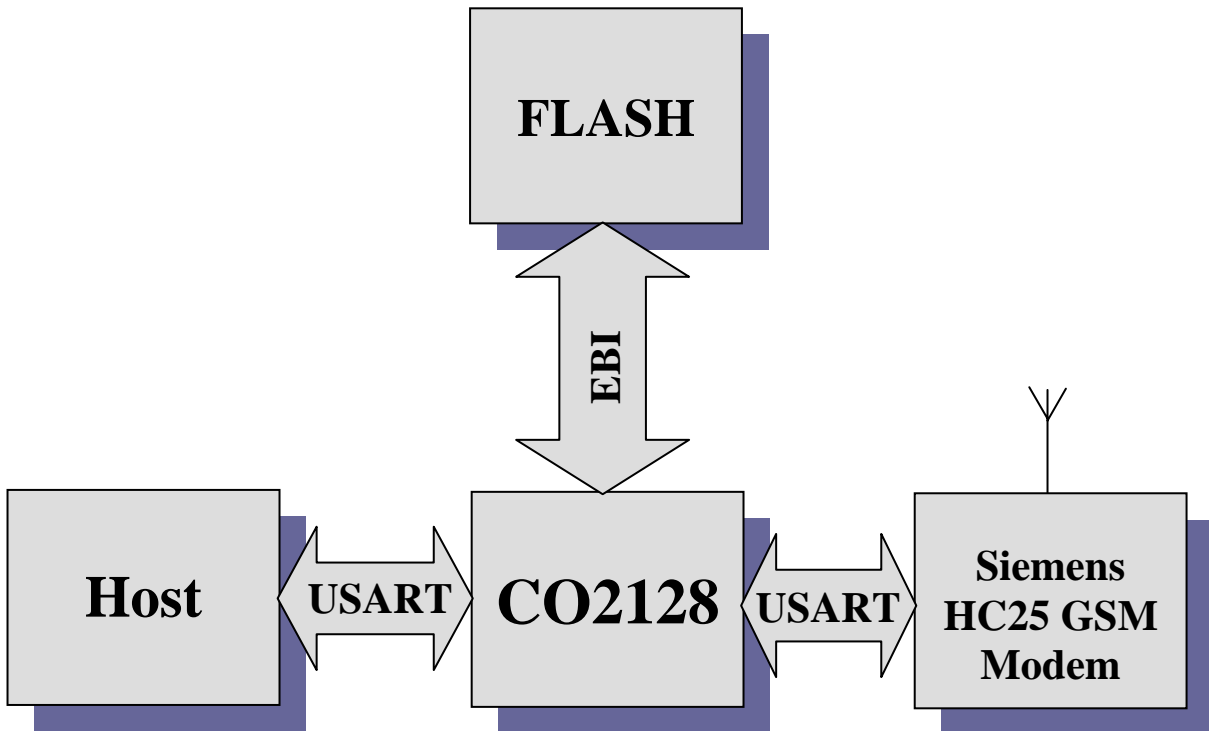
This Reference Design demonstrates the iChip™ CO2128 IP Controller™ connected to a host processor via USART, to a flash memory chip via EBI interface, and to a Siemens HC25 GSM modem via USART.

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

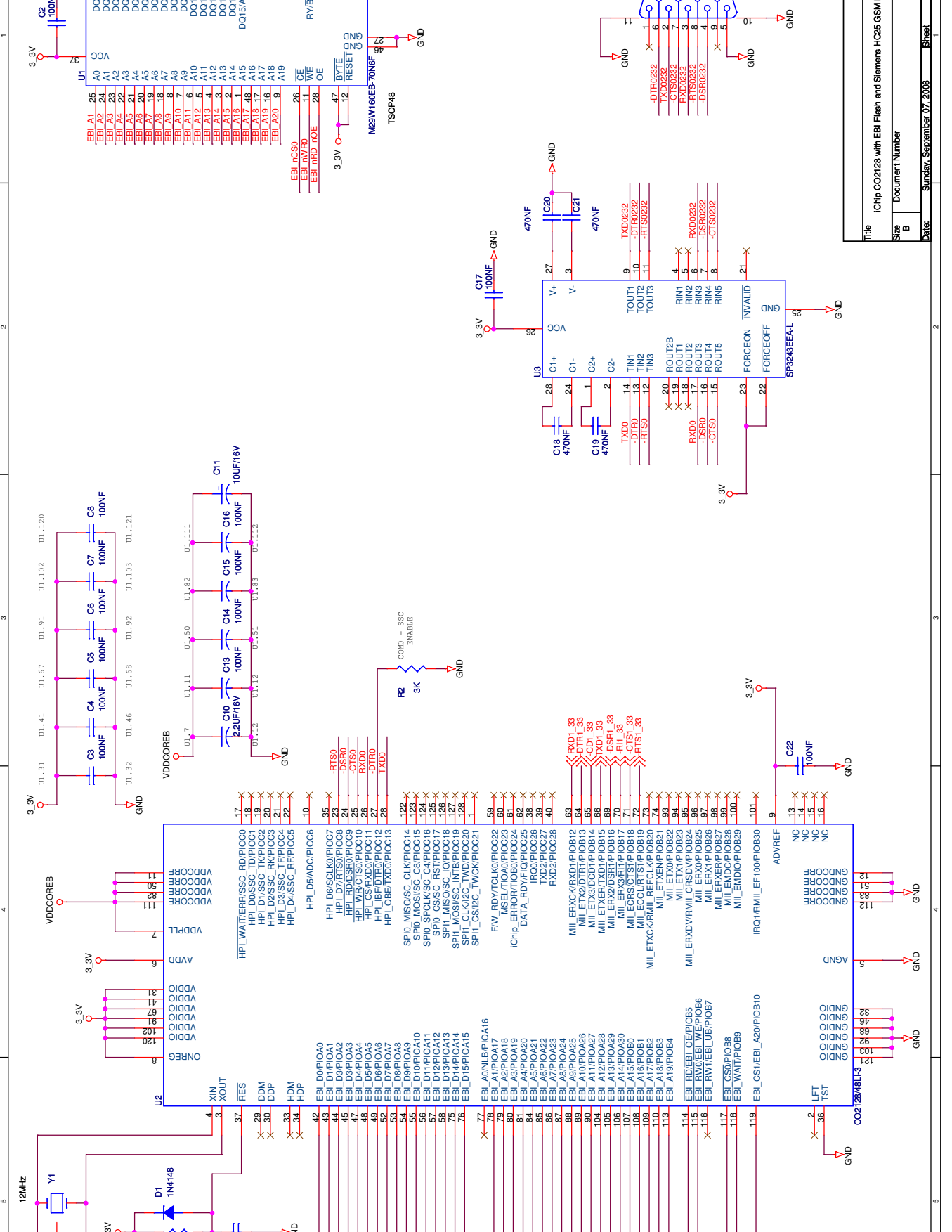
Features

- 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 Siemens HC25 GSM 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	23	C2, C3, C4, C5, C6, C7, C8, C13, C14, C15, C16, C17, C22, C28, C30, C31, C34, C35, C36, C37, C38, C40, C41	100nF	Any
3	1	C10	2.2μF/16V	Any
4	2	C11, C32	10μF/16V	Any
5	5	C12, C18, C19, C20, C21	470nF	Any
6	2	C23, C24	100μF	Any
7	5	C25, C39, C42, C43, C44	33pF	Any
8	1	C26	10pF	Any
9	1	C27	100μF/16V	Any
10	1	C29	1000μF/16V	Any
11	1	C33	1μF	Any
12	1	D1	1N4148	Any
13	1	D2	1N4001	Any
14	2	D3, D4	LED	Any
15	1	D5	CDDFN4-T05	Bourns
16	1	E1	Antenna	50Ω
17	1	J1	DB9 FEM.	Any
18	1	J2	DC-JACK-MALE	Any
19	1	J3	DF12-50DP-0.5V 50pin.	Hirose
20	1	J4	Hirose U.FL-LP-040	Hirose
21	1	R1	10K	Any
22	1	R2	3K	Any
23	1	R3	100K	Any
24	1	R4	2.49K 1%	Any
25	1	R5	1.21K 1%	Any
26	3	R6, R7, R8	470Ω	Any
27	1	R9	430Ω	Any
28	1	S1	PB SW	Any
29	1	U1	M29W160EB-70N6F	Numonyx
30	1	U2	CO2128/48LI-3	Connect One
31	1	U3	SP3243EEA-L	Sipex
32	1	U4	MIC29302WU	Micrell

33	1	U5	TL317C/SO	Texas Instruments
34	1	U6	LM1117T-3.3	National Semiconductor
35	3	U7, U9, U10	FXLP34L6X	Fairchild
36	1	U8	SIM_CONNECTOR	Any
37	1	Y1	12MHz	Any 50 ppm