



## Wireline Products

### ISModem® Embedded Modems

Silicon Laboratories' embedded modem solutions are most feature rich, compact and flexible 2400 baud modems on the market. Available in two 16-pin SOIC packages, the Si2401 and Si2400 embedded modem solutions eliminate the need for a separate DSP data pump, modem controller, codec, isolation transformer,

relay, opto-isolators and 2-4 wire hybrid.

**Features:** • Simple AT command UART interface • Globally compliant line interface • Line-in-use and parallel phone intrusion detection • Caller ID detection and decode

Description	Maximum Data Rate	Voice Codec	Package	System-Side Digi-Key Part No.	Price Each		Silicon Labs Part No.	Line-Side Digi-Key Part No.	Price Each		Silicon Labs Part No.
					1	25			1	25	
V.22bis Modem, Chipset	2400 bps	No	16-SOIC	336-1095-ND◆	25.02	24.11	SI2401-FS	—	—	—	—
V.22bis Modem, Chipset	2400 bps	Yes	16-SOIC	336-1093-ND	28.14	26.36	SI2400-KS	336-1094-ND	7.63	7.22	SI3015-KS

Description	Digi-Key Part No.	Price Each	Silicon Labs Part No.
Evaluation Board for the Si2400 with a UART Interface .....	336-1166-ND	150.00	SI2400URT-EVB
Evaluation Board for the Si2401 with a UART Interface .....	336-1167-ND	150.00	SI2401FS10-EVB
DTMF Decoder Kit .....	336-1283-ND	149.00	DTMFDECODER-RD
Embedded Ethernet Development Kit .....	336-1284-ND	119.00	ETHERNETDK
Embedded Modem Development Kit .....	336-1285-ND	129.00	MODEMDK

◆ RoHS Compliant

### ProSLIC®



Subscriber line interface circuit (SLIC), codec and battery generation functionality. Combined with Silicon Laboratories' Si3201 linefeed integrated circuit, the Si3210 packs maximum performance and flexibility into a 1.5 inch<sup>2</sup> footprint, making it the smallest single-channel telephony interface available. The integrated battery supply continuously adapts its output voltage to minimize power and enables the entire solution to be powered

from a single 3.3V or 5V supply. Software configurable features include 5 REN internal ringing up to 90 VPK, DTMF generation and decoding and a comprehensive set of telephony signaling capabilities for global operation with only one hardware solution. The Si3230 provides the same performance of the Si3201 without the integrated codec.

Description	Digi-Key Part No.	Price Each			Silicon Labs Part No.
		1	25	100	
Single Channel SLIC Codec.....	336-1287-5-ND	8.10	6.84	5.51	SI3215-B-FM

### Clock and Data Recovery ICs

**Features:** • Multi-rate operation: OC-3/12/48, STM-1/4/16, GbE and 2.7 Gbps • Low jitter generation; low power operation • DSPPLL Technology eliminates external loop filter components

Description	Package	Digi-Key Part No.	Price Each		Silicon Labs Part No.	Evaluation Board Digi-Key Part No.	Price Each	Silicon Labs Part No.
			1	25				
OC-12/3, STM-4/1 SONET/SDH, 2.5V .....	20-MLP	336-1120-ND	24.69	24.03	SI5010-BM	—	—	—
OC-12/3, STM-4/1 SONET/SDH, with Limiting Amp, 3.3V .....	28-MLP	336-1277-ND◆	26.29	24.99	SI5013-D-GM	—	—	—
OC-48/12/3, STM-16/4/1 SONET/SDH, GbE, 2.7 Gbps, 2.5V .....	20-MLP	336-1128-ND	78.45	69.39	SI5020-BM	336-1129-ND	500.00	SI5020-EVB

◆ RoHS Compliant

### SIPHY® High-Speed Transceivers

**Features:** • Integrated limited amplifier, CDR, CMU, and MUX/DEMUX • Low jitter generation; <2.0 mUIrms (typ OC-48) • Jitter attenuating CMU eliminates the external clean-up PLL

Description	Package	Digi-Key Part No.	Price Each		Silicon Labs Part No.
			1	25	
OC-48, STM-16 SONET/SDH Transceiver, 1:16 Deserializer and 16:1 Serializer .....	195-CBGA	336-1135-ND	196.46	174.22	SI5100-F-BC
OC-48, STM-16 SONET/SDH Transceiver, 1:4 Deserializer and 4:1 Serializer .....	99-CBGA	336-1181-ND	105.45	85.50	SI5110-G-BC
OC-48, STM-16 SONET/SDH Transceiver.....	195-CBGA	336-1308-ND	105.45	85.50	SI5100-G-BC

### Voice CODEC

**Features:** • Microphone Amplifier • Input Mixer • Headphone Driver • Handset Hybrid • Wide dynamic range in a small footprint • Minimizes external components

Description	Package	Digi-Key Part No.	Price Each		Silicon Labs Part No.
			1	25	
Voice CODEC.....	16-SOIC	336-1382-ND	2.61	—	SI3000-C-FS

### Power over Ethernet



The Si3400 integrates an IEEE 802.3af compliant interface and complete power management solution for a Power over Ethernet (PoE) powered device (PD) application. The Si3400 converts the high voltage supplied over a 100/1000BASE-T Ethernet cable into a regulated low voltage output supply. For applications that require more power than the 11W (max) capability of the Si3400, the Si3401 provides the same feature set as the Si3400 but adds an increased hot swap switch current limit of 470mA (min.), versus the Si3400's 350mA (min.). The Si3401's higher current limit enables it to support applications in the range of 14 to 16W.

Description	Current Limit (mA)	Output Power (Maximum)	Package	Digi-Key Part No.	Price Each			Silicon Labs Part No.
					1	25	100	
Integrated PD I/F with PWM Controller	350	11W	20-QFN	336-1385-ND	3.52	3.49	2.39	SI3400-E1-GM
	470	14 – 16W	20-QFN	336-1384-ND	4.28	3.99	2.47	SI3401-E1-GM

### Digital Power Solutions

#### Digital Isolators

**Features:** • Lowest power consumption: 12mA per channel at 100Mbps • Highest integration: 1/3 the size of opto-coupler solutions • Fastest throughput: 150 Mbps maximum • Pin compatible with existing industry solutions • Temperature: -40°C – 125°C



Number of Inputs VDD1 Side	Number of Inputs VDD2 Side	Maximum Data Rate (Mbps)	Package	Digi-Key Part No.	Price Each			Silicon Labs Part No.
					1	25	100	
1	0	10	8-SOIC	336-1355-ND	2.77	2.22	1.85	SI8410-B-IS
		150		336-1356-ND	3.89	3.12	2.60	SI8410-C-IS
2	0	10	8-SOIC	336-1358-ND	2.77	2.22	1.85	SI8420-B-IS
		150		336-1359-ND	3.96	3.17	2.64	SI8420-C-IS

(Continued)



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Number of Inputs VDD1 Side	Number of Inputs VDD2 Side	Maximum Data Rate (Mbps)	Package	Digi-Key Part No.	1	Price Each 25	100	Silicon Labs Part No.
1	1	1	8-SOIC	336-1360-ND	1.91	1.53	1.28	SI8421-A-IS
3	0	1	16-SOIC	336-1363-ND	2.75	2.20	1.83	SI8430-A-IS
		10		336-1364-ND	4.12	3.30	2.75	SI8430-B-IS
		150		336-1365-ND	6.46	5.17	4.31	SI8430-C-IS
2	1	1	16-SOIC	336-1366-ND	2.75	2.20	1.83	SI8431-A-IS
		10		336-1367-ND	4.12	3.30	2.75	SI8431-B-IS
		150		336-1368-ND	6.46	5.17	4.31	SI8431-C-IS
3	0	10	16-SOIC	336-1327-ND	4.12	3.30	2.75	SI8435-B-IS
2	2	10	16-SOIC	336-1328-ND	4.95	3.96	3.30	SI8445-B-IS
4	—	1	16-SOIC	336-1369-ND	3.42	2.74	2.28	SI8440-A-IS
		10		336-1370-ND	4.95	3.96	3.30	SI8440-B-IS
		150		336-1371-ND	7.09	5.67	4.73	SI8440-C-IS
3	1	1	16-SOIC	336-1372-ND	3.42	2.74	2.28	SI8441-A-IS
		10		336-1373-ND	4.95	3.96	3.30	SI8441-B-IS
		150		336-1374-ND	7.09	5.67	4.73	SI8441-C-IS
2	2	1	16-SOIC	336-1375-ND	3.42	2.74	2.28	SI8442-A-IS
		10		336-1376-ND	4.95	3.96	3.30	SI8442-B-IS
		150		336-1377-ND	7.09	5.67	4.73	SI8442-C-IS

## Timing Products Precision Clock ICs

Features: • Jitter generation less than .3psRMS (typical OC-192) • Forward and reverse FEC clock scaling • Selectable loop filter bandwidths

Description	Package	Digi-Key Part No.	Price Each 1	25	Silicon Labs Part No.	Evaluation Board Digi-Key Part No.	Price Each	Silicon Labs Part No.
Precision Clock Multiplier/Regenerator, 155MHz, 622MHz	20-MLP	336-1139-ND	19.63	17.41	SI5310-BM	336-1140-ND	350.00	SI5310-EVB
Precision Clock Multiplier/Regenerator	20-MLP	336-1292-5-ND	19.63	17.41	SI5310-GM	336-1140-ND	350.00	SI5310-EVB
SONET/SDH Clock Multiplier/Jitter Attenuator, 19MHz ~ 2.5GHz Output, G.709 FEC and 66/64 Scaling	63-CBGA	336-1274-ND	89.15	75.93	SI5321-G-BC	336-1144-ND	350.00	SI5321-EVB
SONET/SDH Clock Multiplier/Jitter Attenuator, Auto Hitless Switching, Four Outputs at 19 MHz, 155 MHz or 622 MHz	99-CBGA	336-1280-ND	106.97	91.11	SI5364-G-BC	—	—	—

◆ RoHS Compliant



COPELAND COMMUNICATIONS, INC.

## Modems and Socket Radio

The **World Modem II™** devices allow rapid implementation of a modem interface into numerous applications. **Features:** • Socket Modem™ compatible • 3.3V operation • Compliant with global standards • Caller ID, Call progress, and Fast Connect • Small footprint 1.045" x 2.54" • Standard and extended AT command set. The **World Modem™ NET** series modems provide a socket modem interface along with a simple internet interface with the AT Command set. **Features:** • Socket Modem Compatible • Compliant with global standards • Up to 10 simultaneous TCP and UDP sockets and up to 2 server sockets. The **World Modem Secure™**

devices support SIA and other security protocols and has programmable GPIO. **Features:** • Socket Modem Compatible • Compliant with global standards • Caller ID, Call progress, and Fast Connect. • Small footprint 1.045" x 2.54" • Standard and Extended AT Command set. The **Socket Radio™** allows rapid implementation of wireless modem capability to any application with data rates up to 33.6Kbaud. **Features:** • Socket Modem compatible • 200' (indoor) range • 900MHz band • FCC 15.249 compliant • AT command set • Small footprint 1.045" x 2.54" • MMCX connector (CB Version) • Integrated antenna (CA Version)

Interface	Description	Voltage (V)	Digi-Key Part No.	Price Each 1	50	Copeland Part No.
<b>World Modem II</b>						
V.22bis, V.22, V.23	Serial Modem, 2400baud	3.3	539-1000-ND	30.71	26.62	CC-24K2-CS
V.90, V.34, V.32bis	Serial Modem, 56kbaud	3.3	539-1001-ND	42.12	36.51	CC-56K2-CS
V.90, V.34, V.32bis	Serial Modem, 5V Compatible, 56kbaud	5.0	539-1006-ND	44.10	38.22	CC-56K2-CS5
V.92, V.90, V.34, V.32bis	Serial Modem, 5V Compatible, 56kbaud	5.0	539-1007-ND	49.19	42.63	CC-92K2-CS5
V.92, V.90, V.34, V.32bis	Serial Modem, 56kbaud	3.3	539-1008-ND	47.21	40.92	CC-92K2-CS
<b>World Modem NET — RoHS Compliant</b>						
V.92, V.42, V.42bis	Serial Modem 2400baud Internet-capable	5.0	539-1011-ND	80.61	69.87	CC-2404K2N-CS5
V.92, V.42, V.42bis	Serial Modem 56kbaud Internet-capable	5.0	539-1012-ND	87.06	75.46	CC-56K2N-CS5
V.92, V.42, V.42bis	Serial Modem 56kbaud Internet-capable	3.3	539-1014-ND	92.31	80.01	CC-56K2N-CS
V.92, V.42, V.42bis	Serial Modem 56kbaud Internet-capable	5.0	539-1013-ND	92.76	80.40	CC-93K2N-CS5
<b>World Modem Secure</b>						
V.21, V.22, V.22bis, V.23	Serial Modem Secure 5V Compatible, 2400baud	5.0	539-1009-ND	35.91	31.13	CC-2401K2A-CS5
V.21, V.22, V.22bis, V.23	Serial Modem Secure 2400baud	3.3	539-1010-ND	33.96	29.44	CC-2401K2A-CS
<b>Socket Radio Modem</b>						
33.6K	Radio Modem 900MHz MMCX Connector	3.3	539-1003-ND	54.49	51.19	CC-900W-CB
33.6K	Radio Modem 900MHz with Antenna	3.3	539-1005-ND	72.92	68.51	CC-900W-CA
<b>Antenna — RoHS Compliant</b>						
—	916MHz PCB Mount Antenna	—	539-1021-ND	5.57	4.83	CC-ANT923842
<b>Development Kits</b>						
—	World Modem Secure Development Kit	—	539-1028-ND	150.00	—	CC-EVB-SECURE
—	World Modem Net Development Kit	—	539-1029-ND	292.50	—	CC-EVB-56KNET
—	World Modem II Development Kit	—	539-1002-ND	199.00	—	CC-CC-EVB-56K
—	Socket Radio Development Kit	—	539-1004-ND	399.00	—	CC-SR-EVAL

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