

CV92/CV34/CV22

Complete Embedded Data Modems



FEATURES

- Two-chip modem solution:
 - CVxx Modem Device in 48-pin TQFP or 100-pin FSBGA (CV92-F100 only)
 - CSP1040 DAA in 20-pin ETSSOP
- Data mode capabilities:
 - V.92, V.90, V.34, V.32bis, V.32, V.22bis,V.22, V.21, Bell 212A, Bell 103
 - V.17 and lower fax rates
 - V.44, V.42bis, MNP 5 Data Compression
 - V.42, MNP 2–4 Error Correction
- CVxx Modem Device features:
 - ARM7TDMS Microcontroller
 - DSP1600S Digital Signal Processor
 - DAA interface and filters
 - Host interface configurable for 8-bit parallel, asynchronous serial or SPI mode
 - On-chip PWM speaker driver
 - SIO interface for audio codec used in voice and handset applications
 - 24.576 MHz crystal or external 27.0 MHz clock
- CSP1040 DAA features:
 - Derives power from system for reliable operation on all phone lines
 - Digital transformer isolation barrier
 - Programmable event detect for caller-ID reception and power ring detection
 - Programmable pulse shaping and spark quench
 - Programmable dc-impedance termination for country-specific VI templates
 - Programmable ac-impedance termination for return loss matching
 - Programmable ringer-impedance emulation
 - Hardware support for pulse dialing for accurate make/break timing.
 - Hardware support for ringing level and frequency qualification for accurate ring detection.
 - Line-in-use and remote handset detection
 - World-wide caller ID support
- Single 3.3V supply required for chip set.



The CVxx family of devices is designed to serve embedded applications that require high-speed dial-up data connections. There are several versions available based on modulations and other features.

For designs that must support field-upgradeability or customized features, a version of the CV92 device is available in a 100 FSBGA that can support external flash ROM. All other versions run from on-chip ROM. The table on page 2 shows the features supported for the various versions. The CVxx devices support RS232 and 8-bit microprocessor interfaces. Additionally, the CVxx devices can be configured for operation on a 4-wire SPI bus.

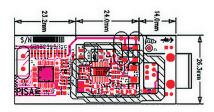


Figure 1 shows a reference design using the 48-pin CVxx and the CSP1040. This is a 2-layer PCB with components on top-side only. The layout can be integrated into a larger PCB or built as a separate module with connectors.

^{*} Actual speeds over U.S. telephone lines vary and are less than 56K due to current FCC regulations and line conditions.



	V.92	V.90	V.34	V.22bis	POS	V.17 FAX	Voice	Par/Ser	SPI
CV92-T48B	Х	Х	Х	Х	Х	Х	Х	Х	Х
CV92L-T48B	Х	Х	Х	Х	Х			Х	
CV90L-T48B		Х	Х	Х	Х			Х	
CV34-T48x			Х	Х	Х	Х	Х	Х	Х
CV34L-T48			Х	Х	Х			Х	
CV22-T48x				х	Х			х	

Typical Modem Sub-System Block Diagrams

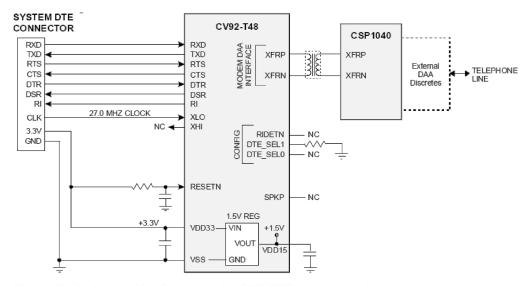


Figure 2. Embedded V.92 Modem for STB/DVR using serial interface.

Ordering Information

PART NUMBER	PACKAGE	COMCODE
L-CV22-T48B-DB	48 TQFP	7110158770
L-CV22-T48B-DT	48 TQFP	7110158780
L-CV34-T48B-DB	48 TQFP	7110109500
L-CV34-T48B-DT	48 TQFP	7110109510
L-CV34L-T48B-DB	48 TQFP	7110158720
L-CV34L-T48B-DT	48 TQFP	7110159010
L-CV90L-T48B-DB	48 TQFP	7110158750
L-CV90L-T48B-DT	48 TQFP	7110158760
L-CV92-F100A-DB	100 FSBGA	7110146740
L-CV92-F100A-DT	100 FSBGA	7110146750
L-CV92-T48B-DB	48 TQFP	7110109480
L-CV92-T48B-DT	48 TQFP	7110109490
L-CV92L-T48B-DB	48 TQFP	7110158730
L-CV92L-T48B-DT	48 TQFP	7110158740
L-CSP1040A3-E11-D	20-pin ETSSOP	7110072260
L-CSP1040A3-E11-DT	20-pin ETSSOP	7110072670
	L-CV22-T48B-DT L-CV34-T48B-DB L-CV34-T48B-DB L-CV34L-T48B-DB L-CV34L-T48B-DT L-CV90L-T48B-DT L-CV90L-T48B-DT L-CV92-F100A-DB L-CV92-F100A-DT L-CV92-T48B-DB L-CV92-T48B-DT L-CV92-T48B-DT L-CV92-T48B-DT L-CV92-T48B-DT	L-CV22-T48B-DB 48 TQFP L-CV22-T48B-DT 48 TQFP L-CV34-T48B-DB 48 TQFP L-CV34L-T48B-DB 48 TQFP L-CV34L-T48B-DB 48 TQFP L-CV34L-T48B-DT 48 TQFP L-CV90L-T48B-DB 48 TQFP L-CV90L-T48B-DT 48 TQFP L-CV92-F100A-DB 100 FSBGA L-CV92-F100A-DT 100 FSBGA L-CV92-T48B-DB 48 TQFP L-CV92-T48B-DB 48 TQFP L-CV92-T48B-DB 48 TQFP L-CV92-T48B-DT 48 TQFP L-CV92-T48B-DT 48 TQFP L-CV92-T48B-DT 48 TQFP L-CV92-T48B-DT 48 TQFP L-CV92L-T48B-DB 48 TQFP L-CV92L-T48B-DT 48 TQFP L-CV92L-T48B-DT 48 TQFP

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