Product Brief

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.

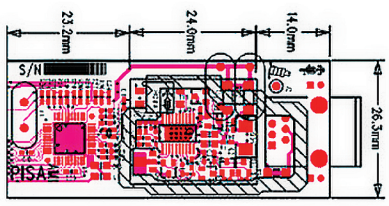

Figure 1 shows a reference design using the 48-pin CVxx and the CSP1040. This is a 2-layer PCB with components on top-side only. The layout can be integrated into a larger PCB or built as a separate module with connectors.

* 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	X	X	X	X	X	X	X	X	X
CV92L-T48B	X	X	X	X	X			X	
CV90L-T48B		X	X	X	X			X	
CV34-T48x			X	X	X	X	X	X	X
CV34L-T48			X	X	X			X	
CV22-T48x				X	X			X	

Typical Modem Sub-System Block Diagrams

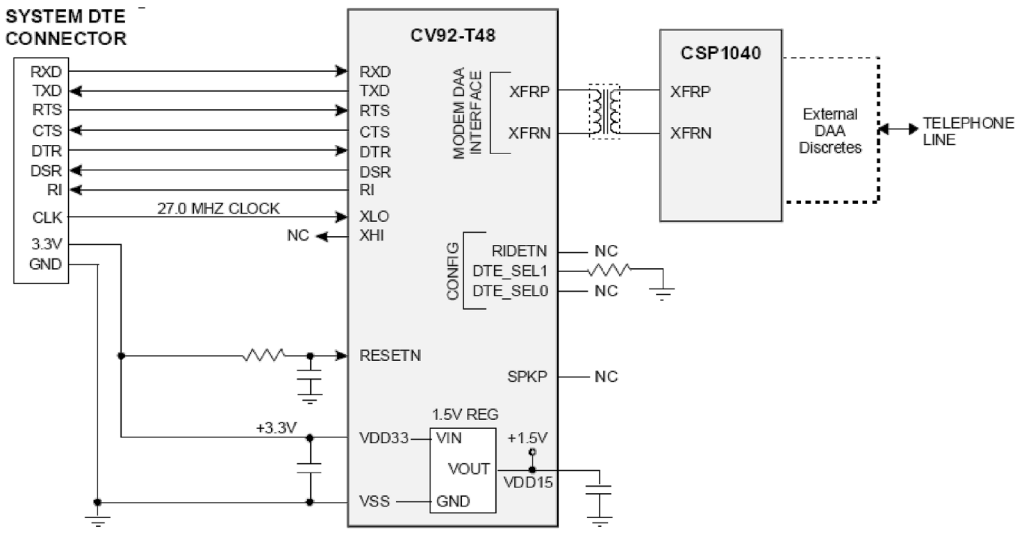

Figure 2. Embedded V.92 Modem for STB/DVR using serial interface.

Ordering Information

DEVICE	PART NUMBER	PACKAGE	COMCODE
CV22	L-CV22-T48B-DB	48 TQFP	7110158770
	L-CV22-T48B-DT	48 TQFP	7110158780
CV34	L-CV34-T48B-DB	48 TQFP	7110109500
	L-CV34-T48B-DT	48 TQFP	7110109510
CV34L	L-CV34L-T48B-DB	48 TQFP	7110158720
	L-CV34L-T48B-DT	48 TQFP	7110159010
CV90L	L-CV90L-T48B-DB	48 TQFP	7110158750
	L-CV90L-T48B-DT	48 TQFP	7110158760
CV92	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
CV92L	L-CV92L-T48B-DB	48 TQFP	7110158730
	L-CV92L-T48B-DT	48 TQFP	7110158740
CSP1040	L-CSP1040A3-E11-D	20-pin ETSSOP	7110072260
	L-CSP1040A3-E11-DT	20-pin ETSSOP	7110072670

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