

V.34 fax

<http://www.vocal.com>

VOCAL Technologies modem software libraries include a complete range of ITU compliant modulations, optimized for execution on DSP architectures from leading silicon suppliers. This software is modular and can be executed as a single task under a variety of operating systems or it can execute standalone with its own kernel.

The line of the V.34 Fax modem interface may be an analog front end (codec and DAA) or a digital interface such as T1/E1, Switched 56, and ISDN. The upper end of this software offers a direct binary and HDLC interface.

As an option V.34 fax modem, can be combined with other relevant Group 3 facsimile modulations (V.17, V.29, V.27 *ter* and V.21 channel 2). All of the facsimile modulations and data streams can be controlled with VOCAL's T.30 function or with VOCAL's facsimile service class 1 command sets (EIA-578 and T.31). The T.30 function could in turn be controlled with VOCAL's facsimile service class 2 command sets such as T.32 (known as fax class 2.1), EIA-592 (known as fax clas 2.0) and industry standard (known as fax class 2).

V.34 fax Features:

- Fully compliant Group 3 Facsimile Support
- Full and half duplex v.34 fax modes
- Primary data channel supports 14 data rates in the range of 2400 bps to 33600 bps, in increments of 2400 bps
- Control channel rates are 1200 and 2400 bps
- Optimized for high performance on leading edge DSP architectures
- Multi-tasking environment compatible

V.34 fax Configurations:

- DAA interface using linear codec at 7.2 kHz, 8.0 kHz or 16.0 kHz sample rate
- Direct interface to 8.0 kHz PCM data stream (A-law or u-law)
- North American and International Dialing/Telephony dialing functions available
- Facsimile protocol layer (T.30 with ECM/BFT) available
- Facsimile service class 1 command sets (T.31 and EIA-578) available
- Facsimile service class 2 command sets (T.32, EIA-592 and industry standard fax class 2) available.
- System can be combined with other Group 3 facsimile modulations (V.17/V.29/V.27*ter*/V.21 channel 2).
- Data/Facsimile/Voice Distinction upon startup available. Complete data modem systems and speech coders systems available with v.34 fax.
- Multiple modulation ports can be executed on a single DSP

V.34 fax Example Resource Requirements (ADSP-2181):

- 16k words program memory, 16k words data memory using overlays between phase 1 and 2, also between 2 and phase 3.
- Estimated 26 MIPS for 33,600 bps at the highest symbol rate using 8 kHz sampling rate.
- Lower MIPS possible with less frequent adaptive coefficient updates

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