SPIRIT CORP
DSP Software Source
www.spiritDSP.com/CST

TMS320C54CST
V.42/V.42bis ALGORITHM

SPRS055A – OCTOBER 2001 – REVISED MARCH 2003

- Supports ITU-T V.24 Recommendation
- Provides Buffered Byte-Oriented DTE Operation
- Frame Size can be up to 128 Octets
- Allows to Select Frame/Buffer Memory Size According to Available System Resources
- Supports Message Handling Mechanism to Make Integration More Feasible
- Can be Efficiently Integrated Into Multitasking Environment With Separate Low and High Priority Processes

- Supports Traffic Load Control
- Includes Buffered Data Pump Interface as Well as Simple Callback Handlers
- Supports Externally Linked Protocol Monitor
- Easily Interfaces With SPIRIT CORP Modem Data Pumps
- eXpressDSP-Compliant Algorithm. Code is Reentrant, Supports Multithreading and Dynamic Memory Allocation
- Can be Easily Ported to any Platform

description

The SPIRIT V.42/V.42bis conforms to ITU-T V.42 error correction protocol that uses LAP-M and ITU–T V.42bis data compression protocol.

resource requirements

CONFIGURATION	MIPS PEAK / AVERAGE	PROGRAM MEMORY (KWORDS)	CONSTANT MEMORY (KWORDS)	DYNAMIC MEMORY (KWORDS)
V.42/V.42bis Generic	N/A† / 4			1370 + (P1‡–259) * 4 + Memory Pool Size§
V.42/V.42bis Pool Size = 1500 Duplex compression, Dictionary size = 512	8† / 3	13.1	162	4936
V.42 only Pool Size = 1500	4 / 3			2308

† Peak MIPS of V.42bis depend very much on the content of data to be compressed. For this reason, V.42/V.42bis object supports multiple threads, so that compressions/decompression tasks, which may consume a lot of MIPS in some exceptional cases, would run in a lower priority thread.
‡ P1 is a negotiation parameter that determines the dictionary size (512 ÷ 4096) for V.42bis. MIPS requirements are given for 14400 bps.
§ Minimum value of Memory Pool SIze is 800.

availability

The SPIRIT V.42/V.42bis is available in the following forms:

- eXpressDSP compliant object code for TMS320C54x
- Fully functional eXpressDSP evaluation object at extremely low price
- DLL for MS Windows
- Portable C code
- Assembly code

The algorithm is supplied with test environment and integration example code.

Detailed product annotation and user guide documents describing testing procedures, interface and integration of this product, as well as PC-based and DSP-based (TI TMS320VC5406 EVM and TMS320VC5402 DSK) demos are available for evaluation upon request. To get additional information on CST software, go to www.spiritdsp.com/CST.

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