

ADVANCED TECHNOLOGIES FROM ISRO

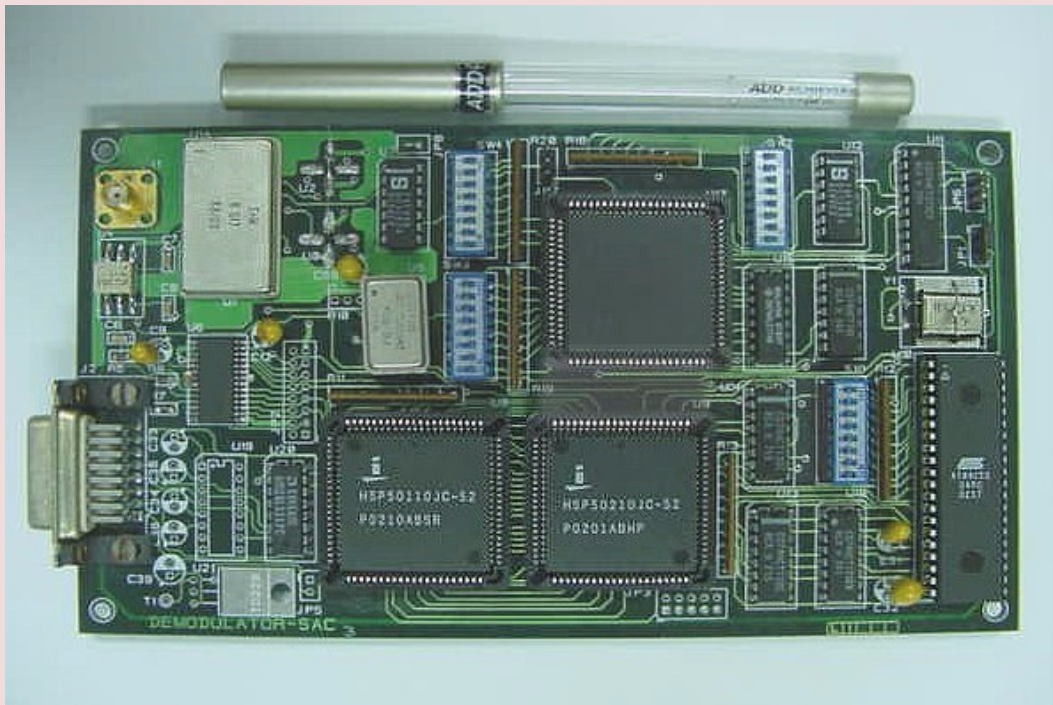
Interest Exploration Note

TT / 09 / 02 / SAC

ASIC Based Demodulator

The Indian Space Research Organisation (ISRO) has developed an ASIC based bpsk Demodulator which will find wide commercial and special application.

ASIC based BPSK/QPSK Demodulator forms an important subsystem for any satellite communication. This is a selectable data rate Demodulator from 2.88 kbps to 2.048 mbps. It accepts 455 KHz to 70 MHz (programmable) at the input and delivers data output at selected rate with RS422 interface. L-band interface is optional. It is capable of tracking input signal over 70% of the data range. Coherent demodulation is implemented to achieve performance within 1 dB of theoretical values.



ASIC Based Demodulator

TECHNICAL SPECIFICATION(S)

IF	: 455 KHz to 70 MHz, Programmable
IF tracking range	: 70% of the data rate
IF level	: -5 to -35 dBm
Modulation	: BPSK/QPSK selectable
Data Rate	: 2.88 kbps to 2.048 mbps preprogrammed
Coding	: Convolution code Rate 1/2,k=7
Phase ambiguity Resolution	: Differential decoding
Scrambling	: V.35 CCITT
Performance	: 6.5 Eb/No for BER of 1.0x 10 ⁻⁶
IF interface	: SMA (f), 50 ohms
Data & Clock interface	: RS 422
Power supply	: + 5 V, 300 mA, + 15 V, 80 mA
Operating temperature range	: 0 ° to 50 ° C

SALIENT FEATURES

- Demodulation of digitized audio, video or data.
- Data rate selectable from 2.88 kbps to 2.048 mbps pre-programmed.
- Moderate tracking range.

APPLICATION(S)

As a subsystem for:

- Digital Audio Networking
- Distance Education and Training
- Disaster Warning Management System
- News and Data Broadcast

TECHNOLOGY TRANSFER FROM ISRO

ISRO is willing to offer the know-how of this technology to entrepreneurs / industries in India. Capable manufacturing industries in acquiring this know-how may write with details of their present activities, requirements and plans for implementation, infrastructure and technical expertise available with them, their own market assessment, if any, and plans for diversification to the address given below.

For further details, please contact:

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