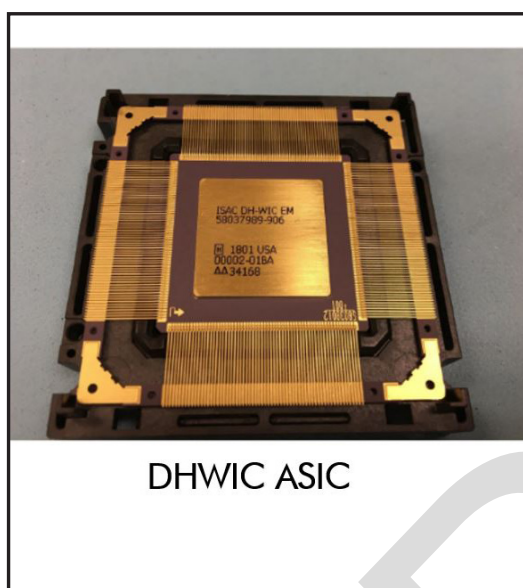


Data Handling Wavelet Image Compression ASIC (DHWIC ASIC)

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has developed Data Handling Wavelet Image Compression ASIC (DHWIC ASIC).

The ASIC is based on DWT based Compression and adopted CCSDS recommended standard.



DHWIC ASIC

Salient Features

- ✦ Space qualified Image compression ASIC of 1M gates with 5Mbits on-chip memory.
- ✦ Versatile design with programmable features to meet multiple mission requirements.
- ✦ Programmable image width up to 4096 pixels.
- ✦ Programmable Compression Ratio.
- ✦ Lossy & Lossless compression.
- ✦ Max. power 0.66W @ 66 Msamples/s.

Major Specifications

Modes of Operation	Compression/Bypass
Compression	CCSDS standard, DWT based
Input Image width	128-4096 pixels (programmable)
Pixel dynamic range	8 to 13 bit programmable
Compression Mode	Lossless / Lossy
Imaging mode supported	Area array/Push broom
Compressed Output	Quality/ Rate controlled
Multichannel support	1/2/4 channel support
Compression ratio	1 to 20
Max power consumption	0.66 Watts @ 66 Msamples / s
Technology & Quality level	150nm, QML V

Technology Transfer

URSC-ISRO offers to transfer this technology of DHWIC ASIC (Data Handling Wavelet Image Compression ASIC) developed by URSC to industries in India with adequate experience and facilities. Conditions apply for transfer of this technology. Industries interested in obtaining knowhow may write giving details of their present activities, infrastructure and facilities.

Technology Transfer & Industry Coordination Division (TTID),
Programme Planning and Evaluation Group (PPEG),

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🌐 <https://www.ursc.gov.in/industry/index.jsp>