

CVC Wave

Catana Versatile Compression Series

**Real-time High-speed Lossless
Data Compression Library**

Data Compression

CVC Wave : Facilitates failure prediction by big data analysis

Exhaustive storage of sensor data from manufacturing equipments

Manufacturing Equipments



Samples at 16bit, 256 points/ms **15TB/year**

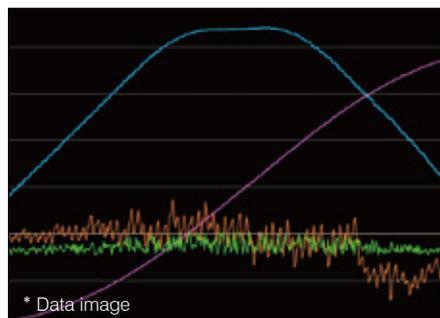
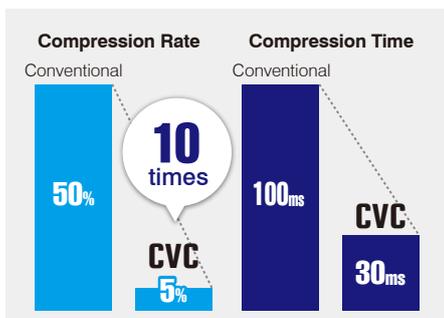
IoT Servers

Sensor data from
manufacturing equipments
Compressed by **CVC**

Line Management Computer



0.8TB/year Manufacturing information
acquisition & analysis



**Extremely high data
compression ratio helps
improve analysis accuracy**

CVC Wave offers ten times higher data compression ratio than conventional methods, enabling storage period on a 1TB HDD to be substantially extended from approximately 20 days to 15 months. It now allows to predict production problems by leveraging big data analysis.

Supported environment

CVC Wave supports wide variety of environments used in embedded devices:

- OS: Windows, Linux, uTRON, T-Kernel, VxWorks, non-OS system and more
- CPU: Intel family, Renesas H8 series, SH family, ARM family and more

* Cannot read from or write to a file in an environment that does not support any file systems.

CVC Wave Features

Designed for natural data such as waveforms, CVC Wave features our proprietary compression technology that optimizes compression based on the system-specific data properties. It builds a dedicated compression strategy based on the data properties (such as density and continuity), resulting in extremely high data compression ratio especially on analog measurement data with uniform properties.

Conventional methods

- ✗ Run slow and take too long time to complete.
- ✗ Processing speed highly depends on the type of input data.
- ✗ Not suitable for embedded applications due to large software size.
- ✗ Lower compression ratio depending on the data contents.
- ✗ Freewares may involve ambiguous licenses.
- ✗ General compression means easy decompression.



CVC Wave

- Achieves overwhelmingly faster compression than conventional methods.
- Stable processing speed and virtually real-time processing.
- Small-scale software implementation makes it ideal for embedded applications.
- Higher compression ratio than conventional methods.
- Machine-independent source code fits any execution environments.
- Highly secure due to our proprietary process.
- Includes a free license for a dedicated library for decompression.

Use Cases / Recommended Uses:



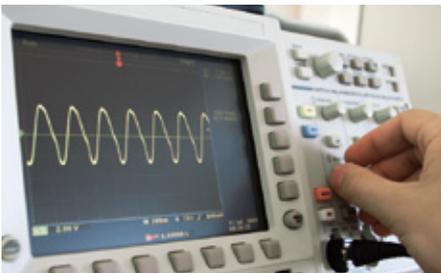
Compressed storage of various data on manufacturing equipments.



Speeding-up communications and compressed storage of various smart factory data.



Speeding-up communications and power saving for remote monitoring systems.



Compressed storage of analog sensor data.



Experiment data archive in lab environments.



Waveform data compaction in IoT clouds and data centers.

Introducing CVC Series

CVC Image

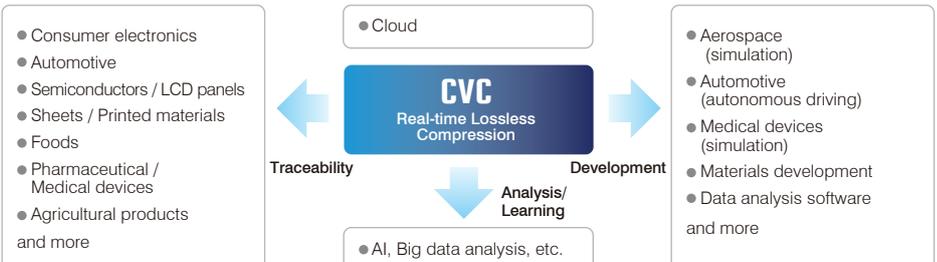
Real-time high-speed lossless data compression library optimized for images. Suitable for exhaustive storage of images.

CVC Wave

Real-time high-speed lossless data compression library that enables fast and highly-efficient compression for various type of waveforms.

CVC Codec

IP library that implements CVC compression with FPGA.



Distributor

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