

## V2F100 Factsheet

### 100 MHz Voltage to Frequency Converter.

#### What is V2F100?

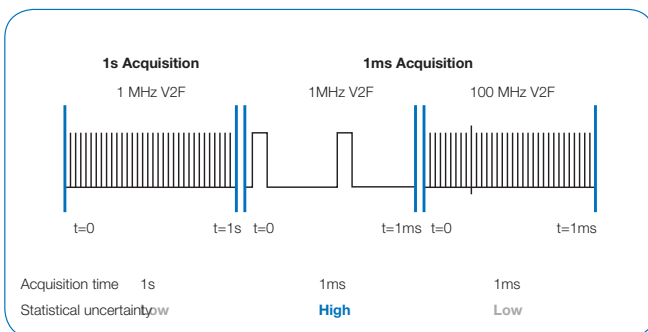
- V2Fs convert a voltage to a frequency. Typically this frequency is sent to a counter to enable the frequency (relating to the voltage) to be recorded.
- As the input voltage increases, the frequency output increases linearly.
- Over the last few decades, the industry standard V2F's have been running at 1 MHz. While there may have been some minor incremental improvements to the design, the resolution of the results have not changed.
- The V2F100 converter operates at 100 MHz. That's 100 times faster than the industry standard resulting in 100x the accuracy of results!

#### Where are V2F's used?

- V2F's are used as part of the readout system for ion chambers.
- A common area they are used is where X-ray fluorescence experiments are being conducted.

#### Why use V2F100?

- A single frequency increment in the V2F100 represents a voltage change 1/100th that of a regular V2F. This means that much smaller voltage changes from the ion chamber can be detected and therefore gives less uncertainty.



- In the time it takes a standard V2F to give a single measurement, the V2F100 will take 100 measurements. So for fast acquisitions the V2F100 enables vital information to be captured that would have been missed by a standard V2F.
- This converter can be configured for voltage ranges of 0 to +/- 1V, 2.5V, 5V or 10V. The output frequency can be configured to be 10, 20, 50 or 100 MHz TTL pulse.

For further information please refer to the technical data sheet.



Comparison of Measurement Uncertainty against Integration Time for Quantum Detectors V2F and V2F100

