

# C414

## 8 Channel TDC



## Features



- Six programmable FSRs: 100, 200, 500, 1000, 2000 and 5000 ns
- 12 bit resolution

### • Description

- Common START operation
- Conversion time: 2.5  $\mu$ s per channel

The **Mod. C414** is a single width CAMAC unit housing 8 independent 12 bit time-to-digital conversion channels. The full scale time can be selected from 100 ns to 5  $\mu$ s via internal DIP switches.

- Full scale time up to 5  $\mu$ s
- The time resolution ranges from 25 ps to 1.25 ns (respectively for 100 ns and 5  $\mu$ s full scale time range). The time resolution is 4 counts, the DNL less than  $\pm 1.5$  %. The conversion time is 2.5  $\mu$ s per channel and it is reduced to 1.5  $\mu$ s for overflow channels. A CAMAC LAM is generated (if enabled) at the end of the conversion.
- Sliding scale for DNL improvement

## Technical Specifications

### Number of channels

8

### Resolution

12 bit

### Number of ranges

6

### Time range/resolution

Max: 0÷5  $\mu$ s (1.25 ns res.)  
min: 0÷100 ns (25 ps res.)

### Conversion time

2.5  $\mu$ s per each valid input

### Full Scale Range

92% of the time range

### Integral non-linearity

$\pm$ 4% counts

### Differential non-linearity

$\pm$ 1.5% (from 20 ns to full scale)

### Fast clear input

>10 ns (active after 800 ns)

### Min. input FWHM

10 ns

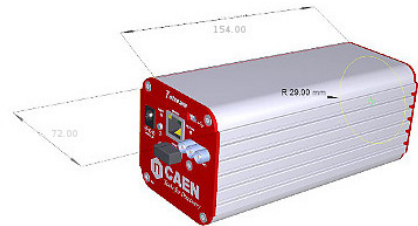
### Thermal stability

400 ppm/ $^{\circ}$ C (0 to 60 $^{\circ}$ C)

### nan

nan

## Gallery



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