

# CT8-WLAN

## Compact Telemetry System

8 channel include signal conditioning for STG, Th-K, ICP or High level inputs

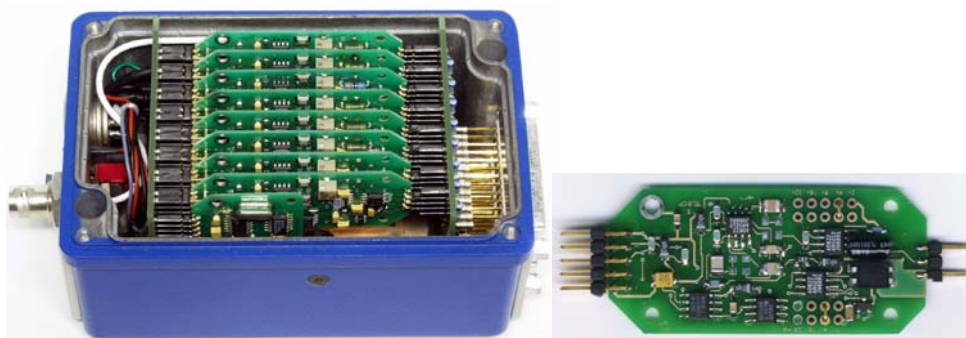


- 8 channels, 12 bit resolution, simultaneous sampling of all channels
- Anti aliasing filters
- +/- 5V analogue output at the receiver side, optional dig. output for PC interface
- Distance up to 2000m (with +12dB Option) between two transceivers at free view
- 100% Error correction through data buffer
- Static acceleration up to 100 g in all directions
- Signal bandwidth 8 x 0 ... 2400Hz

The CT8-WLAN Compact is a 8-channel telemetry system with integrated signal conditioning for sensors, wireless digital transmission with error correction and analog reproduction. The conditioned measured values are routed via anti-aliasing filter to a 12-bit A/D converter, simulate sampling of all channels, encoded in PCM format and transferred to the HF transmitter as modulation variables. Dynamic range is 72dB with a signal-to-noise ratio of approximately 70dB. In the carrier frequency of 2.45GHz can work up to 4 telemetry system at the same time. Analog bandwidth of 8 x 0-2400 Hz.

CT8-Encoder with mobile WLAN transceiver	CT8-Decoder with WLAN transceiver
 <p>The image shows the CT8-Encoder system. It consists of a blue rectangular enclosure with two D-sub connectors on the front. A coiled white cable connects it to a grey rectangular module with a black antenna mounted on top. The grey module has a yellow label that reads "AP V3 AMP 192.168.0.230".</p>	 <p>The image shows the CT8-Decoder system. It consists of a grey rectangular module with four circular ports on the front. A coiled white cable connects it to a grey rectangular module with a white antenna mounted on top. The grey module has a yellow label that reads "AP V3 AMP 192.168.0.230".</p>
<p>with 10m cable between ENC8 and WLAN transceiver, incl. magnetic foot for car roof mounting and 6dB antennas</p>	<p>with 25m cable between DEC8 and WLAN transceiver and 6dB antennas</p>

Various configurations of different sensor modules are possible like signal conditioning for strain gages (STG), thermocouples type K (Th-K), ICP and also Voltage inputs (+/-5 or +/-10V), mixed configuration available.



Specify at Order!!

**Transmitter device (Encoder) without WLAN transceiver**



**Front side with the Sensor inputs**

**Back side with power In and antenna Out**

**SC Module STG:**

Sensor: strain gage, > 350 Ohms  
 Bridge completion: full, half and quarter-bridge  
 Excitation: 4 VDC (fixed), short-circuit protection up to 20mA  
 Gain: 200 or 1000 - selectable by solder jumpers (5mV/V or 1mV/V)  
 Offset: Zero adjustment by potentiometer or optional Auto-zero function (which is not lost by power-off), offset range up to 80% of full scale.

**SC Module ICP:**

Constant current: 1, 4, or 10mA  
 Gain: 2x, 4x, 8x, 16x or 32x

**SC Module POT:**

Sensor: Potentiometer Sensor >350 Ohms  
 Excitation: 4 VDC (fixed)

**SC Module TH-K:**

Sensor: thermo-couple, type K ( with cold junction compensation)  
 Temperature measuring range: 0°C to +1000°C (other on request)

**SC Module VOLT:**

High-level inputs: +/- 5 Volt or +/- 10 Volt

**Common data's:**

Channels: 4 or 8  
 Resolution: 12 bit A/D converter with anti aliasing filter  
 Sampling: simultaneous of all channels  
 Line of sight distance: 300 m with 10mW transmitting power and 0dB antennas  
 2000 m with 12dB booster and 6dB antennas  
 Power input: 10 ... 18 DC  
 Power consumption: 1000 mA (at 12V) using STG 8 sensors at 350 Ohms.  
 Analog signal bandwidth:  
 4 Channel Version: 4 x 0 ...4800Hz - 3dB  
 8 Channel Version: 8 x 0 ...2400Hz - 3dB  
 Transmitter carrier frequency: 2.45 GHz with 1100 kbit/s transmitter  
 Dimensions: 130x85x55 mm (without WLAN transceiver)  
 Weight: 850 grams (without WLAN transceiver)  
 Operating temperature: - 20 to +70 C  
 Static acceleration: 100 g in all directions  
 Shock: 200 g in all directions

## Receiver device (Decoder) without WLAN transceiver



**Front side with 8 BNC outputs**



**Back side with antenna In, power In and Auto Zero LED display**

### Common data's:

Channels:	4 or 8 Analog with $\pm 5V$ output range via BNC (optional digital PCM output for PC interface)
Resolution:	12 bit D/A converter with smoothing filter
Dynamic range:	72dB
Power input:	10-30 VDC
Power consumption:	1000mA at 12V
Receiver carrier frequency:	2.45 GHz
Dimensions:	180x105x65 mm. (without WLAN transceiver)
Weight:	1250 grams without receiving antenna (without WLAN transceiver)
<u>Time delay</u>	3.3 seconds between analog IN / OUT (through data buffers)
Operating Temperature:	-20 to +60C .
Shock:	20g in all directions.
System accuracy between encoder input and decoder output:	+/-0.25% without sensors