

DEWE-CLOCK

GPS or IRIG synchronization for DEWETRON instruments

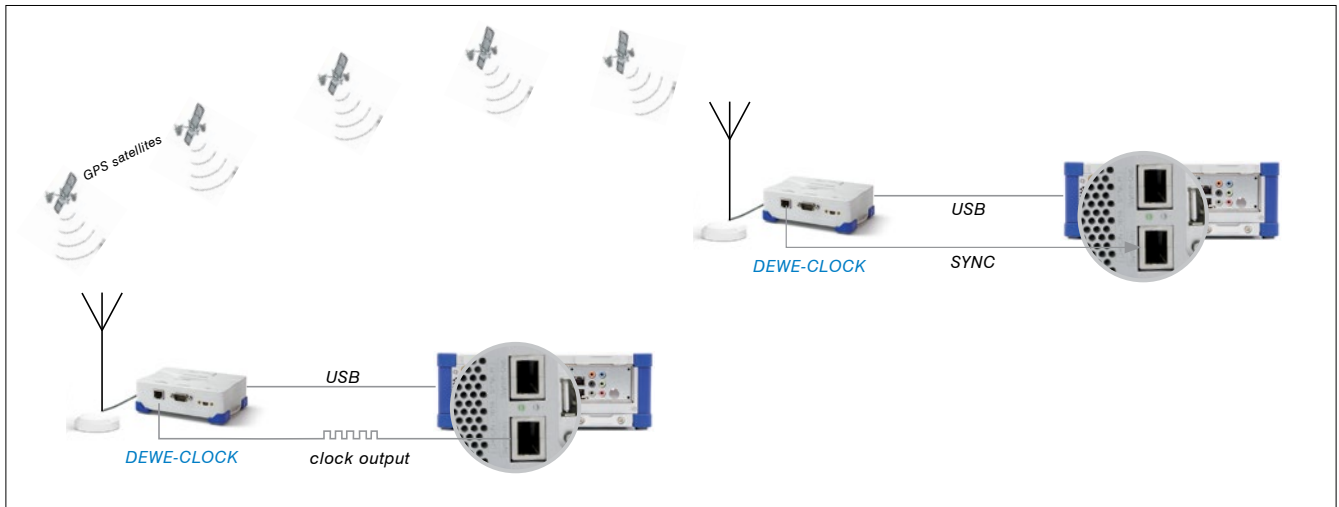
- Synchronization of DEWETRON instruments to absolute time
- No drift when locked to IRIG or GPS signal
- Very low drift even with IRIG or GPS signal disconnected
- Input:
 - GPS
 - IRIG time code A or B, AM or DC
- Output:
 - AD converter clock up to 10 MHz
 - DEWE-ORION DSA-series clock
 - IRIG time code B, DC



DEWE-CLOCK			
IRIG input specifications			
Supported codes:	IRIG code A or B; AM or DC		
Compatibility (AM code):	0.5 V _{pp} to 10 V _{pp}		
Ratio (AM):	3:1 ±10 %		
Compatibility (DC code):	DC Level Shift TTL / CMOS compatible		
Impedance:	20 kΩ		
Isolation	150 V _{DC}		
Trigger accuracy	1 μs		
IRIG output specifications			
Supported codes	IRIG code B, DC		
Isolation	None		
Accuracy	< 1 μs (delay to GPS PPS)		
GPS specifications			
General	12 channel, L1 frequency receiver		
PPS accuracy	100 ns		
Refreshrate	1 Hz		
Position accuracy	Horizontal CEP		
Autonomous	3.0 m		
Differential	1.0 m		
Trigger accuracy	1 μs		
System specifications			
Clock accuracy locked	without drift	Vibration test:	EN 600068-2-6
Clock accuracy unlocked	< 10 ppm	Shape:	Sine
Input	SMA for GPS antenna, BNC for IRIG I/O	Frequency:	10 Hz to 150 Hz
Output:	Clock and Trigger for DAQ-systems on DB9 connector	Power spectral density:	1 m/s ² / Hz from 10 – 200 Hz
Trigger:	PPS (pulse per second), rising edge on time, 75 ms high time, TTL level compatible	Duration:	30 minutes per axis
Scan clock:	10 Hz to 10 MHz, rising edge synchronized, 50 % duty cycle, TTL level compatible	Vibration test:	EN 60721-3-2 Class 2M2
ORION-DSA-SYNC:	LVDS compatible on RJ45	Shape	Random
Power supply:	USB powered, max. current 500 mA	Frequency range	10 - 200 Hz
Operation temperature:	-5 °C to +70 °C	Power spectral density	1 m/s ² / Hz from 10 – 200 Hz
Storage temperature:	-20 °C to +85 °C	Duration	30 minutes per axis
Humidity:	10 % to 80 %; non condensing	Shock:	EN 60068-2-27
Dimensions (W x D x H):	133 x 104 x 43 mm (5.23 x 4.1 x 1.7 in.)	Shape:	Half-sine
Weight:	approx. 330 g (0.72 lb)	Acceleration amplitude:	15 g
		Duration:	11 ms
		Test in 3 axis, 3 shocks in each axis and direction	

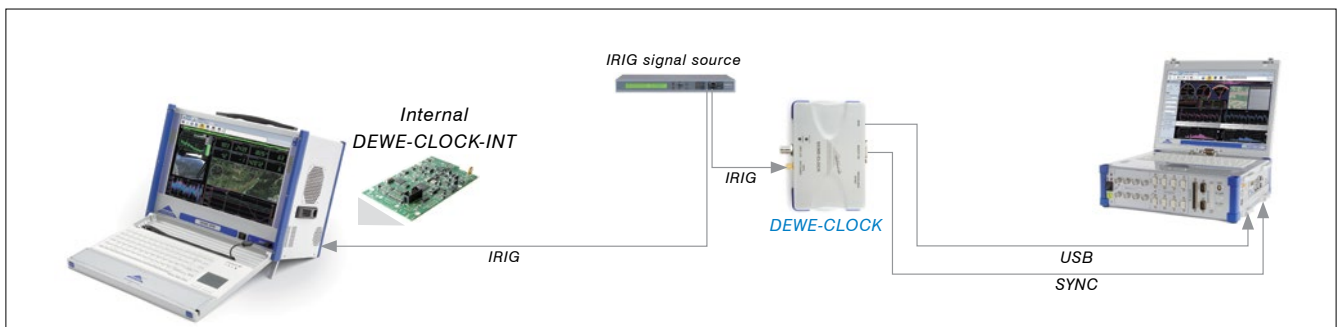
Applications

SYNC via GPS



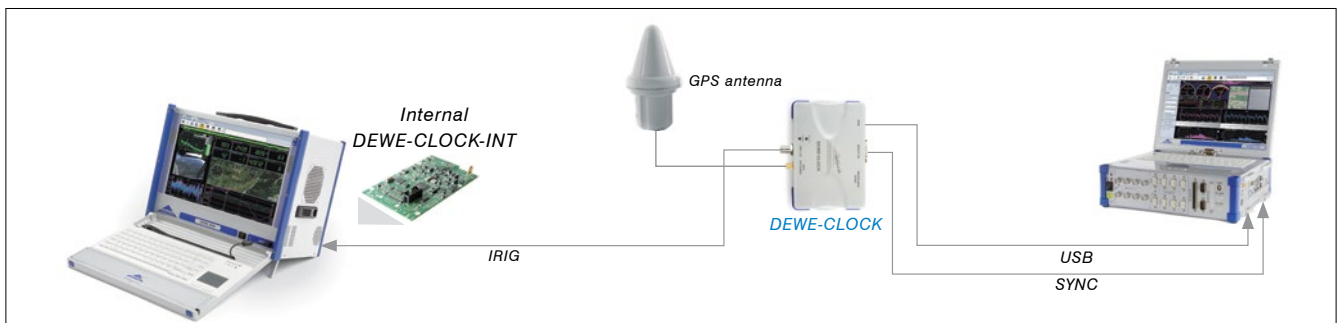
Synchronization of 2 DEWETRON instruments over long distances

SYNC to existing IRIG signal



Synchronization of two instruments to IRIG timecode

IRIG generator



DEWE-CLOCK used as IRIG signal and clock generator