

## IRIG-B MODULE



### DESCRIPTION

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The IRIG-B time synchronization protocol is today the most used in the electrical utilities industry.

The IRIG-B signal is fed to the RWC0Y000x module using either an IEC 60044-8 TTL compliant signal connected to the BNC connector, or an IEC 61869-9 compliant fiber optic signal connected to the ST type fiber optic connector (Fiber optic and BNC input connectors cannot be used at the same time).

The IRIG-B protocol generally provides synchronization within a few hundred of nanoseconds of UTC (Coordinated Universal time). The IRIG-B000/B004 IEEE-1344 protocol supports leap second adjustment, but does not provide TAI offset. The IRIG-B000/B004 IEEE-C37.118 protocol provides additional information on time quality.

The Vizimax IRIG-B module supports the following Time Code formats:

- IRIG-B000/B004 IEEE-C37.118 (compatible with 2005 and 2011)
- IRIG-B000/B004 IEEE-1344
- IRIG-B003.

### BENEFITS

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The Vizimax IRIG-B module provides Vizimax unit with accurate time synchronization to time stamp all recorded events and waveforms for remote data analysis.

## IRIG-B MODULE SPECIFICATION

The IRIG-B module has the following specifications:

Specification	Value
Base precision	Better than 10 $\mu$ s
IRIG-B DCLS (Un-modulated) over Fiber Optic	ST type Frequency range : 820 – 850 nanometers Base precision: better than 1.0 $\mu$ s
IRIG-B DCLS (Un-modulated) on BNC	Input impedance : $Z_{in} = 500 \Omega$ Input level : 2.5V to 5.0 Vdc Base precision: better than 10 $\mu$ s
Voltage isolation level	500 Vdc
Available IRIG-B formats	<ul style="list-style-type: none"> <li>- IRIG-B000/B004 IEEE-C37.118 (compatible with 2005 and 2011)</li> <li>- IRIG-B000/B004 IEEE-1344</li> <li>- IRIG-B003</li> </ul>

**NOTE:** Fiber optic and BNC input connectors cannot be used at the same time.

## IRIG-B SIGNALIZATION LED

An IRIG-B signalization LED is located near the IRIG-B input connectors.

The signalization LED provide information on the IRIG-B module operational state.

IRIG-B LED state	Description
Off	IRIG-B module is disabled.
Red steady	IRIG-B module is Enabled, but does not receive any IRIG-B input signal.
Red flashing	IRIG-B module is Enabled and IRIG-B input signal is received but application cannot decode received frame format. It may also be due to receiving data without year (IRIG-B003 mode) and decoded date is too far from current system time (greater than 1 day).
Yellow flashing	Transitory state: Synchronization is ongoing with a received pulse.
Green flashing	Normal state: The system is receiving a valid timecode.

## ORDERING INFORMATION

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**RWC0Y0000 :** Optional IRIG-B module for SynchroTeq Plus unit (Rear Plug-In-U).  
This option must be ordered at the same time as the SynchroTeq Plus unit order.

Please refer to the SynchroTeq Plus smart coding document STP030000-SC for more details on the SynchroTeq Plus options.

**RWC0Y0001 :** Optional IRIG-B module dedicated to SynchroTeq MV unit.  
This option must be ordered with the SynchroTeq MV unit.

Please refer to the SynchroTeq MV smart coding document STM0x0000-SC for more details on the SynchroTeq MV options.

VIZIMAX also offers commissioning and training services: for more details please contact us.



Support contact:

[support@vizimax.com](mailto:support@vizimax.com)

[www.vizimax.com/support](http://www.vizimax.com/support)

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