

TIMELINK2

Modular Time-Frequency equipments.

The TIMELINK concept is designed to answer various requirements in terms of frequency and time generation and distribution over different formats and protocols.

The TIMELINK line is characterised by modularity, flexibility and versatility as well as low cost and easier maintenance operations.

TIMELINK_2 is the second generation of this equipment line, which is now well known and established on the critical markets of Avionic, defence, space and telecom.

A ruggedised version of TIMELINK is also available, in order to cope with strong environment constraints of onboard systems (vibrations, shocks, EMC...).

The modular structure allows the combination of frequency and time code, generation and distribution in the same equipment without any problem on the signal quality.

1. MECHANICAL ASPECTS

Both 3U and 6U rack mounts are used, depending on the number of modules required. The equipment depth is 359 mm, and the modules are compliant with format standard DIN 100 x 160 mm.

The modules width is: 6 TE that is $6 \times 5.08 = 30.4$ mm. 2x6TE or 3x6TE width are used for some specific modules (Power supply, Rubidium oscillator...)

As the useful width of the rack is 84 TE, 14 modules of 6 TE widths could be plugged together. A handful is used for module removal. The front face of the modules is treated with colourless Alodine.



TimeLink 2 Front face



Rear face

Modular Time-Frequency equipments.

2. BACK PLANE CONNECTORS

Standard DIN41612 connectors with "a" and "c" raw are used for equipment back plane. Inserted coaxial connectors are also used for critical analogue signals. In order to best manage time and frequency sub-systems in the same rack, the modularity has been also extended to the back plane.

The Central Unit (CU) module is able to manage several modules distributed over different racks.

3. FRONT FACE

Two types of front faces are used:

"Time type » front face

"Frequency type" Face

On request, specific front faces are designed in order to meet special requirements. But they share with standard front face the same philosophy.

3.1 "TIME TYPE" FRONT FACE

In the standard release this front face holds an UT time display (7 segments red LED) and a B&W graphical touch panel LCD display.

3.2 "FREQUENCY TYPE" FRONT FACE

When the equipment only runs frequency modules type, the front face simply holds bicolour Led. The Led shows to the user a synthesis of each module status.

4. SOFTWARE

4.1 FRONT FACE MANAGEMENT.

The information's displayed on the front face are presented according to the main functions of the equipment. For example, the complete parameters of the GPS are displayed on one page (position, status, alarms...).

4.2 LANGUAGES

The user selects the language of the displayed information's. At least, two languages: English and French are available.

4.3 REMOTE CONTROL

The signature of the equipment is available through the remote control function of the equipment : Configuration, modules version...Both TCP/IP and SNMP link (option) are available for remote control management. RS232 link could be available too.

4.4 SETTING EQUIPMENT PARAMETERS

The CU module stores all the operating parameters. For the modules using settable parameters, the UC module is in charge of these settings when the equipment is starting or when the parameters have to be modified.

A non-exhaustive list of the available modules is shows on the next page.

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<i>Reference</i>	<i>Designation</i>
<i>GPS receiver modules</i>	
TL2-9201	Motorola M12 Timing receiver - with local OCXO oscillator 5 OR 10 Mhz
TL2-9202	Motorola M12 Timing receiver - frequency disciplining applications - 1PPS output
TL2-9210	Synchronisation module - 1 reference input 1 MHz & 1 PPS - with internal OCXO oscillator
<i>IRIG B modules</i>	
TL2-9300	IRIG B Time code generator
TL2-9301	DCLS IRIG B Time code generator
TL2-9302	IRIG B redundant time code distributor - Individual outputs setting - 5 differential outputs
<i>1 PPS modules</i>	
TL2-9350	Top second distributor (1PPS) - 5 TTL outputs
<i>RS232/RS422 serial link modules</i>	
TL2-9400	ASCII time frame generator - 5 RS232 / RS422 outputs
TL2-9401	Serial frame distributor - 5 RS232 / RS422 outputs
<i>Oscillators modules</i>	
TL2-95xx	5 & 10 MHz, quartz OCXO, BVA & Rubidium oscillators
<i>Frequency output modules</i>	
TL2-9600	Frequency output module, 5 sine outputs without filters, +13 dBm 50 Ω - 1 to 20 MHz
TL2-9601	5 MHz frequency output module, 5 sine outputs with filters, +13 dBm 50 Ω
TL2-9602	5 MHz redundant frequency output module, 5 sine outputs with filters, +13 dBm 50 Ω
TL2-9603	10 MHz frequency output module, 5 sine outputs with filters, +13 dBm 50 Ω
TL2-9604	10 MHz redundant frequency output module, 5 sine outputs with filters, +13 dBm 50 Ω
TL2-9605	2.048 MHz frequency output module, 5 sine outputs with filters, +13 dBm 50 Ω
<i>Frequency input modules</i>	
TL2-9700	10 MHz frequency input module
TL2-9701	1 to 20 MHz frequency input module
TL2-9702	2.048 MHz frequency input module
<i>Frequency control modules</i>	
TL2-9801	Frequency doubler module
TL2-9802	Frequency divider module
TL2-9803	Phase comparator module - 1 external clock input - Analogue outputs 0 - 10 V
<i>Remote control modules</i>	
TL2-9900	RS232 serial link remote control module
TL2-9901	IEEE 488 link remote control module
TL2-9902	TCP/IP remote control module
<i>Miscellaneous</i>	
TL2-9101	Video sync module, composite video sync output & VITC time code output
TL2-9102	Video time incrustation module