

Data Sheet

VIAMI

7310 Lector and Scriptor

Service Test Product Family

The 7310 Lector software allows you to easily manage complex measurements; it is a well-established and economic test solution for service centres and repair shops testing returned mobile phones.

7311 Lector Basic

Carry out automated measurements with simple pass/fail indication and more detailed test reports. This product is free of charge, comes with generic test scripts for the major cellular technologies, and can use test scripts created with 7315 Scriptor.

7312 Lector Enhanced

Lector Enhanced supports additional functions like indication of multiple Lector installations running simultaneously, the position finder for GSM auto coupling and support of 7360 Coupling Factor Update License. A one-year 7360 license is already included.

7315 Scriptor

Edit and define test scripts and limits; and add new mobile phone models with coupling factors. Scriptor comes with all the Lector functionality and fulfils all the administrator needs to define the tests.

7360 Coupling Factor Update License

Update your database of coupling factors for new mobile phone models over the Internet. This 1-year license is an option to 7312 Lector Enhanced and 7315 Scriptor, and allows you to update your database of mobile phones with latest information.

The Digital Functional sub-system comprises a Digital Test Controller (DTC) card, together with up to 18 Digital Testpoint (DTP) cards.

- Protocol Emulation
- Device Programming
- 4 x 16 bit Pattern Generators
- 64 non-multiplexed drive/sense channels per DTP card
- Programmable Logic Levels
- Up to 16 k memory per channel
- Relay isolation on all channels
- Analog signal routing

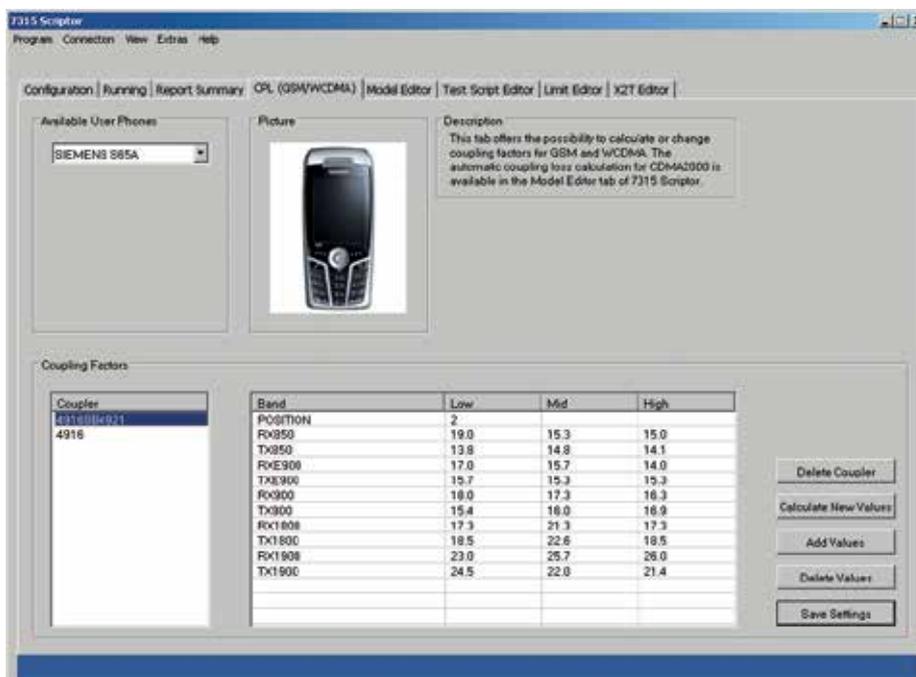


Bluetooth and WiFi Testing

Additionally, check if the Bluetooth or WiFi module of the phone is performing. Options and complete kits for Go/NoGo testing are available to support complete mobile phone testing.

Automated Test Solution For Any Wireless Application

Application	Recommended Test Solution
Service centers use test equipment to decide if a phone needs repair or is fault-free. An administrator takes care of new phone.	7311 Lector Basic (test stations) 7315 Scriptor (administrator)
Incoming inspection in large service centers uses test systems to determine the fault; further processing depends on the test results. Productivity is increased with several test systems simultaneously operated by one person, with multiple instances of the software on one PC. An administrator measures coupling factors and distributes them, along with appropriate test scripts, via LAN. Test results are centrally stored.	7312 Lector Enhanced (test stations) 7315 Scriptor (administrator)
Service centers without an administrator and knowledge how to measure coupling factors manually, need a simple solution to update test systems with coupling factors for the latest phones. The standard test scripts delivered with Lector are sufficient.	7312 Lector Enhanced with 7360 Coupling Factor Update License
Individual technicians in repair shops with good knowledge of test scripts and limits, perform tests and also configure them. They achieve accurate measurements even with latest phone models with the Coupling Factor Update License.	7315 Scriptor with 7360 Coupling Factor Update License
Radio workshops test TETRA handsets to ensure reliable communication. In case of a failure, the TETRA radio is tested to identify the problem; it is then forwarded to a repair technician, along with a test report.	7312 Lector Enhanced 2303 Stabilock with 2331 Autotest Option
The administrator of a TETRA service center integrates parameters for new radios into Lector, making them available to test technicians in a user-friendly way.	7315 Scriptor 2303 Stabilock with 2331 Autotest Option



7311 Lector Basic

Testing the functionality of a wireless device in the repair shop or at the point of return does not have to require highly qualified test engineers: Standard test sequences are easily run and result in a simple Pass/Fail statement. A test protocol for more detailed results can be viewed or printed on request, for example, to forward it to a repair technician. Test protocols can be saved automatically or on request, on the local PC or any connected server. 7311 Lector Basic supports comprehensive functional tests by shop personnel.

The software takes the power attenuation between the antenna coupler and the tester into account in the measurement results: For initial setup, 7311 Lector Basic comes with a free built-in database containing coupling factors for popular phones. This facilitates the test system setup and saves a lot of time compared to manually adding coupling factors for all phone models.

7311 Lector Basic is free and can be downloaded from the VIAVI Solutions web site.

The built-in test sequences support all the leading cellular technologies: GSM, GPRS, EDGE, WCDMA, HSDPA, AMPS, CDMA2000, 1xEV-DO, LTE and TETRA. Predefined parameters such as the channels to test and the coupling factors allow the operator to start testing immediately, but can be customized from within Lector.

The screenshot displays the 7312 Lector Enhanced software interface. The window title is "7312 Lector Enhanced" and the menu bar includes "Program", "Connection", "View", "Extras", and "Help". The main area is divided into several sections:

- Run Test Script:** Includes dropdown menus for "Group" (GSM/WCDMA), "Subgroup" (GSM/WCDMA; GSM), "Script(s)" (WG_D9018_ST.RET), and a "Run Test Script" button.
- Phone Information:** Shows a small image of a Samsung S9000 phone and its details: "Samsung S9000 ; Pwr: 50" and "IMEI: 352819021116991".
- Result:** A table with columns: Item, Lower Limit, Upper Limit, Value, Unit, and Result. The table contains multiple rows of test results, all of which are "PASS".
- Test Status:** Shows "Current Test Step" as "WG_D9018_ST.RET" and "Finished".
- Result Summary:** A large green button labeled "PASS" is located at the bottom right of the interface.

Item	Lower Limit	Upper Limit	Value	Unit	Result
Frame Erasure Rate	0.000	0.122	0.0	%	PASS
MS REPORT					
RX Level	-117	-87	-103	dBm	PASS
RX Qual	0	3	0	code	PASS
RF-LEVEL: -100dBm					
MS: 0 ; TCH: S94					
TX ALL					
Phase Error RMS	0.00	19.00	1.20	deg	PASS
Phase Error Peak	0.00	40.00	3.4	deg	PASS
Frequency Error	-250.00	250.00	-46.21	Hz	PASS
TX Power	25.00	35.00	29.46	dBm	PASS
Timing Advance	-3.69	3.69	-1.15	µs	PASS
Template Check	0	0	0.0	stat	PASS
FSER					
Class B error	0.000	2.000	0.0	%	PASS
Class B error	0.000	0.410	0.0	%	PASS
Frame Erasure Rate	0.000	0.122	0.0	%	PASS
MS REPORT					
RX Level	-117	-87	-102	dBm	PASS
RX Qual	0	3	0	code	PASS
RF-LEVEL: -100dBm					
MS: 15 ; TCH: S94					
TX Power	-5.00	5.00	-0.7	dBm	PASS
Template Check	0	0	0.0	stat	PASS
Test finished					

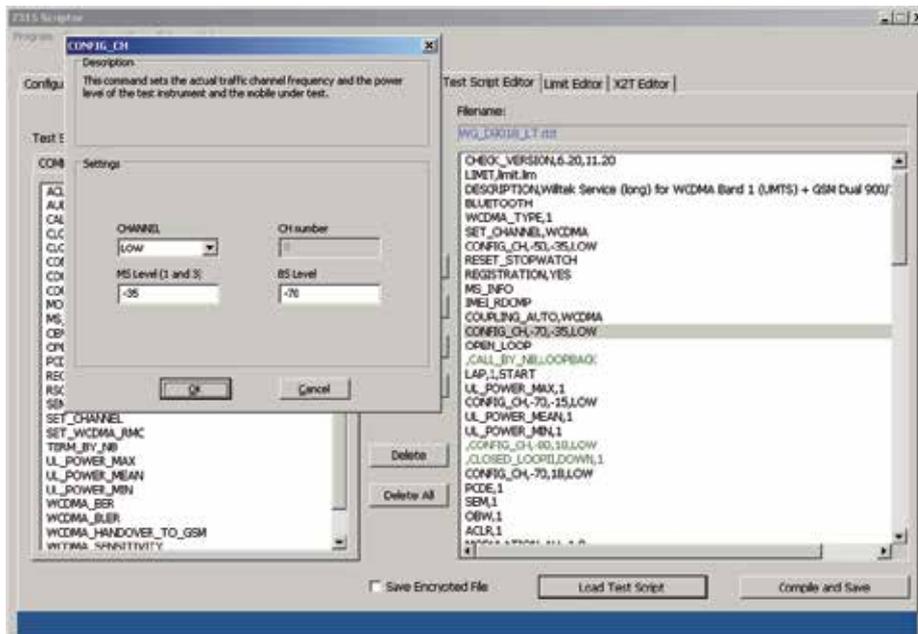
7312 Lector Enhanced

7312 Lector Enhanced provides all the possibilities of 7311 Lector Basic and offers additional features. The major difference between Lector Enhanced and Lector Basic is the support of the 7360 Coupling Factor Update License. Also, up to four instances of Lector Enhanced can run simultaneously on a single PC controlling different testers, increasing operator productivity. The different program windows are easily differentiated visually.

For new phone models, Lector Enhanced can determine the coupling factors for the different frequency bands. For GSM and WCDMA phones, the built-in averaging function increases the accuracy; outliers are indicated and can be excluded from averaging.

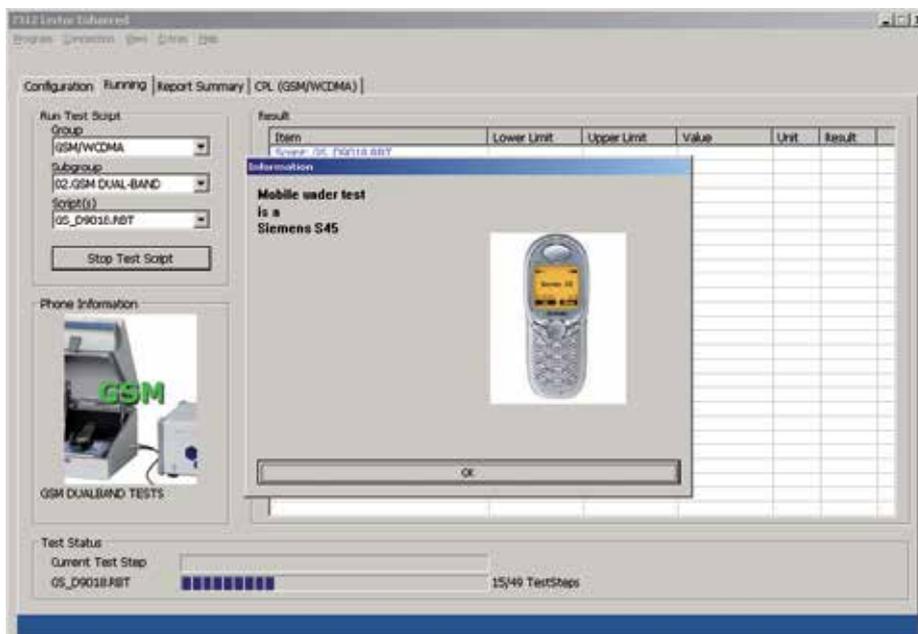
7315 Scriptor

7315 Scriptor features all of Lector Enhanced functionality and adds the capability of easily modifying existing test scripts and mobile phone profiles. These customized tests can then be transferred to and used by 7311 Lector Basic and 7312 Lector Enhanced installations.



The Model Editor within Scriptor is used by administrators to create model lists for Scriptor, Lector Basic and Lector Enhanced. This tool allows you to conveniently change or add entries for mobile phone models. Pictures, test scripts, comments, user instructions (1 and 3) can be entered and linked to a phone; the test operator will then see these when starting a test for this type of phone.

The Test Editor component provides an easy way for editing test scripts or creating a new test. The picture on the right shows how easily it is done: On the left hand side, separate lists for each technology allow you to conveniently choose a test step; it is copied to the new test script on the right hand side. A double-click on a test step opens an appropriate input box that allows you to change the parameters for this test step.



The Test Editor makes modifications of existing and creation of new test scripts an easy task.

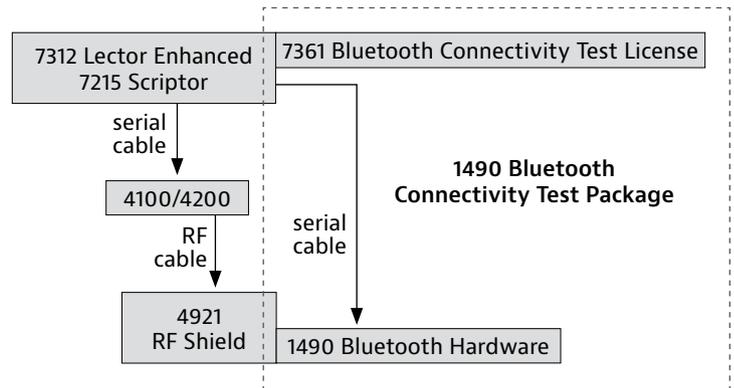
The Limits Editor offers a good overview of the limits, sorted by technologies. The limits can easily be edited by the administrator and stored under the same or another file name. Each test script can be linked to a different limit file; this way, tests scripts and limit sets can be combined individually.

7361 Bluetooth Connectivity Test License

Together with 7312 Lector Enhanced or 7315 Scriptor and the optional 7361 Bluetooth Connectivity Test License easy Bluetooth Go/NoGo tests 4100 and 4200 Series can be performed. The usability is extremely easy; the user just needs to make sure that Bluetooth of the mobile device is switched on. If this is the case the test is running automatically without any further user interaction like pairing. No interferences can disturb the test since the 4941 RF Shield box is used. In the Lector-Scriptor test results a PASS/FAIL statement can be found to manifest that Bluetooth has been tested for the particular phone.

7363 WiFi Connectivity Test License

Lector or Scriptor can also check the WiFi performance of mobile phones to determine if the WiFi device is connecting well. A few measurements are quickly done, only insignificantly increasing the overall test time of the phone. Almost any WiFi device can be tested, including routers.



7360 Coupling Factor Update License

With tests over the antenna, good power and receiver measurement accuracy is only achieved with the exact knowledge of the antenna coupling factor, which depends on the phone model and the coupling device. A list of coupling factors for a number of phone models is already delivered with Lector and Scriptor, but does not cover all the phone models available on the market. VIAVI offers an update service of the coupling factors for the latest models. These coupling factors are valid for the antenna connection between the phone and the 4916 Antenna Coupler installed in a 4921 RF Shield.

The 7360 Coupling Factor Update License is available as an option to 7312 Lector Enhanced and 7315 Scriptor; a first-year license is even included in these products. The option enables both applications to download actual coupling factors; VIAVI provides monthly updates over the Internet. A list of supported mobile phones and wireless devices is available on the VIAVI Solutions web site. The update service is available for one year and can be renewed.

VIAVI Software Licenses

The Lector and Scriptor products provide a scalable solution for running automated tests in the service environment. VIAVI makes software updates available on the Internet. The software licenses are protected by a USB dongle. This way, you can easily update and upgrade the software, and transfer the license from one PC to another, for example, if one computer is defective. Just one USB dongle suffices for all the software products because it can carry multiple licenses and can be upgraded on site.

Repair centres can take advantage of the network license where a number of computers share a dongle over the local area network (LAN). This way, the software licenses can be managed centrally, reducing the risk of individual dongles getting lost.

Home At Any Repair Shop

With Lector and Scriptor, VIAVI builds on many years of experience in the design of easy-to-use instruments and PC control software. Lector and related products from VIAVI reduce the complexities of testing modern cellular technologies to a simple Pass/Fail report, with a clear indication of the potential source of a problem if any. ISO 9000-certified service centers can trace the test conditions and equipment used for measurements with Lector and Scriptor.

Technical Details

Supported Connections

- TCP/IP
- GPIB
- USB
- RS-232
- Supported Instruments
- 7100 LTE Service Tester
- 2201 ProLock
- 3100 Series
- 4100 Mobile Fault Finder Series
- 4200 Mobile Service Tester Series
- 4300 Mobile Service Tester Series
- 4400 Mobile Phone Tester Series
- Supported Technologies
- LTE
- GSM, GPRS, EDGE, WCDMA, HSDPA
- AMPS, CDMA2000, EVDO
- TETRA
- Bluetooth, WiFi
- System Requirements
- Windows 7, Vista or XP
- 60 MB free hard disk space
- CD-ROM drive
- RS-232 or USB connection

Summary of Features

Feature	7311 Lector Basic	7312 Lector Enhanced	7315 Scriptor
Password protected configuration area	■	■	■
Display for measurement results in real time		■	■
Test report summary	■	■	■
Bluetooth and WiFi tests supported	■	■	■
Coupling factor wizard and editor for GSM, WCDMA and LTE	■	■	■
Automatic coupling factor calculation	■	■	■
Assignment of unknown Type Approval Codes to known mobile phones	■	■	■
Import and activation of phone configuration packages	■	■	■
Download of product updates via online and offline update	■	■	■
Support of the new 4916 XY Shuttle	■	■	■
Multiple print formats	■	■	■
Sending of SCPI and AT commands within a test script	■	■	■
Free of Charge	■	■	■
Download of actual CPL values possible (7360 support)		■	■
Up to 4 Lector installations on one PC		■	■
Failure reason codes for test data analysis		■	■
Report summary can be stored automatically		■	■
File synchronization for reading from a central folder		■	■
Optimum position finding for GSM, WCDMA and LTE phones			■

Summary of Features

Feature	7311 Lector Basic	7312 Lector Enhanced	7315 Scriptor
Mobile Editor, Script Editor, Limits Editor		■	■
X2Test Editor for barcode reader support		■	■
CDMA2000 carrier and coupling factor management			■
Channel files can be created and linked to script files			■
Groups, subgroups etc. can be exported to PCF files			■
Script check for error finding in the scripts (GSM/WCDMA)			■
Measurements can be selected for script commands with multiple output			■
Averaging of coupling values for GSM, WCDMA, CDMA2000, LTE and TETRA with indication of values which extremely deviate from the average value			■
Position finding for GSM, WCDMA, CDMA2000, LTE and TETRA phones			■
Encryption of test scripts			■
Calibration date can be checked and displayed with Lector		■	■

The type approval code (TAC) can be entered using a barcode reader; the TAC, that is the types of test depend on the mobile phone model

Ordering Information

Individual Licenses		Network Licenses	
7312 Lector Enhanced (includes USB dongle)	AG 897 310	7312 Lector Enhanced (network license)	AG 897 326
7315 Scriptor (includes USB dongle)	AG 897 311	7360 Coupling Factor Update License (network license, one year)	AG 897 327
7360 Coupling Factor Update License	AG 897 312	7360 Coupling Factor Update License (network license, two years)	AG 860 329
7360 Coupling Factor Update License (2 years)	AG 860 328	USB Network Dongle for max. 10 users	AG 860 570
7361 Bluetooth Connectivity Test License	AG 897 330	USB Network Dongle for max. 50 users	AG 860 571
7363 WiFi Connectivity Test License	AG 897 336	USB Network Dongle for max. 250 users	AG 860 572
1490 Bluetooth Connectivity Test Package for 7310 Lector and Scriptor	AG 248 980		
1491 WiFi Connectivity Test package	AG 248 499		
4941 Bluetooth Hardware	AG 248 511		
Scriptor Upgrade 7312 to 7315	AG 897 314		
4943 WiFi Adapter	AG 860 481		



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