KITS™

Data Acquisition, Analysis & Reporting Software

Fiber Optic Acceptance Testing Applications

- Test, accept & report cable loss & ORL
- Test & report Tx / Rx power levels
- Standards Compliant Pass / Marginal / Fail
- Data logging
- Education, using real time display
- Produce CSV export file for dB integration
- Either download or work live

Revision 3

KITS™ software is a flexible solution for real time data acquisition, analysis and reporting of fiber optic attenuation, power & optical return loss (ORL).

KITS™ dramatically improves testing productivity, lowers skill level, minimises errors and enhances report customizing capability.

KITS™ can be used across any size of organisation as a true enterprise level solution for performing measurement, reporting and database entry.

KITS™ is built into Excel. It is a convenient out-of-the-box solution for most users, and can be easily customised in many ways.

Features

- Real time acquisition & display
- Familiar MS-Excel® user interface
- Easy to use, productive & flexible
- Use on or off site
- Flexible test standards compliance
- Easy report customization
- One-click data directly into reports
- Full custom report capability
- Test data security
- Integration with our Autotest instruments
- Data logging
- Live test or download setup automation
- Demo mode for easy trial evaluation.
- Includes sample data files
- Comprehensive user manual

KITS™ - Data Acquisition, Analysis & Reporting Software

KITS™ software includes Cable Acceptance Reporting, Data Logging, Meter Memory Dump, and a Real Time Meter Display. It works with all KI2000 and KI7000 series Power Meters, Loss Test Sets and Two-Way + ORL Testers, to achieve the industry's fastest and most flexible cable acceptance testing.

Typically, when acceptance testing cable, about 50% of the testing cost is field operations and the other 50% is office procedures such as reporting and database entry. KITS™ greatly reduces the field testing cost, and practically eliminates the office procedures.

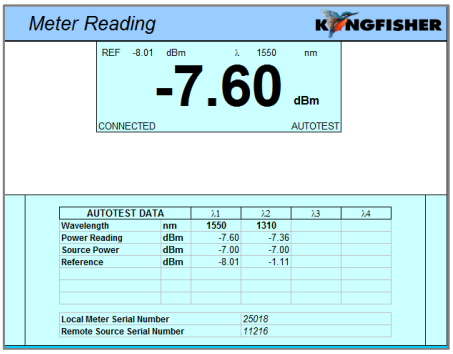
KITS™ can easily be part of your solution for field test data integration with a corporate asset database.

Cable Link & Optical Return Loss (ORL) Testing

- Test, accept & report on loss, ORL & power
- 1- 4 wavelengths
- Industry's fastest two-way & ORL test
- Merge 2 one-way loss tests to get two-way result
- Standards compliant pass / marginal / fail analysis
- Build multiple fully customized reports
- Perform low speed data acquisition and display for monitoring, fault finding and general testing
- Use the live data display for classroom education, etc.
- Add in-house or new standards on the fly

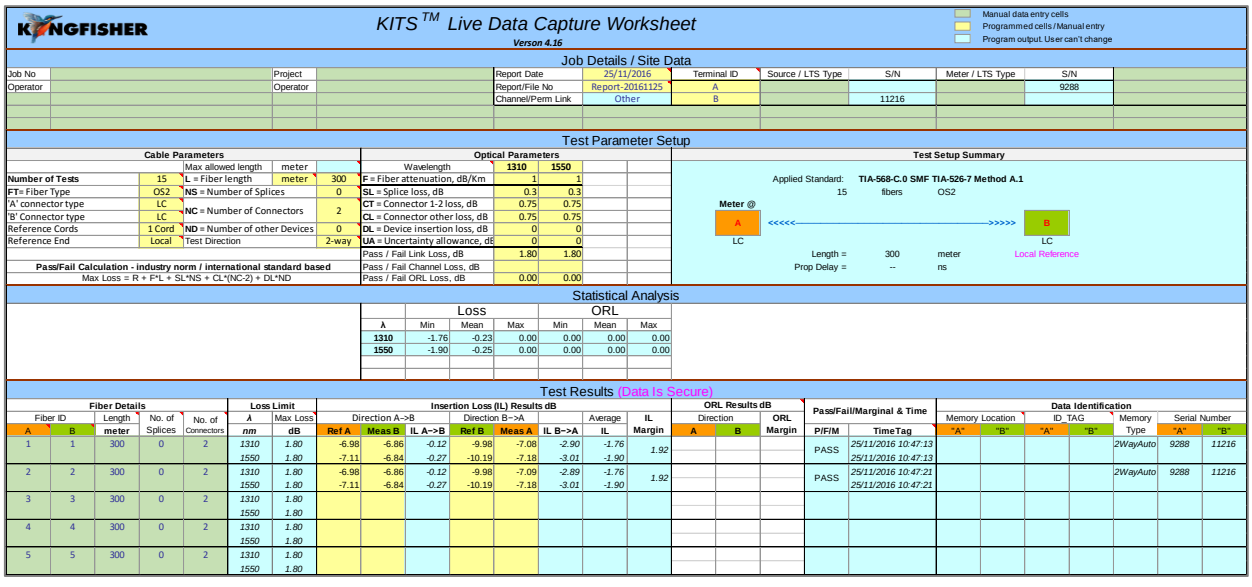
Meter Reading Sheet provides a large real time power meter display on your computer screen, and includes a data table to display Autotest data.

This sheet is very useful to easily verify the instrument connection, or makes a very handy classroom training aid if used with a projector. It displays all the acquired real time data, and instrument serial numbers.

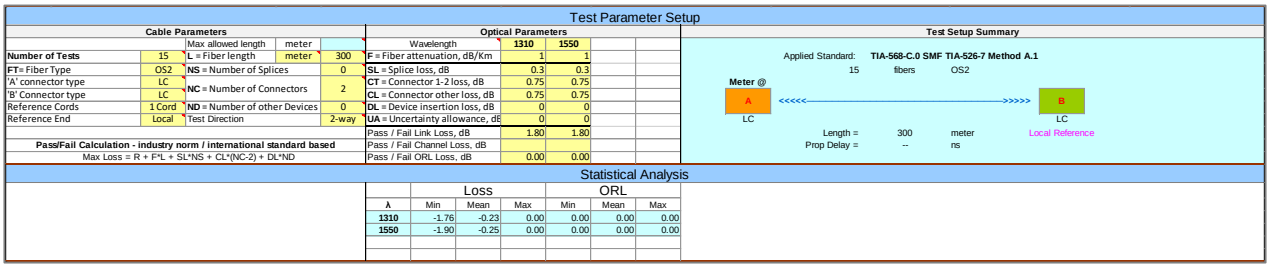


Live Data Sheet is for cable acceptance testing and instant pass / marginal / fail analysis at up to 4 wavelengths. Its main functions are on-site test configuration and acquisition. Project & instrument related information is also stored with the testing data. The sheet is auto-setup for 1 or 2 directional test during Autotest. In data Secure Mode, data is protected against unauthorized modification.

Live test data is clicked into the sheet one fiber at a time, with pass/marginal/fail displayed immediately. This is fundamentally different to all other solutions. Data can also be imported to the sheet from meter memory or CSV file.



International Standards or Custom Based Pass/Marginal/Fail Assessment can be selected to generate Pass / marginal / Fail and report performance of fiber optic components such as connector losses etc. Common ANSI / TIA / IEC standards are all included, and any others can be easily added.



Test Parameter Setup

Cable Parameters					Optical Parameters		
		Max allowed length	meter		Wavelength	1310	1550
Number of Tests	15	L = Fiber length	meter	300	F = Fiber attenuation, dB/Km	1	1
FT= Fiber Type	OS2	NS = Number of Splices		0	SL = Splice loss, dB	0.3	0.3
'A' connector type	LC	NC = Number of Connectors		2	CT = Connector 1-2 loss, dB	0.75	0.75
'B' Connector type	LC				CL = Connector other loss, dB	0.75	0.75
Reference Cords	1 Cord	ND = Number of other Devices		0	DL = Device insertion loss, dB	0	0
Reference End	Local	Test Direction		2-way	UA = Uncertainty allowance, dB	0	0
					Pass / Fail Link Loss, dB	1.80	1.80
Pass/Fail Calculation - industry norm / international standard based					Pass / Fail Channel Loss, dB		
Max Loss = R + F*L + SL*NS + CL*(NC-2) + DL*ND					Pass / Fail ORL Loss, dB	0.00	0.00

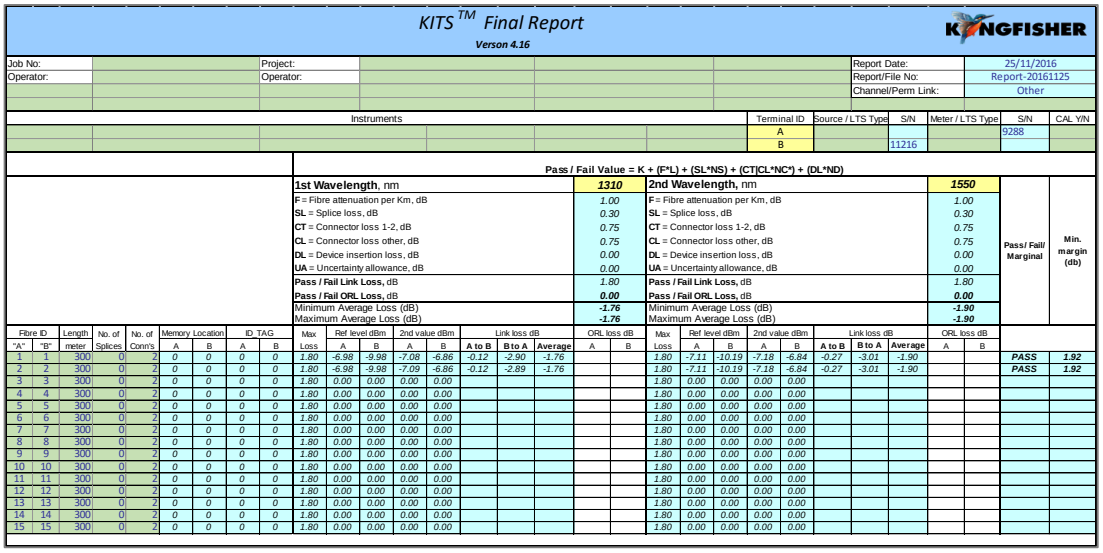
Test Setup Summary

Applied Standard: TIA-568-C.0 SMF TIA-526-7 Method A.1
15 fibers OS2
Meter @ A <<<<< >>>>> B
LC LC
Length = 300 meter Local Reference
Prop Delay = -- ns

Statistical Analysis

	Loss			ORL		
λ	Min	Mean	Max	Min	Mean	Max
1310	-1.76	-0.23	0.00	0.00	0.00	0.00
1550	-1.90	-0.25	0.00	0.00	0.00	0.00

Final Report Sheet is a default reporting sheet which also provides backwards compatibility with report formats in KITS™ version 3.02 or earlier, and is suitable for typical 2 wavelengths testing.



KITS™ Final Report
Verson 4.16

Job No:		Project:		Report Date:	25/11/2016
Operator:		Operator:		Report/File No:	Report-20161125
				Channel/Perm Link:	Other

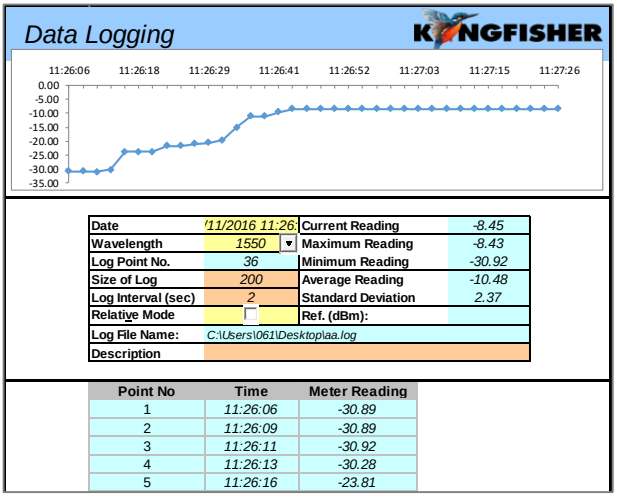
Instruments	Terminal ID	Source / LTS Type	S/N	Meter / LTS Type	S/N	CAL Y/N
	A				9288	
	B		11216			

Pass / Fail Value = K + (F*L) + (SL*NS) + (CT|CL*NC*) + (DL*ND)

1st Wavelength, nm	1310	2nd Wavelength, nm	1550
F = Fibre attenuation per Km, dB	1.00	F = Fibre attenuation per Km, dB	1.00
SL = Splice loss, dB	0.30	SL = Splice loss, dB	0.30
CT = Connector loss 1-2, dB	0.75	CT = Connector loss 1-2, dB	0.75
CL = Connector loss other, dB	0.75	CL = Connector loss other, dB	0.75
DL = Device insertion loss, dB	0.00	DL = Device insertion loss, dB	0.00
UA = Uncertainty allowance, dB	0.00	UA = Uncertainty allowance, dB	0.00
Pass / Fail Link Loss, dB	1.80	Pass / Fail Link Loss, dB	1.80
Pass / Fail ORL Loss, dB	0.00	Pass / Fail ORL Loss, dB	0.00
Minimum Average Loss (dB)	-1.76	Minimum Average Loss (dB)	-1.90
Maximum Average Loss (dB)	-1.76	Maximum Average Loss (dB)	-1.90

Fibre ID "A"	Fibre ID "B"	Length meter	No. of Splices	No. of Conn's	Memory Location A	Memory Location B	ID TAG A	ID TAG B	1310 Max Loss	1310 Ref level dBm A	1310 Ref level dBm B	1310 2nd value dBm A	1310 2nd value dBm B	1310 Link loss dB A to B	1310 Link loss dB B to A	1310 Link loss dB Average	1310 ORL loss dB A	1310 ORL loss dB B	1550 Max Loss	1550 Ref level dBm A	1550 Ref level dBm B	1550 2nd value dBm A	1550 2nd value dBm B	1550 Link loss dB A to B	1550 Link loss dB B to A	1550 Link loss dB Average	1550 ORL loss dB A	1550 ORL loss dB B	Pass/ Fail/ Marginal	Min. margin (db)
1	1	300	0	2	0	0	0	0	1.80	-6.98	-9.98	-7.08	-6.86	-0.12	-2.90	-1.76			1.80	-7.11	-10.19	-7.18	-6.84	-0.27	-3.01	-1.90			PASS	1.92
2	2	300	0	2	0	0	0	0	1.80	-6.98	-9.98	-7.09	-6.86	-0.12	-2.89	-1.76			1.80	-7.11	-10.19	-7.18	-6.84	-0.27	-3.01	-1.90			PASS	1.92
3	3	300	0	2	0	0	0	0	1.80	0.00	0.00	0.00	0.00						1.80	0.00	0.00	0.00	0.00							
4	4	300	0	2	0	0	0	0	1.80	0.00	0.00	0.00	0.00						1.80	0.00	0.00	0.00	0.00							
5	5	300	0	2	0	0	0	0	1.80	0.00	0.00	0.00	0.00						1.80	0.00	0.00	0.00	0.00							
6	6	300	0	2	0	0	0	0	1.80	0.00	0.00	0.00	0.00						1.80	0.00	0.00	0.00	0.00							
7	7	300	0	2	0	0	0	0	1.80	0.00	0.00	0.00	0.00						1.80	0.00	0.00	0.00	0.00							
8	8	300	0	2	0	0	0	0	1.80	0.00	0.00	0.00	0.00						1.80	0.00	0.00	0.00	0.00							
9	9	300	0	2	0	0	0	0	1.80	0.00	0.00	0.00	0.00						1.80	0.00	0.00	0.00	0.00							
10	10	300	0	2	0	0	0	0	1.80	0.00	0.00	0.00	0.00						1.80	0.00	0.00	0.00	0.00							
11	11	300	0	2	0	0	0	0	1.80	0.00	0.00	0.00	0.00						1.80	0.00	0.00	0.00	0.00							
12	12	300	0	2	0	0	0	0	1.80	0.00	0.00	0.00	0.00						1.80	0.00	0.00	0.00	0.00							
13	13	300	0	2	0	0	0	0	1.80	0.00	0.00	0.00	0.00						1.80	0.00	0.00	0.00	0.00							
14	14	300	0	2	0	0	0	0	1.80	0.00	0.00	0.00	0.00						1.80	0.00	0.00	0.00	0.00							
15	15	300	0	2	0	0	0	0	1.80	0.00	0.00	0.00	0.00						1.80	0.00	0.00	0.00	0.00							

Data Logging Sheet is for flexible data logging of loss at one wavelength, including a graph and statistical functions.

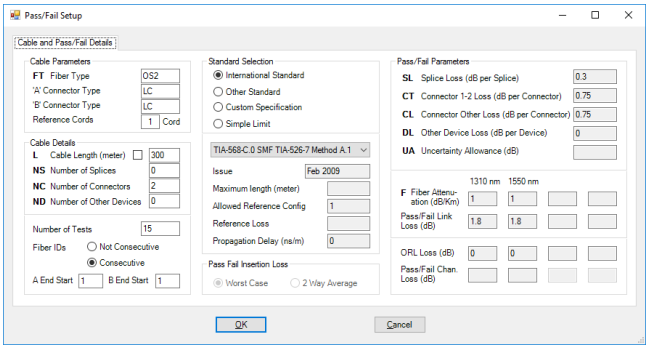


Data Logging

Date	11/2016 11:26:	Current Reading	-8.45
Wavelength	1550	Maximum Reading	-8.43
Log Point No.	36	Minimum Reading	-30.92
Size of Log	200	Average Reading	-10.48
Log Interval (sec)	2	Standard Deviation	2.37
Relative Mode		Ref. (dBm):	
Log File Name:	C:\Users\061\Desktoplaa.log		
Description			

Point No	Time	Meter Reading
1	11:26:06	-30.89
2	11:26:09	-30.89
3	11:26:11	-30.92
4	11:26:13	-30.28
5	11:26:16	-23.81

Pass/Marginal/Fail Assessment



An intermediate level Excel user can easily modify the KITS™ Excel spreadsheets, user instructions, language and extra reporting data fields.

Meter Dump Sheet is for a simple instrument memory dump.

Data downloaded from S/N 11216, Date/Time 29/11/2016 9:33:48

Fibre	WL	Power	Ref	ORL	Remote Power	Remote Ref	Remote ORL	Remote S/N
1	1310 nm	-6.83	-6.94	-26.07	-6.97	-6.85	-26.73	8855
1	1550 nm	-6.84	-7.19	-36.44	-7.19	-6.82	-36.54	8855
2	1310 nm	-6.79	-9.98	-26.60	-9.98	-6.83	-26.91	8855
2	1550 nm	-6.78	-10.19	-35.01	-10.19	-6.79	-35.61	8855

Manual Data Entry is available for Live Data Sheet when not in Secure Data Mode.

Using Template - KITS™ software is supplied with a default Excel workbook. You can easily create a new KITS™ workbook, customize and save as an Excel workbook or template, and reopen it. That is very handy for working on assorted jobs, changing languages, terminology, and so on.

Computer Requirements

- Windows: 32 or 64 bit 10 / 8.x / 7 / Vista / XP
- Apple: OSX (Mavericks) using Parallels 9.
- For full functionality: 32 bit Microsoft Office 2016/2013/2010/2007.
- "Save csv" Data file download utility only: MS Office is not required. This function doesn't work on WinXP.

Language Requirements

KITS™ support for any non-English language Windows environments is as follows:

- English language installations of Microsoft Office require a relevant language Microsoft Office MUI (Multilingual User Interface) to run in another language.
- Non-English language installations of Microsoft Office require an English language Microsoft Office MUI.

Instrument Requirements

- Any KI7000 series Power Meter or Loss Test Set with firmware version 5.00 or later. Firmware version is displayed during instrument turn on.
- Any KI2000 series Power Meter or Loss Test Set with firmware version 0.27 or later. Firmware version is displayed during instrument turn on.
- Any matched pair of KI7000 Two-Way Loss Test Sets (firmware version 5.00 or later). ORL will be used when available.
- Measurement of ORL (Optical Return Loss) requires one Two-Way + ORL Tester.
- If using the software with a Power Meter, a suitable Autotest compatible light source is advisable for optimum functionality when testing at more than one wavelength.
- Successive link testing with a Power Meter or simple Loss Test Set can be used to achieve bi-directional loss measurements, although this will be greatly faster if done in one step with a Two-Way Tester.

Applications Support

- KITS™ software support is provided from our Head Office. sales@kingfisher.com.au