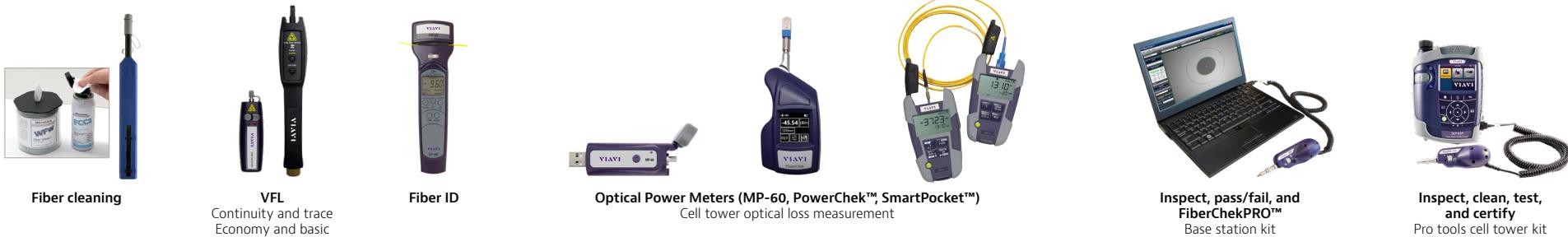


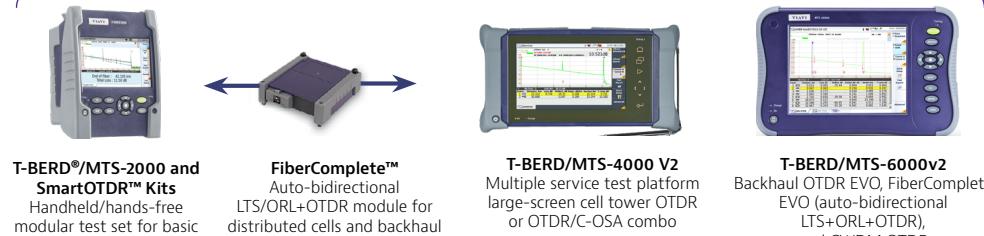
Test and Monitoring Solutions for Fiber to the Antenna (FTTA)

Fiber Inspection and Basic Optical Test



Fault Locator/OTDR/IL/ORL Testing

SLM and FTTA - SLM - Software Feature*



*SLM + FTTA-SLM (Smart Link Mapper): Icon-based OTDR map view automatically detects elements

CWDM/DWDM Testing



Active Network Field Test



Remote Test and Monitoring



Test and Monitoring Solutions for Fiber to the Antenna (FTTA)

Fiber Backhaul Tests Performed	Tool Category	FI-60	FFL-100 and FFL-050	P5000i	OLP-82	OLP-35, MP-60, and PowerChek	OLS-35	OCC-5x	T-BERD/MTS-2000	T-BERD/MTS-4000 V2	SmartClass Ethernet	HST-3000	T-BERD/MTS-5800v2	T-BERD/MTS-6000A
Identify live fiber	Fiber identifier	■												
Inspect optical-connector end face	Video inspection scope			■	■				■	■		■	■	■
Inspect and pass/fail certify connector end face	Digital video inspection scope			■	■				■	■		■	■	■
Check continuity	VFL		■						■	■				■
Verify link length/locate break	OTDR/SLM								■	■				■
Loss/attenuation test	Loss test set				■	■	■	■	■	■		■		■
Identify splice and connector loss, macrobend, and reflectance	OTDR/SLM								■	■				■
Power-level measurements	Broadband power meter	■			■	■			■	■		■		■
CWDM/DWDM test	OSA/channel check						■	■	■					■
CPRI/OBSAI test	Layer 1/2										■	■		■
Ethernet test	Layers 1, 2, 3, 4										■	■	■	■

Macro Cell Tower and Distributed Cell Tests Performed	Tool Category	FI-60	FFL-100 and FFL-050	P5000i	OLP-82	OLP-35, MP-60, and PowerChek	OLS-35	OCC-5x	T-BERD/MTS-2000	T-BERD/MTS-4000 V2	HST-3000	T-BERD/MTS-5800v2	T-BERD/MTS-6000A	
Identify live fiber	Fiber identifier	■												
Inspect optical connector end face	Video inspection scope			■	■					■	■	■	■	■
Inspect and pass/fail certify connector end face	Video inspection scope				■	■				■	■	■	■	■
Check continuity	VFL		■								■	■		■
Verify link length/locate break	OTDR FTAA-SLM										■	■		■
Loss/attenuation test	Loss test set				■	■				■	■	■	■	■
Identify splice and connector loss, macrobend, and reflectance	OTDR FTAA-SLM					■					■	■		■
Power-level measurements	Broadband power meter	■								■	■	■	■	■
CWDM/DWDM test	OSA/channel check					■	■				■	■		■
CPRI/OBSAI test	Layer 1/2												■	■

FTTA and Mobile Backhaul Service Assurance and Monitoring	Tool Category	QT-600 Family	ONMSi
Metro-E (10 Mbps to 10 GE)	Remote Test and Monitor	■	
Mobile Backhaul (Ethernet)	Remote Test and Monitor	■	
Backhaul Monitoring (Fiber)	Remote Test and Monitor		■
Fronthaul Monitoring (Fiber)	Remote Test and Monitor		■