

SmartID™

Advanced Coax Probes



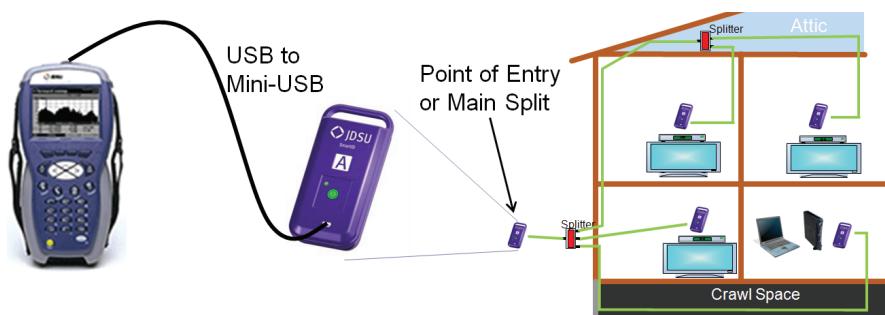
Key Benefits

- Cut repeat service calls by enabling quick and comprehensive coax home-network testing
- Verify readiness for advanced home-network technologies (MoCA®) with no customer-premises equipment (CPE) required
- Eliminate unproductive troubleshooting, guesswork, and unnecessary CPE replacement
- Speed home certification by testing the whole coax network at one time

Home-networked applications are evolving quickly, yet the home network itself often remains unchanged. Coax handles many new technologies well, but it is subject to faulty components, wear, poor craftsmanship, and amateurish modifications. Troubleshooting these problems can be especially difficult and time consuming when the installation or service tech can't adequately test and troubleshoot the network, and this typically leads to repeat truck rolls. Fortunately, SmartID advanced coax probes comprehensively test the home network and minimize installation and service times and equipment costs.

The SmartID test mode is a standard feature in JDSU DSAM Digital Service Activation Meter XT version firmware (v 4.0 and higher), enabling sophisticated measurement data analysis (with SmartID probes). The SmartID test quickly displays and certifies subscriber coax topology and identifies and locates physical-layer impairments that affect both triple-play and multiroom DVR (MoCA) services.

When services are disrupted, technicians spend most of their allocated time reworking coax elements. Until now, even experienced technicians spent hours trying to identify the root causes of video, voice, data, and multiroom DVR impairments and without practical, comprehensive testing, the technician often left the home without knowing that there were other issues. And, accessibility to much of a home coax network is limited, increasing the troubleshooting challenge. SmartID probes let technicians of any skill level determine which coax legs are connected and they show unexpected, hidden splitters and house amplifiers. The SmartID shows a technician every connected component, resulting in less guesswork and more-efficient problem solving.



Screenshot 1: Voice-Video-Data Path

A → R: 47.5 ft

Circuit diagram: A → [] → R → [] → L

Screenshot 2: JDSU SmartID Test Results

Path Length: 75.5 ft

Upstream: Excessive loss in the upstream

Downstream: Failed frequency response at 38.000 MHz

Ingress: Excessive loss in the downstream

Screenshot 3: MoCA Quality Index Matrix

ComcastIndy3_0

	F	I	L	R
F	X			
I	✓	9		
L	✓	9	9	
R	X	10	9	9
A				
F				
I				
L				

Testing with a SmartID probe at each outlet, set-top box (STB), embedded multimedia terminal adapter [eMTA], and cable modem lets a technician verify that each coax path can handle all planned services. The probes validate all connected locations from the point-of-entry to the subscriber's equipment location for triple-play services as well as STB-to-STB locations for multiroom DVR services.

The SmartID system saves troubleshooting time by showing technicians impairment locations immediately. Technicians don't have to repeatedly segment the network, make a change, and then retest. Often, when technicians determine that a drop cable is faulty, they simply replace it when it could be easily fixed. Time and money wasted to re-run, bury, or hang a new drop adds up quickly. SmartID lets technicians know whether they can quickly fix the drop or if they indeed need to replace it with a new one.

Subscriber services evolve, technologies such as DOCSIS® and MoCA change, and bit rates increase; however, the coax remains the same. Focusing on fixing service-impacting physical issues guarantees that the coax performs regardless of changing technology versions. For example, customer self-installation for new services can be deployed with greater confidence knowing that the home wiring has been tested with SmartID.

Each probe generates signals and measures within a 5 to 1,650 MHz frequency range. When technicians test the MoCA frequency range, a DSAM provides a JDSU-exclusive MoCA Quality Index (MQI) indicating 1 (low) to 10 (high) estimated throughput. The DSAM displays an easy-to-read quality matrix that lets a technician quickly find any outlet with impaired transmission performance. Drilling down, the technician can determine exactly how far the impairment is from the outlet, simplifying and speeding the process of locating and fixing the problem. Probes are available in kits that enable complete RF network transmission characterization in most home networks. The kit lets a technician test the whole home network in one test that typically takes less than 2 minutes.



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Specifications

			MQI	Estimated throughput (Mbps)	MQI
Max transmit level	50 dBmV	Test times (typical)	30 seconds with 2 SmartIDs	Less than 100	0
Min receive level	-10 dBmV		45 seconds with 3 SmartIDs	100 to 120	1
Max number of connected Smart IDs	16		60 seconds with 4 SmartIDs	120 to 140	2
Frequency range	5 - 1650 MHz		75 seconds with 5 SmartIDs	140 to 160	3
Minimum frequency step size	100 KHz		90 seconds with 6 SmartIDs	160 to 180	4
Upstream frequency steps	250 KHz	Discoverable coax elements	Faults	180 to 192	5
MoCA frequency steps	195 KHz		House amplifiers	192 to 204	6
Downstream frequency steps	5 MHz		Filters	204 to 216	7
Length resolution	0.5 ft		Splitters	216 to 228	8
Battery types supported	AA alkaline AA lithium (recommended)	Resolution of coax elements	~2 ft	228 to 240	9
Battery life (typical)	Alkaline: 500-700 Test Cycles Lithium: 1000-1500 Test Cycles	Maximum length	300 ft	240 or higher	10
Connectors	1 Mini USB 1 F-type coax	Max sweep attenuation	60 dB		
		Max FDR attenuation	25 dB		
		Coax cable types supported	RG59 RG6 Custom VOP		
		Sweep response error	< +/- 2.5 dB typical		

Ordering Information

Part number	Description
SMARTID_2PCS_STARTERKIT	SmartID Starter Kit with 2 SmartID Coax test probes, carrying case, USB to Mini-USB cable and Quick Start Guide
SMARTID_3PCS_STARTERKIT	SmartID Starter Kit with 3 SmartID Coax test probes, carrying case, USB to Mini-USB cable and Quick Start Guide
SMARTID_4PCS_STARTERKIT	SmartID Starter Kit with 4 SmartID Coax test probes, carrying case, USB to Mini-USB cable and Quick Start Guide
SMARTID_5PCS_STARTERKIT	SmartID Starter Kit with 5 SmartID Coax test probes, carrying case, USB to Mini-USB cable and Quick Start Guide
SMARTID_6PCS_STARTERKIT	SmartID Starter Kit with 6 SmartID Coax test probes, carrying case, USB to Mini-USB cable and Quick Start Guide
SMARTID_1PC	One SmartID additional or replacement probe
SMARTID_ACC_KIT	SmartID Accessory Kit. Includes carrying case, USB to Mini-USB cable and Quick Start Guide. Does NOT include SmartID probes.
SMARTID_USBCABLE	SmartID USB to Mini-USB cable only



SMARTID ADVANCED COAX PROBES

Test & Measurement Regional Sales

NORTH AMERICA TEL: 1 866 228 3762 FAX: +1 301 353 9216	LATIN AMERICA TEL: +1 954 688 5660 FAX: +1 954 345 4668	ASIA PACIFIC TEL: +852 2892 0990 FAX: +852 2892 0770	EMEA TEL: +49 7121 86 2222 FAX: +49 7121 86 1222	WEBSITE: www.jdsu.com/test
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