# PRODUCT DATA

# PULSE Reflex Telephone Test Test Suite for CES-Q003-2 Type 8772-X05

## Uses

- Voice testing of VoIP phones according to CES-Q003-2
- Measurement of the full transmit and receive signal path using a network simulator
- Research and development of mobile phones with focus on voice testing using advanced test signals and real speech
- Quality assurance and sample testing of mobile phones
- Inspection and validation of mobile phones

#### Features

- Pre-programmed test suites according to CES-Q003-2 of 2004
- Minimum interaction required when running complete test suites, or individual test cases
- Supports the use of Type 1, Type 3.2 and Type 3.3 (HATS) ear simulators

# Introduction

Type 8772-X05<sup>\*</sup> software provides a standardized approach to voice testing of VoIP phones according to CES-Q003-2.

By using real speech, the codec can be included in the measurement path. Accordingly, the full transmit and receive signal paths are measured, giving realistic measurements of phone performance.

Type 8772-X05 utilizes PULSE Reflex<sup>™</sup> Telephone Test Software Type 8770 and Voice Testing System for Telephones Type 6712 for testing VoIP phones according to CES-Q003-2.

## **Testing of Handset VoIP Phones**

Table 1 shows which test cases are supported by Type 8772-X05 with respect to the CES-Q003-2 (September 30, 2004) standard. The numbers in the table refer to the sections in the standard.

\* X = license model either N for node-locked or F for floating

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Table 1 Test cases supported with references to sections in standard

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Test Case Title	CES-Q003-2
Sending Frequency Response	3.2
SLR	3.1
Sending Delay	7.2
Sending Noise	3.3
Receiving Frequency Response	4.2
RLR	4.1
Receiving Delay	7.2
Receiving Noise	4.4
Sidetone Frequency Response	5.1
STMR	5.1
TCLw	6.1
TELR	6.1

For specific information on software licenses, please see the ordering information. For specific information on hardware configurations, please see the Product Data for PULSE Reflex Telephone Test Software Type 8770 (BP 2428).



#### PULSE REFLEX TELEPHONE TEST

Туре 8770-Х*	PULSE Reflex Telephone Test
Type 8770-A-XS*	PULSE Reflex Telephone Test Pack
	(see BP 2428 for details)

The following optional software packages are available for PULSE

Reflex Telephone Test: Type 8771-X01<sup>\*†</sup> PULSE Reflex Telephone Test, ITU-T P.862 PESQ Type 8771-X02<sup>\*†</sup> PULSE Reflex Telephone Test, ITU-T P.863 POLQA

For testing according to CES-Q003-2 the following software package is available for use with PULSE Reflex Telephone Test Type 8770:

Type 8772-X05<sup>\*†</sup> PULSE Reflex Telephone Test, CES-Q003-2 Handset

<sup>+</sup> Type 8770-X is required for this software package.

#### **REQUIRED STANDARD SYSTEM CONFIGURATIONS**

In order to conduct testing on telephones, the hardware included in one of the following systems must be available<sup>‡</sup>:

• System for Testing using Test Head, Type 6712-A-S01

• System for Testing using HATS, Type 6712-A-S02

An appropriate network simulator must also be available

SOFTWARE MAINTENANCE AND SUPPORT AGREEMENTS	
M1-8770-X <sup>*</sup>	Software Maintenance and Support Agreement for
	PULSE Reflex Telephone Test
M1-8771-X01 <sup>*</sup>	Software Maintenance and Support Agreement for
	PULSE Reflex Telephone Test, ITU-T P.862 PESQ
M1-8771-X02 <sup>*</sup>	Software Maintenance and Support Agreement for
	PULSE Reflex Telephone Test, ITU-T P.863 POLQA
M1-8772-X05 <sup>*</sup>	Software Maintenance and Support Agreement for
	PULSE Reflex Telephone Test, CES-Q003-2 Handset

‡ For details see the Product Data for Type 6712 (BP 1683).

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<sup>\*</sup> X = license model either N for node-locked or F for floating.