SYSTEM CHECKOUT, TEST & COMMISSIONING SERVICE DESCRIPTION

1. Introduction

This document describes the System Checkout, Test and Commissioning (SCTC) Service to be delivered by Harmonic (“SCTC Service”) to the issuer of a purchase order (hereafter “Customer”). The SCTC Service described in this document is subject to Harmonic’s Sales Terms and Conditions and supersedes all proposals, oral or written, all negotiations, conversations or discussions between the parties relating to the SCTC Service.

The purpose of SCTC Service is to provide technical assistance and expertise in the setup, test and operation of the products purchased from Harmonic and installed by Customer. The SCTC Service does not include physical installation or cabling of the purchased products. The SCTC Service is limited to Harmonic equipment, as well as approved third party equipment supplied by Harmonic. Integration with external systems or products is not a Harmonic responsibility and is not included in this SCTC Service scope of work. Completion of SCTC Service is independent of the purchase of the products listed on Customer’s Purchase Order.

The SCTC Service performance period is a maximum of two (2) days. The SCTC effort begins with the inspection and verification of Customer’s installation and cabling of the equipment/system. This inspection is followed by a series of Harmonic performed tasks that may be witnessed by the Customer for training purposes. The series of tasks include: equipment power-up, checkout, setup, and test of the products. Once the primary goals of installation verification, checkout, setup and test are completed, informal hands-on training of selected Customer personnel may be conducted.

2. Service

2.1 BOM Review

Harmonic shall coordinate and conduct a bill of materials (BOM) review with Customer to ensure that all necessary equipment required by Customer will be available when the Harmonic Engineer arrives on site. The BOM review will also be used to establish a reasonable schedule so that all parties can plan and synchronize performance of the SCTC Service.

2.2 Scheduling and Continuous Activity

Customer will notify Harmonic of the anticipated date for which the Harmonic Engineer will be required on-site. Requested date shall be subject to Harmonic technical personnel availability. Harmonic and Customer will mutually agree to the on-site date at least seven days in advance. Customer will notify Harmonic of any circumstances requiring a change to the scheduled date for the SCTC Service as soon as possible. SCTC Service must be completed in a continuous manner once the Harmonic Engineer arrives at Customer’s facility. Any of the SCTC Service that cannot be completed within two (2) working days after arrival of the Engineer due to circumstances beyond Harmonic’s reasonable control shall be excluded from the SCTC Service at the sole discretion of Harmonic and no refund or credit shall be due.

2.3 On Site Service

Harmonic will perform the following tasks at Customer’s designated location:

2.3.1 Inspection

Upon arrival at Customer’s site, Harmonic Engineer will perform a visual inspection of Customer’s installation of the purchased equipment. The purpose of this inspection is to verify that Customer has correctly installed, cabled and connected all of the equipment. If the Harmonic Engineer determines that Customer’s installation is incomplete or improperly completed, Customer will be given an opportunity to complete the installation within two hours. If the installation is not or cannot be corrected within that time frame, then the Customer may reschedule the SCTC Service at a date/time mutually agreed upon between Harmonic and the Customer (which will take into account availability of Harmonic’s resources),
provided that Customer pays Harmonic for its time spent and costs incurred up to the point of notification of rescheduling, and such remuneration will be based upon a Time & Materials ("T&M") rate and actual costs incurred.

2.3.2 Activation & Configuration

Once the inspection is complete, the Harmonic Engineer will begin activating all the equipment and configure the system for test and operation. The Harmonic Engineer will also verify that all sources are available and visually confirm that the source quality is adequate. Any sources not available during this verification will be excluded from the functional testing described in Section 2.3.3.

2.3.3 Functional Testing

Upon completion of inspection, activation, setup and configuration, the Harmonic Engineer will perform a functional verification test (FVT) on the installed equipment/system. The FVT is composed of functional tests based upon Customer’s equipment configuration and setup. Product and/or system acceptance testing is not part of the scope of the SCTC Service. The main purpose and goal of the FVT is to demonstrate that the Harmonic provided equipment, as installed by Customer, performs correctly by flowing contents through the equipment/system. Written test procedures are not provided. Customer designated personnel will witness the performance of such functional verification tests.

Should any test of Harmonic products not produce an acceptable result, the Harmonic Engineer will attempt to correct the deficiency immediately and perform the test again. Any non-service affecting deficiency established during functional testing, which cannot be immediately corrected, will be documented and remedied under the terms of the applicable product warranty. Customer shall be responsible for correcting issues with the installation and cabling of the equipment. The Harmonic Engineer will also provide recommended solutions/actions to Customer for any items for which Customer is responsible.

2.3.4 Training

At the completion of the functional verification tests, Harmonic may provide training to Customer staff. This training will be informal, hands-on training using the tested products. No formal training guides or documentation will be provided.

2.3.5 Completion

At the completion of SCTC Service, Harmonic shall issue a completion notification via email to the primary Customer point of contact. Any non-service affecting issues identified during the FVT which cannot be resolved during the SCTC Service period will be noted for correction under the product warranty terms. The Customer has five (5) working days from the receipt of the completion notification email to provide Harmonic with a written rejection of the SCTC Service which details the reason(s) for such rejection. If no rejection is received from the Customer within 5 working days, then the SCTC Service shall be deemed accepted by Customer and Harmonic will be entitled to invoice Customer for the SCTC Service.

2.3.6 Validity Period

The SCTC Service obligation is valid for a period of 180 days from the issuance day of the Customer Purchase Order. Should the Customer not exercise the SCTC Service within the 180-day validity period, Harmonic reserves the right to cancel the service obligation.
3. Customer Furnished Equipment/Information (CFE/CFI)

3.1 Technical Contact
Customer will designate a single point of technical contact during the SCTC Service performance period. This person, at a minimum, should witness the power-up, setup, configuration, network management map build, test, FVT and be the designated notification person for the SCTC Service completion.

3.2 On Site Service
Customer will provide equipment mounting racks and adequate support for all equipment purchased. Customer will install, cable and connect the equipment supplied prior to the arrival of the Harmonic Engineer. This installation will include the labor and materials for installing the equipment and all connecting cabling within the rack or racks. Customer guarantees proper grounding (per Harmonic specifications) of racks and equipment.

3.2.1 Sources/Contents
All source and destination cabling will be installed and verified by the Customer prior to the arrival of the Harmonic Engineer. All cabling will be of types and specification suitable for each application.

3.2.2 Control Network
The Customer will install and verify all Ethernet cabling for the network management control prior to the Harmonic Engineer’s arrival. The control network should be isolated from all other Ethernet traffic in Customer’s facility.

3.2.3 Decoders
The Customer will supply the decoder and monitor, if necessary, to view the video and audio resulting from the transport stream output. This decoder and monitor could be used during the setup, configuration, test and FVT of the installed equipment.

3.3 Configuration Parameters
The Customer will make available and connect all sources prior to the arrival of the Harmonic Engineer. A configuration parameter worksheet, which could include list of the sources, formats, PIDs, desired encoding rates, network parameters, and other relevant information, shall be made available to the Harmonic Engineer prior to arrival at Customer’s site.

3.4 Facility Access/Workspace
Customer shall provide access to its facility for Harmonic Engineer to perform the SCTC Service. Ideally, the Customer will also provide a desk and Internet access. Where this is not possible, some reasonable workspace will be allocated to the Harmonic Engineer for the duration of the visit.

3.5 Building Requirements
Customer’s site should conform to local building, electrical, environmental, and applicable safety codes. Customer is encouraged to pay particular attention to HVAC, electrical, and grounding requirements.