VTI SERVICES

TN Number 001

Version 1.9
Supersedes 1.8
Date: 15/08/2019

Technical Note 001

CP Link Conformance to installation performance requirements of AS 11801 Series

Text in *Italics* is derived from the standards.

Applicability

The following applies to the requirements for establishing installation performance conformance by VTI Services to meet its NATA reporting obligations for CP or SCP Links to AS/NZS 11801 and ISO/IEC 11801 Series, in which such Links are allowed,

Background

AS/NZS and ISO/IEC 11801 Series is 11801.1, 11801.2, 11801.3, 11801.4, 11801.5 and 11801.6.

AS/NZS 11801.1 defines a **CP Link** as *part of the permanent link between the floor distributor and the consolidation point, including the connecting hardware at each end*.

AS/NZS 11801.1 defines a **CP Cable/Cord** as *cabling between the consolidation point and the terminal equipment outlet*.

SCP is the Service Concentration Point in AS 11801.6 – Distributed Building Services.

Hereinafter, CP and SCP are collectively called the CP.

The conformance of performance requirements of AS 11801 Series are based on installed Channels.

AS 11801 Series Clause 4 b) indicates that *performance conformance can be achieved by one of the following three methods*;

1. **Channel Implementation (Method 1)**

   Based on a design and implementation of the installed cabling system (including the installed patch cords) that ensures channel performance is met.

2. **Permanent Link /CP Link Implementation (Method 2)**

   Attachment of appropriate components (CP cable, terminal equipment outlets and cords) to a CP Link that meets the performance requirements of Annex A (Normative) of AS/NZS 11801.1.

   The installation conformance testing regime to establish performance compliance is listed in Annex A (Normative) of AS/NZS 11801.1.

   It should be noted that;

   - 'Note b' of Table A.1 – *Test regime for reference conformance and installation conformance - Balanced cabling* states that "***length is not a pass/fail criterion***".

- Alien crosstalk requirements apply to Channels, Permanent Links and CP Links for Class E_A and above.
- Short CP Link cables (e.g. under 15m in length) may pass conformance requirements at time of installation, however short CP links may impact the overall performance of the associated permanent link when implemented. It is therefore recommended that CP Link cables are a minimum of 15 metres in length or such other length supported by a "Statement of Conformance" from the cable system manufacturer, which is based on laboratory test reports.

3. Reference Implementation (Method 3)

Reference Implementation is based on statistical modelling contained within Clause 8 *Reference implementation for balanced cabling* of AS 11801 Series and the use of appropriate cabling and connecting hardware components.

The statistical approach utilises mathematical modelling based on length assumptions in AS 11801.2 to AS11801.6 starting at Tables 1 or 2 *Length assumptions for horizontal cabling*.

However, *the length assumptions of the mathematical model used to validate channel performance using components of Clauses 9, 10 and 13 do not represent absolute restrictions on the implementation of channels and permanent links but may be used for guidance.*

Reference Implementations are typically supported by a manufacturer's "Statement of Conformance", which is based on laboratory test reports.

CP Link Installation Conformance

The conformance assessment by VTI Services of CP Link installation performance as part of its NATA reporting has the following requirements:-

A. For Class D and E installations attempting to use a Channel Implementation (Method 1) for the installation performance conformance to AS 11801 Series;
   - Since the CP Link is only part of the permanent link and there are no CP cable or patch cords attached, it is not possible or appropriate to test a CP Link as a channel.
   - The CP Link cannot be tested using Channel Implementation (Method 1).

B. For Class D and E installations utilising a CP Link Implementation (Method 2) for the installation performance conformance to AS 11801 Series;
   - CP Link performance conformance can be achieved by successful testing of all Class D and E parameters. Length of the CP Link is not a consideration for this CP testing.

- Although the CP Link conformance is not affected directly by the length of the associated CP cable (from CP to TO), the length of the CP cable when installed will affect other performance parameters that do form part of the channel conformance.

- After the CP cable is installed, the full permanent link or channel must be tested.

C. For Class E_A, F, F_A and Class I and II installations it is recommended that Reference Implementation (Method 3) be used for the installation conformance to AS 11801 Series;

- As length of the CP Link forms part of the assumptions for Reference Implementation, the length is required to be specified by the cable system manufacturer's "Statement of Conformance".

  Note: Where length is a criterion for a Reference Implementation, the incorrect setting of NVP during testing may affect compliance as the reported length is dependent on the stated NVP.

- Alien crosstalk testing is a requirement for E_A, F, F_A and Class I and II installations.

- Compliance is achieved by either providing acceptable AXT test results or providing a cable system manufacturer's written "Statement of Conformance" that excludes the need for in-field alien crosstalk testing. The Statement is required to state all conditions necessary to meet the cable system manufacturer's reference implementation including the CP Link cable length.

- After the CP cable is installed, the full permanent link or channel must be tested.