Universal Connector/Adapter System

Overview

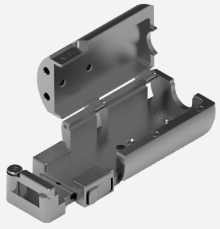
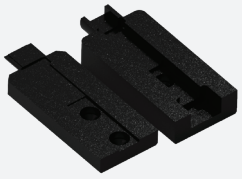
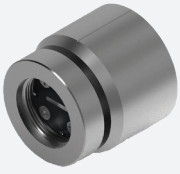
The Universal Connector/Adapter System (UCA), provides an interface between standard test equipment and various specific fiber optic terminations, such as ribbon fiber, ferrules, slider assemblies, fiber arrays, MPO, splice-chucks, and bare-fiber, to fiber optic equipment. It features an outer universal clamshell interface (AC951) that can be easily reconfigured to accommodate customized specific termination styles.

Universal Adapter Solution

Acting as a temporary connector body, the Universal Adapter Solution accommodates various fiber ferrules and small connectors. The system allows the user to keep the device under test (DUT) in an easily controlled adapter solution that can move to both an IL/RL test stand and fiber end face inspection.

Figure 1: Universal AC951clamshell adapter with AC950

The adapter is comprised of four primary components:

1	The clamshell holds the adapter insert (either VIAVI supplied or custom made by customer). This is a required piece.	Clamshell Adapter	
2	The adapter insert is a public, replaceable interface to the Universal Adapter System. VIAVI offers several pre-configured variants. Customers can make their own as well.	Ferrule Insert	
3	The barrel holder magnetically secures the clamshell into place and attaches to a VIAVI power meter.	Barrel Holder (AC950)	
4	The barrel assembly aperture plate comes in three different variants, including small circle, large circle, or slit options.		

The adapter insert is engineered to accommodate a wide range of components, serving as a flexible core. It is designed to host splice chucks, v-grooves, ferrules, and custom glass/poly pieces, offering adaptability to various configurations. Initially, it supports splice chuck, MT, TMT, and blank inserts for customization by the user, with the inserts being field replaceable.

Lastly, the barrel holder is utilized to attach the adapter to the VIAVI integrated remote head or an mOPM with an integrating sphere (AC991S).

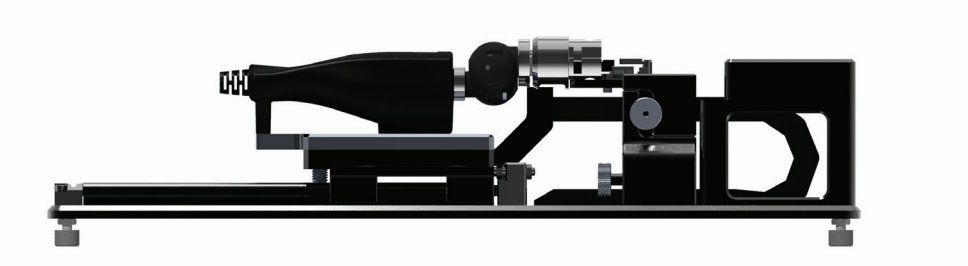
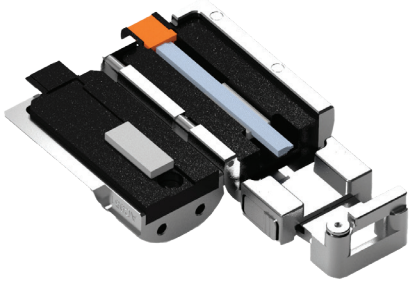
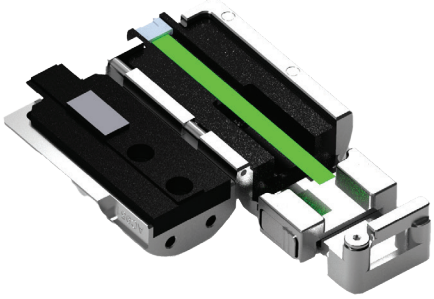


Figure 3: AC950 and AC951 adapters attached to an intergating sphere (AC991S) and OPM remote head on a AC1100 sliding fixture

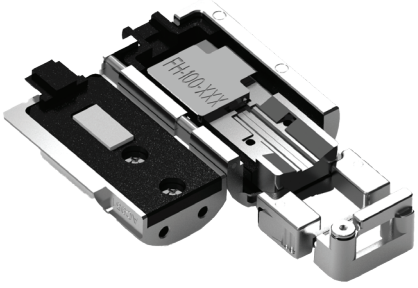
Currently Supported Ferrule Inserts



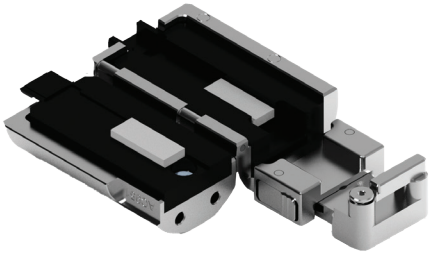
a. MT Ferrule Insert



b. TMT Ferrule insert



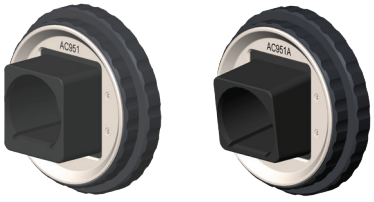
c. Splice Chuck Insert



d. Empty insert for customization

Inspect before you connect!

To ensure a clean end-face and detect contamination, VIAVI also equipes connectivity manufacturers with an inspection adapter compatible with the UCA. The same clamshell and inserts can be used with three additional adapters that replace the barrel (AC950). Thus, instead of attaching to a power meter they attach to benchtop microscope.



For the FV series benchtop microscopes, we have the **FMAX-AC951 (PC)** and the **FMAX-AC951A (APC)** adapter.

For the FVAM multifiber benchtop microscope, we have **FMAG-AC951** adapter.

Ordering Information

Clamshell and Inserts

Part number	Connector Type	Description
AC951-000	Custom	AC951 with blank insert for customization
AC951-912	MT Ferrule	AC951 with MT insert
AC951-931	Fujikura-Sumitomo splice	AC951 with splice chuck holder insert
AC951-943	TMT	AC951 with TMT insert

Barrel and Inspection Adapters

Part number	Description
AC950-95A	AC950 with small circular aperture
AC950-95B	AC950 with large circular aperture
AC950-95C	AC950 with dual row slit aperture
FMAG-AC951	Universal Clamshell Inspection Adapter, for use with FVAM Benchtop Microscopes
FMAX-AC951	Universal Clamshell Inspection PC Adapter, for use with FV Benchtop Microscopes
FMAX-AC951A	Universal Clamshell Inspection APC Adapter, for use with FV Benchtop Microscopes

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