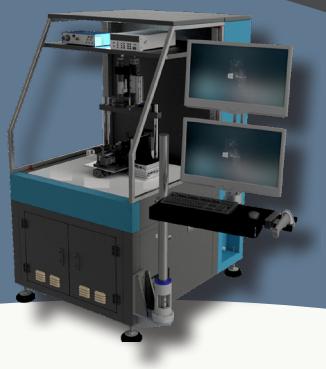
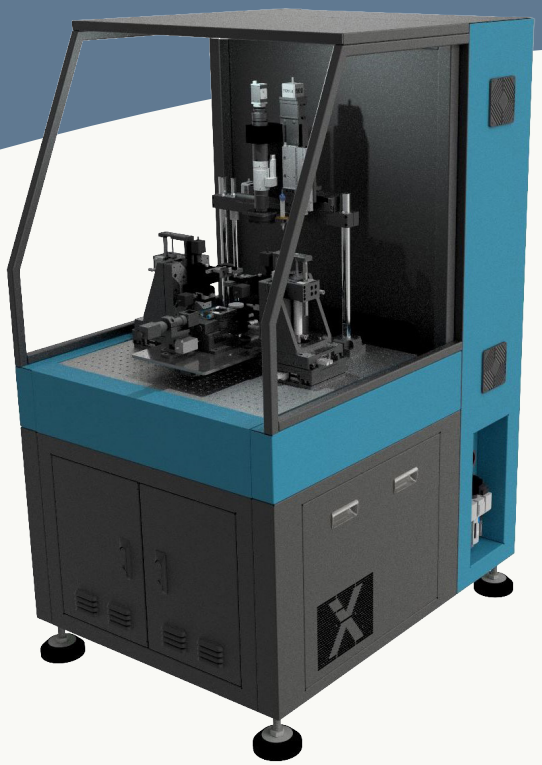
Aligner Series

AXISTEC





Highly Reliable and Ultra-Accurate Aligner

The Axis-Tec Engineering Aligner is a standalone platform-based machine. It caters for Active Alignment in Single Mode Fiber or Fiber Array, and supports Passive Alignment with machine vision.

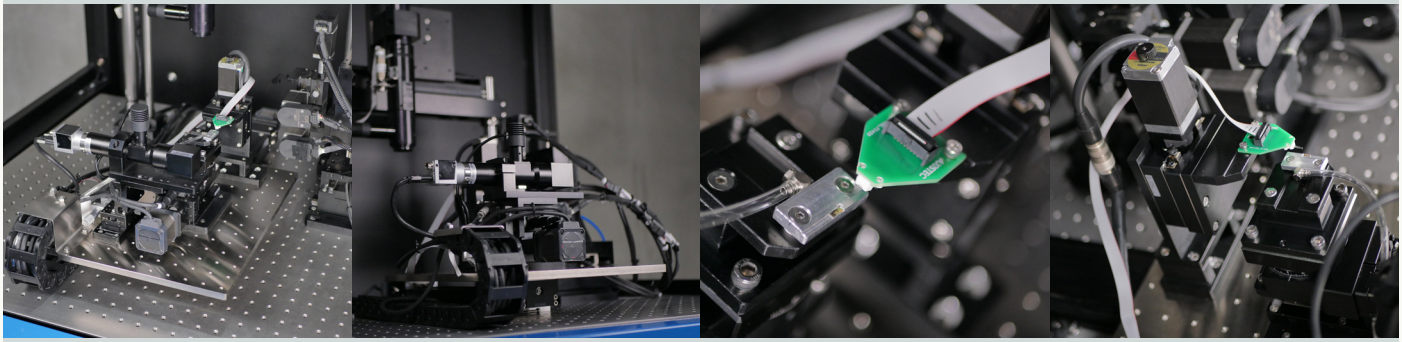
It is compatible with both Active and Passive application alignment, that can improve flexibilities in customers' processes.

Applications

- Active Alignment in Single Mode Fiber or Fiber Array
- Passive Alignment with Machine Vision

Advantages

- Customized center stage
- High resolution top camera for micro-meter field level
- Adjustable height and angle
- Automated motion for precise handling and alignment testing
- Universal gripping solution system



◊ Specifications

XYZ Motorized Axis Stage for 6-Axis (Left) & 6-Axis (Right) (Optical)	
Resolution	<0.1 µm
Travel	>50 mm
Speed	>10 mm/s
Repeatability	<+/-1 µm
θ XYZ Motorized Rotational Stage (Left) & (Right)	
Travel	<+/-5°
Resolution	<0.00001 degree/pulse (Full)
Repeatability	<+/- 0.001°
Center Device Positioning Stage	
Travel	50 mm
Resolution	+/- 0.025 µm
Repeatability	+/- 3 µm
Auto Stage XYZ for Probe (3-axis)	
Resolution	0.1 µm
Repeatability	2 µm
Gantry XYZ for pick up for DIE and Camera (3-axis)	
Resolution	0.1 µm
Repeatability	2 µm
Vision Camera	
Lens	High Resolution Telecentric Lens Magnification
Working distance	>100 mm
Resolution	20 MP

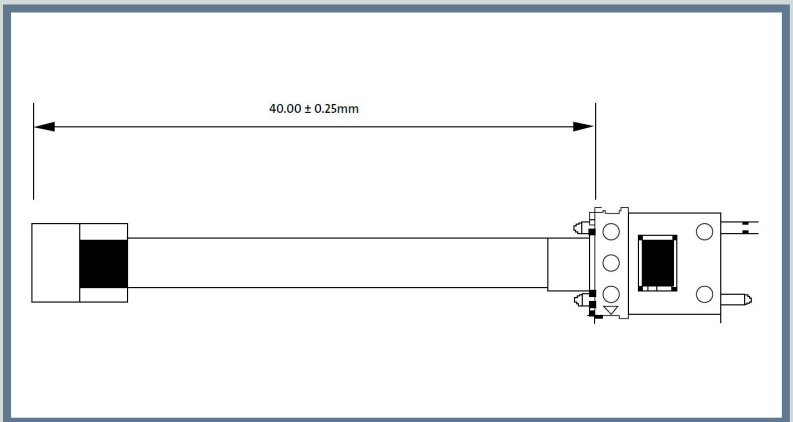


Fig 1 - Drawing of an FAU-MTP® Assembly

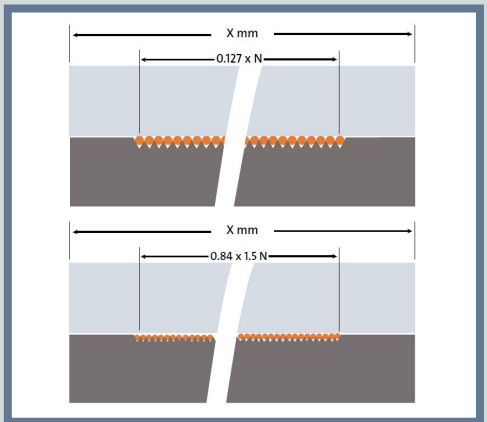


Fig 2 - Standard vs RCBI FAU end face

Main Coupling Methods for FAU

1. Edge coupling with our conventional FAUs: These FAUs can easily be used to bond with a customer's PLC waveguide from the edge.

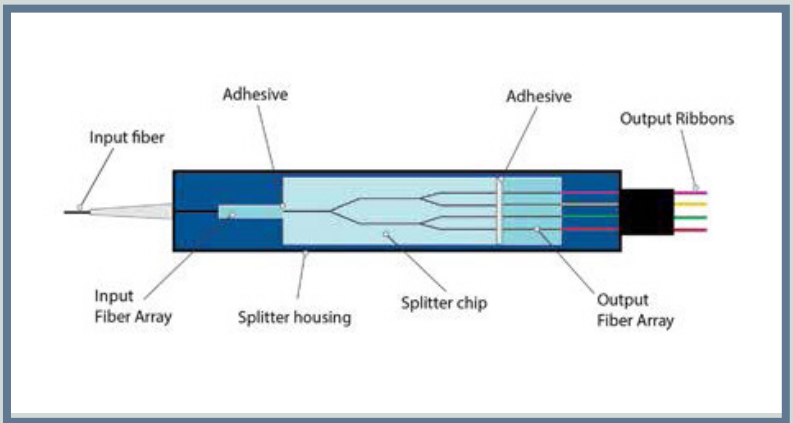


Fig 3 - Illustration of Edge Coupling between an FAU and a Planar Lightwave Circuit (PLC)

2. Grating coupling with Corning 90-degree light-turn FAUs: With low-loss, high-reliability 90-degree light-turn FAUs, the signal light can be conveniently coupled from and to the PIC via a diffractive grating.

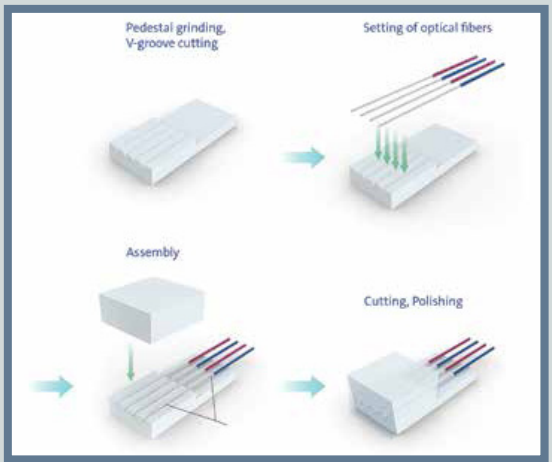


Fig 4 - FAU Assembly Steps

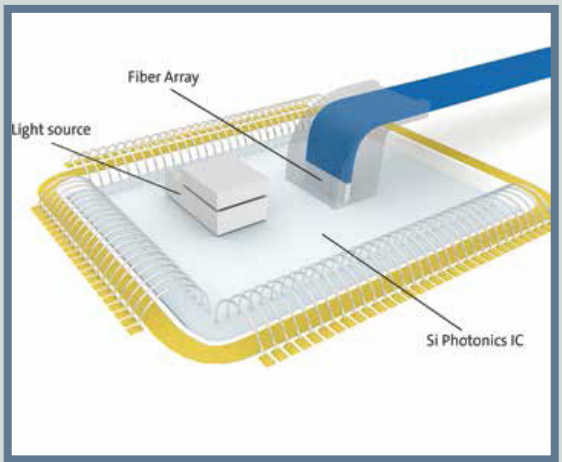


Fig 5 - FAU with Grating Coupling

FAU for Data Center

Axis Tec offers a wide variety of FAUs to put inside transceivers and connect to a PIC.

Ordering Information

TFA ☐ ☐ ☐☐ – ☐ ☐ ☐☐☐ ☐

A B C D E F G

A&B: Device End
0: none
2: two types of termination
A: PLC w/FAU
D: DLC UPC connection with fan-out
K: LC receptacle
L: LC PC connection with fan-out
M: LC ferrule
F: FAU
P: FC PC
Q: FC APC connection with fan-out
R: Prism
U: MPO, 80 µm hole
V: MPO, 125 µm hole

C: Fiber Count
01: 1 F
04: 4 F
06: 6 F
08: 8 F
12: 12 F
20: 20 F
24: 24 F

D: Cable Type
1: SM
2: MM
3: PM
4: others
X: more than one fiber
S: splice

E: Customer Code
A: A Company

F: Running Number

G: Optional Code
Reserve for special use

FAU for Long-Haul and Metro Networks

An FAU can be put inside a reconfigurable optical add-drop multiplexer (ROADM) and function as an optical transmission for the wavelength selective switch (WSS) to switch traffic remotely from a wavelength division multiplexing (WDM) system at the wavelength layer.
There are other functions within long-haul and metro networks that require FAUs, and they are amplifier/CP module, coherent mixer, multiport wavelength switch, multicast switch, and optical channel monitor.

Ordering Information

PFA □ □ □ □ – □ □ □ □ □
1 2 3 4 5 6 7 8 9

1 Material Type
A: Borosilicate
F: Fused silica
S: Silicon
P: PYREX® or BOROFLOAT®
Q: Quartz
B: BK7

2 Port Count
1: single port
2: 2 ports
3: 3 ports
4: 4 ports
6: 5~6 ports
7: 7 ports
A: two 4 ports
8: 8 ports
B: two 8 ports
9: 9 ports
E: 10 ports
G: 11~12 ports
5: 13~15 ports
H: 16 ports
J: 20 ports
X: 24 ports
K: 25-28 ports
C: four 8 ports
T: 32 ports
U: 33~39 ports
Y: 40 ports
S: 44 ports
D: six 8 ports
F: 48 ports
L: 49 ports
W: 64 ports
M: 65~128 ports
Z: customized

3 Fiber Type
S: single, 900 µm tight buffer, Corning® SMF-28®
B: single, 900 µm SBJ fiber
1: single, 250 µm, SMF-28
D: single, 250 µm, G657
I: single 165 µm, RCBI fiber
L: lensed fiber
2: 2-fiber ribbon, 250 µm, SMF-28
4: 4-fiber ribbon, 250 µm, SMF-28
5: 4-fiber ribbon, 250 µm, G657
6: 6-fiber ribbon, 250 µm, SMF-28
7: 6-fiber ribbon, 250 µm, G657
8: 8-fiber ribbon, 250 µm, SMF-28
9: 8-fiber ribbon, 250 µm, G657
A: 8-fiber ribbon, 250 µm + single 900 µm, SMF-28
C: 8-fiber ribbon, PVC jacket
T: 12-fiber ribbon, 250 µm, SMF-28
U: 12-fiber ribbon, PVC jacket
V: 12-fiber ribbon, PVC, G657
W: 12-fiber ribbon, G657
M: OM3 fiber
P: PM fiber
R: round cable
X: small core
Z: customized

4 Polished Angle
0: Flat (90.0 degrees)
C: 96 degrees
8: +8 degrees (98)
A: -8 degrees (82)
B: -12 degrees (78)
D: -6 degrees (84)
E: 45 degrees
F: Tilt -8 degrees (L to R down, rear view)
G: Tilt +8 degrees (R to L down, rear view)
P: protruded
T: +12 degrees (102)
Z: customized

5 Port Spacing
0: no spacing
S: 84 µm spacing
H: 127 µm spacing
9: 129 µm spacing
F: 250 µm spacing
C: 500 µm spacing
E: 750 µm spacing
A: 900 µm spacing
B: 1250 µm spacing
2: 2 mm
3: 3 mm
U: uneven
Z: customized
D: 2D FAU

6 FAU Thickness
4: 1.0-1.49 mm
1: 1.50-1.99 mm
A: 2.0-2.49 mm
2: 2.50-2.99 mm
3: 3.00-3.99 mm
4: 4.00-4.99 mm
Z: customized

7 Connector Code
0 = none
1 = none; bare ribbon fiber with fan-out
K = LC APC connectors with fan-out
L = LC PC connectors with fan-out
M = MT RJ connectors with fan-out
P = FC PC connectors with fan-out
Q = FC APC connectors with fan-out
R = LC receptacle
S = SC PC connectors with fan-out
T = SC APC connectors with fan-out
U = MU PC connectors with fan-out
V = MTP® connectors with fan-out
N = SnapMate connectors with fan-out

8 Hermetic/Running #
A: AR coating
H: HR coating
L: 90-degree light turn
C: cerrocast
F: glass feed-through
Running #: 0-9

9 Running #
0-9