

# LiNbO<sub>3</sub> Modulator

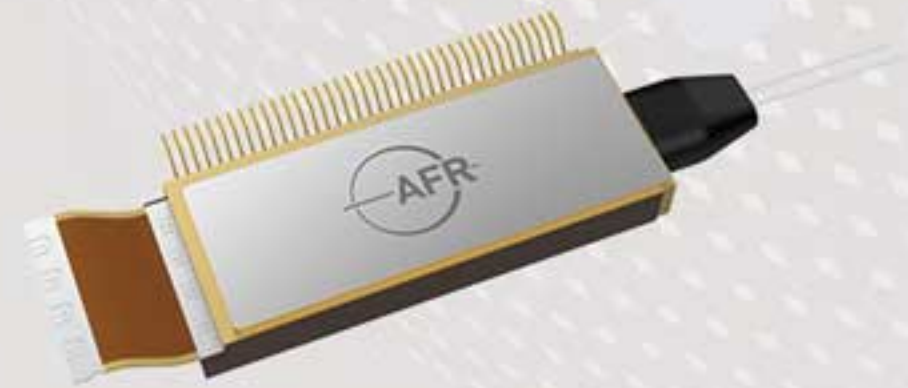


## Thin-Film

### 130 GBaud CDM

- Power Consumption < 3.5 W
- Optical Extinction Ratio  $\geq$  23 dB

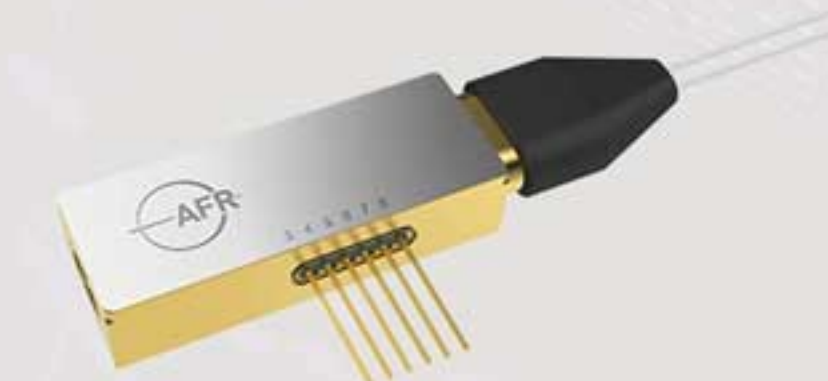
For DP-QPSK, DP-16QAM Coding



### 70 GHz Intensity Modulator

- Low Drive Voltage
- Optical Extinction Ratio  $\geq$  25 dB

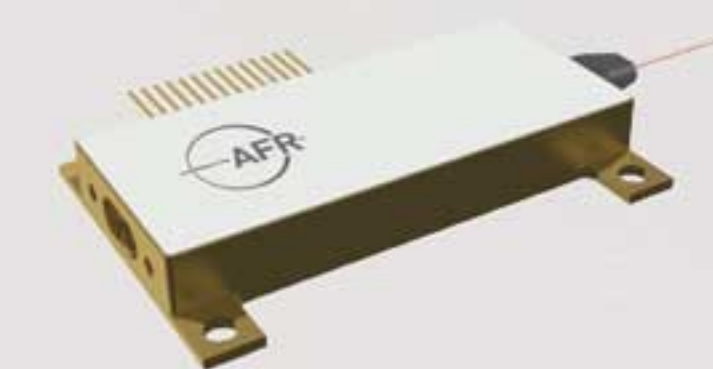
For Digital/Analog Transmission, RoF Applications



### 40 GHz TFLN IQ Modulator

- Electro-Optic Bandwidth > 25 GHz
- Excellent Linearity

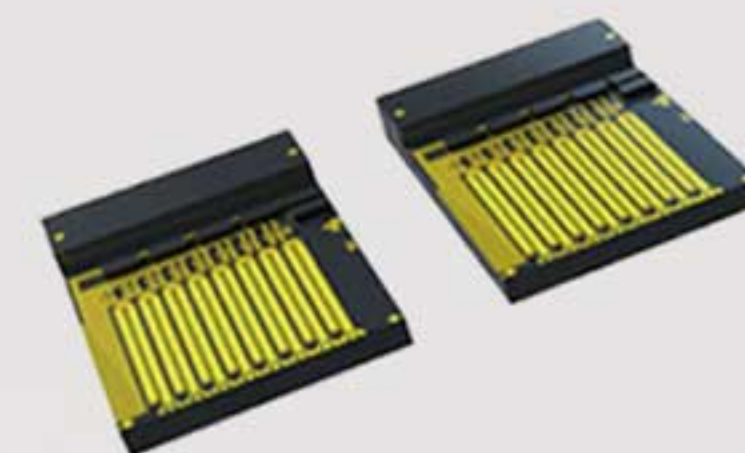
For OFDM, QPSK, QAM Coding and FMCW LiDAR



### 800G DR8 Modulator Chip

- Low Drive Voltage
- Low Optical Insertion Loss

For QSFP-DD/OSFP/OSFP-XD Type Transceiver Modules



## Bulk

### 20/40 GHz Intensity Modulator

- Electro-Optic Bandwidth > 32 GHz
- Low Optical Insertion Loss & Low Drive Voltage
- Extended Operating Temperature at - 55 to + 85 °C

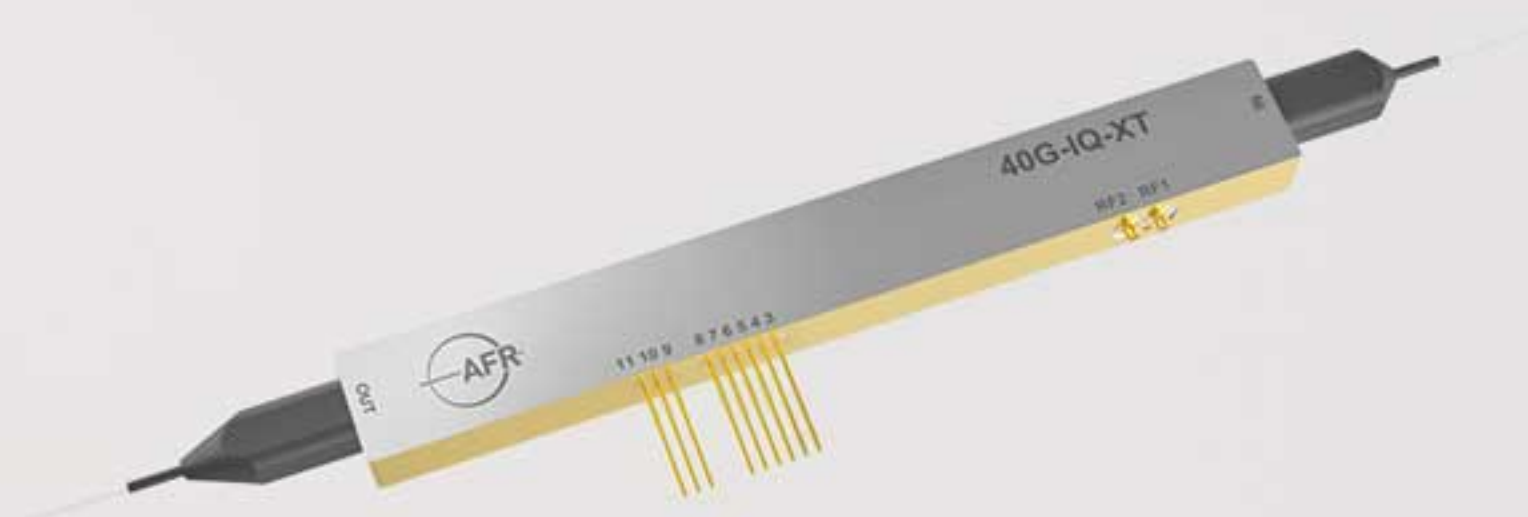
For Digital/Analog Transmission



### 40 GHz IQ Modulator

- Electro-Optic Bandwidth > 30 GHz
- Optical Insertion Loss: 5 dB (typ.)
- Optical Extinction Ratio  $\geq$  24 dB

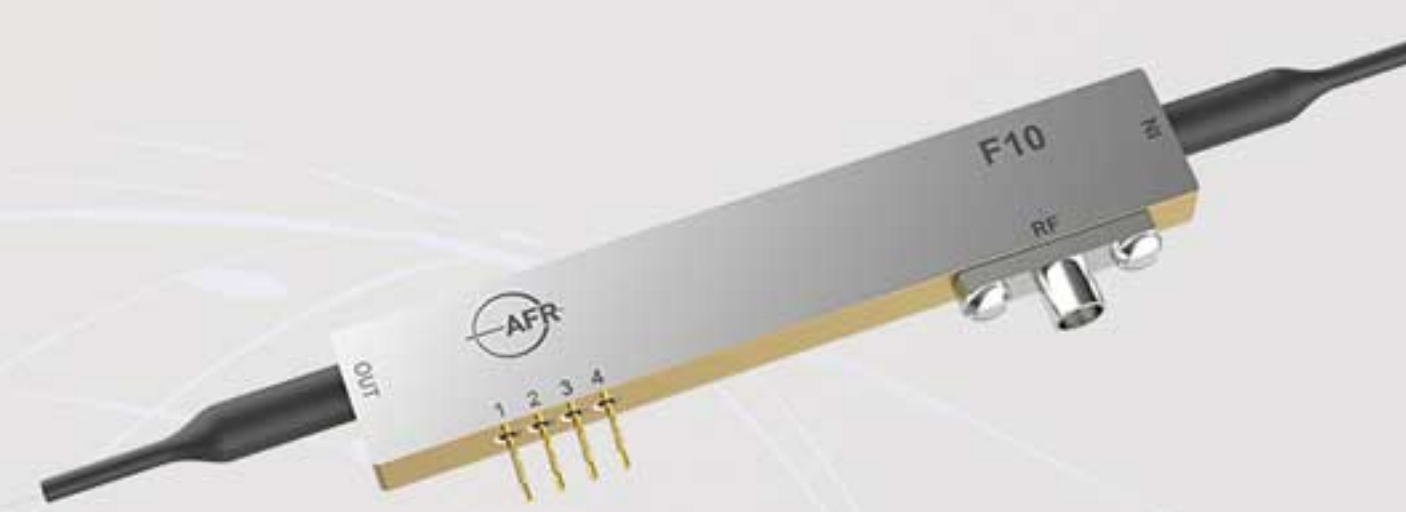
For Satellite Communication and LiDAR Applications



### 10 GHz Zero-Chirp Modulator

- Electro-Optic Bandwidth > 12.5 GHz
- Optical Insertion Loss < 4.5 dB
- RF V<sub>π</sub> Voltage: 5 V (typ. @ 1 kHz)

For High Frequency RF Signal Over Fiber Optic Links



### Phase Modulator

- Low Optical Insertion Loss @ 1060 nm Band or C-Band
- Frequency Response up to 10 GHz
- Extended Operating Temperature at - 55 to + 85 °C

For Ultra-Fast High Power Lasers and Quantum Applications



### CATV Analog Modulator

- Integrated Phase and Intensity Modulator
- 1550 nm Window
- Low Optical Insertion Loss

For CATV Applications



# AFR Company Profile

Advanced Fiber Resources (AFR), founded in 2000, is a leading supplier of fiber optical components. With its strong R&D and design capabilities, highly efficient manufacturing process and strict quality control, AFR designs and manufactures standard and custom components, modulators, and provides contract manufacturing solutions to our customers. Our products are widely used in fiber laser, telecom, data center, fiber sensing, autonomous driving, biomedical equipment, as well as research institutes and universities around the globe. AFR's products have been sold to customers in more than 40 countries and regions worldwide.



**25**  
Years of History



**2017**  
IPO in China



**115,000**  
m<sup>2</sup> Facility



**300**  
Engineers

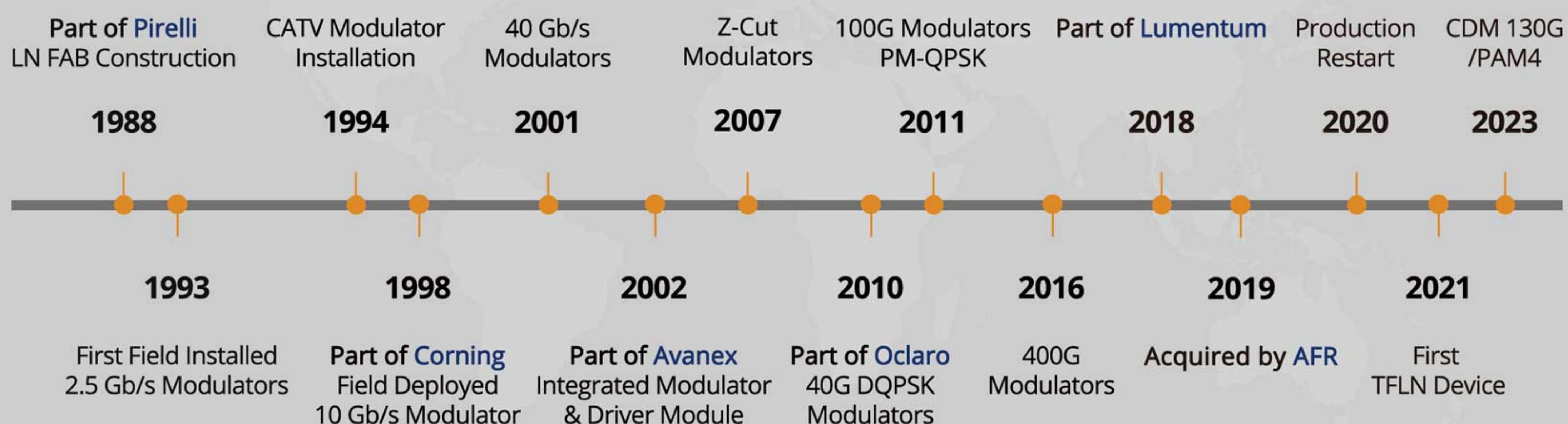


**600**  
Customers



**2,000**  
Employees

## AFR MILAN: A world leader in LN modulators with 40 years of history



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