

Intracity Link PTB-Rollei



This Testbed provides an underground dark single-mode fiber pair between PTB and the QVLS-HTI facilities in the Rolleiwerke in Braunschweig. It was established to provide reference signals to the start-ups within the QVLS-HTI. The one-way fiber link length is 14 km with a ~7 dB loss on each fiber. Access to both ends can be arranged and the fiber link can be configured as a loop.

A: Brief Information

Testbed title	Intracity Link PTB - Rollei
Start Point	Physikalisch-Technische Bundesanstalt (PTB)
End point	Rolleiwerke, Braunschweig
Institute/ Organization:	Physikalisch-Technische Bundesanstalt (PTB)
Contact	Dr. Sebastian Koke: Sebastian.Koke@ptb.de , (0531) 592-9462
	Dr. Nicolas Spethmann: nicolas.spethmann@ptb.de , (0531) 592 2009
Status	active

B: Technical Information

Type of Transmission	dark fiber
Length [km]	14 km on-way, 28 km looped tests
Losses [dB]	7 dB one-way, 14 dB looped
Supported Wavelengths [nm]	1550 nm \pm 20 nm
Type of Fiber	single mode
Polarization Stabilization	No
Type of Deployment	underground
Quantum Communication Infrastructure	none
Available Infrastructure for external Parties	Lasers, Time tagger, access upon request and agreement

C: Additional Information

Linked projects	<ul style="list-style-type: none">QVLS-HTI and QVLS-iLabs: https://qvl.de/de/ilabs/high-tech-incubator/
Press Release and Publications	Upcoming
Demonstrated Milestone	<ul style="list-style-type: none">Characterization of polarization fluctuations, loss and reflections profile of the quantum link.

Outlook	
Suggested Use Cases	Testing of QKD Systems and novel quantum communication techniques.
Other Comments/ Information	The time availability of the testbed must be coordinated with the other uses.