



AT A GLANCE

Optical coherent receiver
in a compact 19"-chassis

Coherent detection
of high-speed optical dual-
polarization m-PAM and
m-QAM signals

25, 40, 70 and 100 GHz
versions available

Features

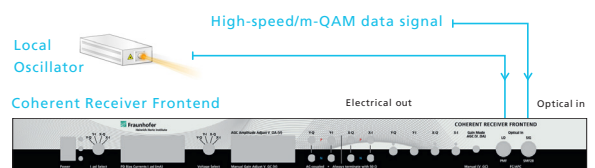
- Coherent optical receiver in a compact 19"-chassis
- Simultaneous detection of I/Q and both polarizations
- Optical inputs for local oscillator and data signal
- Low, medium and high-bandwidth version
- Linear trans-impedance amplifier in low bandwidth versions
- Optical extender heads in high-bandwidth versions

Applications

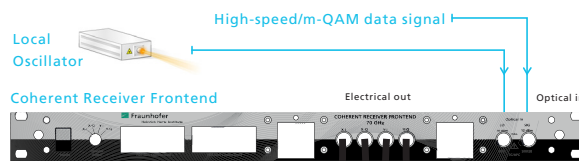
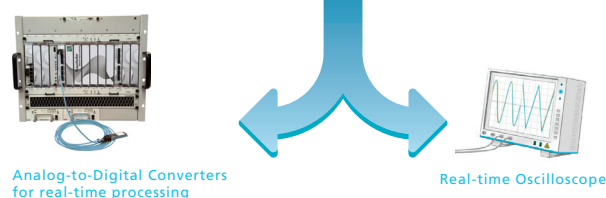
- Test and measurement
- Development of multi-terabit transmission systems and components
- Polarization diverse coherent detection of high-speed data signals with various modulation formats (m-PAM, m-QAM, 4D)
- Coherent receiver frontend for single-mode optical data transmission
- O/E converter for detection of arbitrary optical waveforms
- High-resolution optical spectrum measurements

	CRF - 40T	CRF - 40	CRF - 40 - EH	CRF - 70 - EH	CRF - 100 - EH
Operating wavelength range (nm)	C-band (1530 – 1570) The units operable in S-band and L-band can be available upon request.				
3dB cut-off frequency (GHz)	40	42	42	70	100
Average CRF responsivity (sig mA/W) <small>includes hybrid loss excluding TIA gain</small>	55	45	60	60	40
Trans-impedance amplifier (linear)	Yes	No (Optical pre-amplification is recommended)			
Output swing (Vpp) @1GHz	300 (TIA _{gain} =1)	150	300	300	200
CRF input Sig/LO power (dBm)	-10/12	12/16			
Common mode rejection ratio (dB _e)	-18 (DC)	-18 (DC)	-20 (DC)	-20 (DC)	-15 (DC)
Imbalance I _{sig} and I _{lo} (dB _o)	2 (DC)	2 (DC)	2 (DC)	2 (DC)	2 (DC)
Phase deviation (deg)	+/- 5.0	+/- 5.0	+/- 5.0	+/- 5.0	+/- 5.0
Optical Return Loss (dB _o @1550nm)	27	30	30	30	30
Pol. extinction ratio for Sig & LO (dB _o)	20				
Internal local oscillator laser	Optional				
Optical extender head	No	No	Yes	Yes	Yes
Optical connectors	FC/LC/E2000-APC				
HF-connectors	female K®	female K®	female V®	female V®	female mm-W®
Dimensions (W x H x D in mm)	482 (19") x 45 x 460				

Lower bandwidth versions, e.g., 25 GHz, are also available upon request.



Principal setup of CRF-40 and CRF-40T



Principal setup of CRF-40, 70, and 100-EH

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