



# Industry-Leading Performance

For 100-600G Optical Networks



Long-Haul

Metro

Data Centers

**QORVO**<sup>®</sup>  
all around you

# Innovative Optical Solutions

Qorvo® innovation sets the standard for optical fiber network limiting and linear modulator drivers and TIAs enabling local access, data center interconnect, regional, metro and long-haul optical networks with cost-effective transmit and receive solutions for 100/400 Gb/s and beyond. Our limiting and linear optical modulator drivers and TIAs in single-, dual- and quad-channel configurations, lead the industry with the lowest power dissipation, highest reliability and surface-mount assembly convenience.

Qorvo is synonymous with quality and reliability, delivering more than 1 million SMT and MMIC die-level modulator drivers to the world's leading optical network manufacturers. The QPA4961 leads the industry with high gain, low power dissipation and low THD. Qorvo module solutions support CFPx, QFSP28 and other small form factor (SFF) footprint standards. The quad TGA4851-SL CLR4 extended reach (500m-2km) targets data center applications (QFSP28 FF) providing industry-leading performance and up to 30% lower power dissipation versus competitive solutions. The next generation QPA4854 enables higher performance with further reduced power consumption. Qorvo has the next generation devices targeting 64GBaud data rates.

Description	Number of Channels	3dB BW (GHz)	RF Port IN/OUT	Output (Vpp)	Gain (dB)	Voltage (V)	Iq (mA)	Part Number
11.3 Gb/s EML Driver, 4x4mm <sup>2</sup>	1	8	Diff/Diff	1.8-4.5	30	3.3	130	TQP5115
28 Gb/s Differential SMT Modulator Driver	1	25	Diff/Diff	6-9	24	4-5	450	TGA4957-SM
32 Gb/s Differential SMT Modulator Driver	1	27	Diff/Diff	6-9	25	5	428	TGA4959-SL
Wideband Driver Die (Linear or Limiting)	1	37	SE/SE	4-6	11	6-8	215	TGA4852
Low Power Wideband Driver Die (Linear or Limiting)	1	50	SE/SE	1-3	12	2.5-3.3	50	TGA4840
Low Power Wideband Modulator Driver (Linear or Limiting)	1	33	SE/SE	1-3	11	2.5-3.3	50	TGA4840-SM
Low Power Wideband Quad Modulator Driver (Linear or Limiting)	4	30	SE/SE	1.5-2.5	11	2.5-3.3	40-70	TGA4851-SL
Wideband Driver Die (Linear or Limiting)	1	50	SE/SE	1.5-2.5	13	2.5-3.3	40-70	QPA4971D
Wideband Modulator Driver (Linear or Limiting)	1	37	SE/SE	1.5-2.5	13	2.5-3.3	40-70	QPA4971
Low Power Wideband Quad Modulator Driver (Linear or Limiting)	4	30	SE/SE	1.5-2.5	13	2.5-3.3	40-70	QPA4854
32 Gb/s Optical Modulator Driver	1	27	SE/SE	4-9	32	6	485	TGA4943-2-SL
32 GBaud Quad Linear Driver	4	25	Diff/SE	3-5	26	3-5	-	TGA4899-SL
32 GBaud Quad Linear Driver with Equalization	4	27	Diff/SE	3-5	28	3-5	-	QPA4961*
64 GBaud Quad Linear Driver	4	45	Diff/SE	4.5	27	3-5	-	QPA4964*
64 GBaud Quad Linear Driver with Equalization	4	45	Diff/SE	4.5	27	3-5	-	QPA4964A*
64 GBaud Quad Linear Driver Die with SPI	4	45	Diff/Diff	2.5-3.5	20-25	3-5	-	QPA4963D*

\* Coming during 2018

Qorvo's optical infrastructure portfolio includes both limiting and linear TIAs in single, dual and quad-channel format that deliver high-transimpedance gain with AGC, SPI control and adjustable bandwidth for 100-400 Gb/s applications as well as targeting next generation 64 GBaud data rates. The PAM4 linear TIA TGA4875 is available today.

Description	Number of Channels	Bandwidth (GHz)	Differential TZ Gain (ohm)	Differential Output Vpp (mV)	Equivalent Input Noise (pA/rtHz)	Voltage (V)	Current (mA)	Part Number
Dual 32 Gb/s Linear TIA w/AGC	2	30	6,000	100 to 900	15	3.3	188	QPA4862D
Dual 32 Gb/s Linear TIA w/AGC	2	30	7,000	100 to 900	19	3.3	188	TGA4872
Quad 32 Gb/s Linear TIA w/AGC + SPI	4	30	7,000	100 to 900	19	3.3	376	TGA4874
Quad 28 Gb/s Limiting SE In/Diff Out TIA with RSSI	4	30	7,800	600 to 990	15	2.7-3.3	130-180	TGA4871
Single 56 Gb/s PAM4 Linear TIA: SE In/Diff Out	1	36	5,400	100 to 750	15	3.3	112	TGA4875
Dual 64 GBaud Linear TIA w/AGC	2	45	5,000	700	17	3.3	130	QPA4867D*
Quad 64 GBaud Linear TIA w/AGC + SPI (Low Power)	4	45	5,000	500	17	3.3	195	QPA4866D*
Quad 64 GBaud Linear TIA w/AGC + SPI	4	45	5,000	700	17	3.3	260	QPA4868D*

\* Coming during 2018