



Industry-Leading Performance

For 40-400G Optical Networks



Long-Haul

Metro

Data Centers

QORVO[®]
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 TGA4899-SL leads the industry with high gain, low power dissipation and low THD. The QPA4960 with the gain slope adjustability provides ultimate performance with differential input and output. 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 will enable higher performance with further reduced power consumption. The new PAM4 100G & 400G QPA4993 and QPA4994 diff/SE single & quad drivers will meet the stringent gain and THD requirements for the PAM4 and DMT applications while family QPA497x is targeting the diff/diff applications. 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 ²	1	8	Diff/Diff	1.8-4.5	30	3.3	130	TQP5115
5G Optical Front Haul Driver & 28 Gb/s 6Vpp	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
32 Gb/s Quad Limiting Modulator Driver	4	24	Diff/SE	3.3-6.5	27	3.3-5	295	QPA4848
CFP2/CFP4 Low Power Driver, Die (Linear & Limiting)	1	50	SE/SE	1-3	12	2.5-3.3	50	TGA4840
CFP2/CFP4 Modulator Driver (Linear & Limiting)	1	33	SE/SE	1-3	11	2.5-3.3	50	TGA4840-SM
40 Gb/s Wideband Driver, Die	1	37	SE/SE	4-6	11	6-8	215	TGA4852
QSFP28 Quad Driver	4	30	SE/SE	1.5-3	11	2.5-3.3	200	TGA4851-SL
QSFP28 Quad Driver (56GBaud PAM4)	4	30	SE/SE	1.5-3	13	2.5-3.3	200-320	QPA4854*
CFP2/CFP4 EML or MZ High Gain	1	37	SE/SE	1.5-2.5	13	2.5-3.3	40-50	QPA4971
PAM4 100/400G Family of Drivers: Diff/Diff	1 & 4	25	Diff/Diff	1-3	9-13	2.7-4	-	QPA497x Family*
PAM4 100/400G Family of Drivers: Diff/SE	1	30	Diff/SE	1-2.2	3-15	3.3	100	QPA4993
PAM4 100/400G Family of Drivers: Diff/SE	4	30	Diff/SE	1-2.2	3-15	3.3	400	QPA4994
40/100 Gb/s, 8Vpp Optical Modulator Driver	1	27	SE/SE	4-9	32	6	310	TGA4943-SL
CFP & CFP2-ACO Quad Linear Driver	4	25	Diff/SE	3-5	28	3-5	940	TGA4899-SL
CFP & CFP2-ACO Quad Linear Driver	4	26	Diff/Diff	3-5	30	3-5	1000	QPA4960
CFP & CFP2-ACO Quad Linear Driver	4	27	Diff/SE	3-5	28	3-5	-	QPA4961*
64GBaud Quad Linear Driver	4	45	Diff/SE	4-5	23-27	3-5	-	QPA4964*
Optical Clock Driver with Integrated AGC	1	17	SE/SE	27dBm	27	6	210	TGA2565-SM

* Coming during 2017

The new PAM4 linear TIA TGA4875 is available today and will be followed by the lower power consumption QPA4876D dual and QPA4878D quad channel versions.

Qorvo's optical infrastructure portfolio includes both limiting and linear TIAs in single, dual and quad 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 64GBaud data rates.

Description	Bandwidth (GHz)	Differential TZ Gain (ohm)	Differential Output Vpp (mV)	Equivalent Input Noise (pA/rtHz)	Voltage (V)	Current (mA)	Part Number
Dual Channel 32 Gb/s Linear TIA w/AGC	30	6,000	100 to 900	15	3.3	188	QPA4862D
Dual Channel 32 Gb/s Linear TIA w/AGC	30	7,000	100 to 900	19	3.3	188	TGA4872
Quad 32 Gb/s Linear TIA w/AGC+SPI	30	7,000	100 to 900	19	3.3	376	TGA4874
Quad 100GE Limiting SE/Diff with RSSI	30	7,800	600 to 990	15	2.7-3.3	130-180	TGA4871*
PAM4 Linear TIA: SE In/Diff Out	36	5,400	100 to 750	15	3.3	112	TGA4875
PAM4 Linear TIA: SE In/Diff Out, Lower Pdiss	32	6,100	100 to 700	15	3.0-3.3	71	QPA4876D*
PAM4 Linear TIA Quad with I ² C	36	5,500	100 to 750	15	3.3	284	QPA4878D*
Dual 64 Gb/s Linear TIA w/AGC + SPI	45	5,000	700	17	3.3	160	QPA4867D*
Quad 64 Gb/s Linear TIA w/AGC	45	5,000	700	17	3.3	-	QPA4868D**

* Coming during 2017 ** Coming during 2018