

ADTRAN Series

500G/600G

FTTB/FTTdp ONUs

Models: 501G, 504G, 508G, 516G, 524G, 548G, 624G, 648G



500G/600G G.FAST ONUs

Accelerating Gigabit Services

Premium broadband services are fueling the need for pushing fiber deeper into the network and closer to the end user. However, the cost of delivering Fiber-to-the-Home (FTTH) can be prohibitive in some areas. Next-generation broadband technologies such as Vectored VDSL2, G.fast and G.hn enable ultra-broadband speeds (approaching Gigabit) over existing copper, coax, or even powerline infrastructure. Using Fiber-to-the-Curb (FTTC), Fiber-to-the-distribution point (FTTdp) and Fiber-to-the-Building (FTTB) architectures, service providers can deliver premium broadband services at the reduced cost per subscriber or living unit.

Premium Broadband Services Today

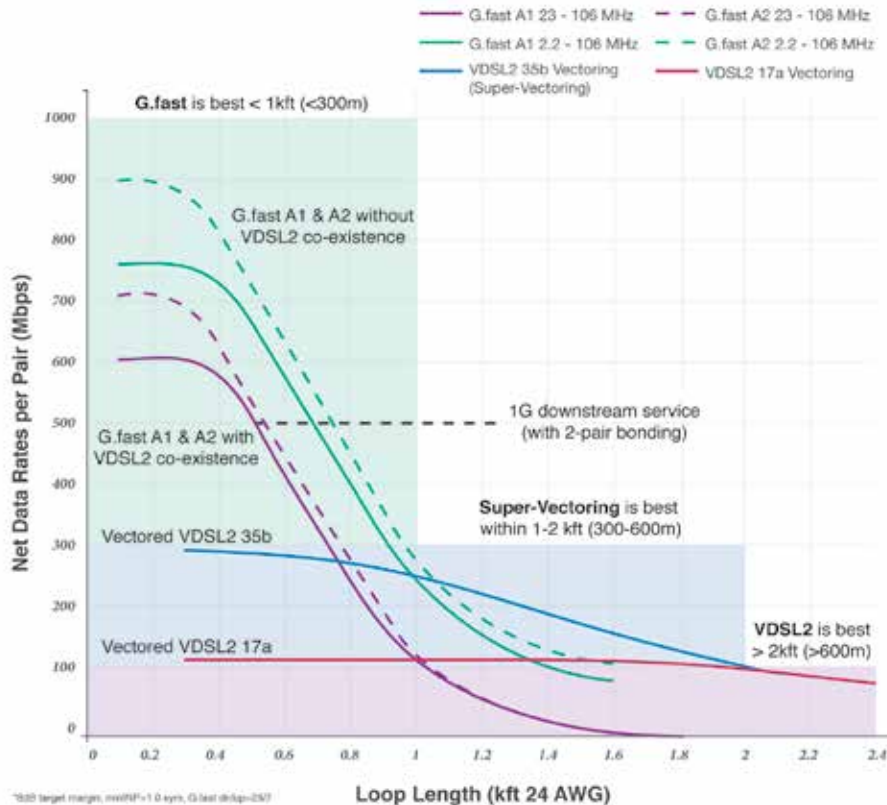
ADTRAN's 500G and 600 G series FTTdp and FTTB optical network units (ONUs) allow service providers to cost-effectively deliver ultra-broadband (up to 1Gbps) services utilizing ITU-T G.fast technology standards. The 600G outdoor hardened series is optimized for shelter-based deployments.

- G.fast: G.fast solutions support deep-fiber deployments cost-effectively while allowing for near Gigabit speeds. G.fast is an ideal solution for less than 300 meters (~1000 ft).

Eliminate In-Home Wiring Concerns

The ADTRAN 500G and 600G series of ONUs are a complementary solution for GPON, XGS-PON or NGPON2 based FTTH networks. The 500G series ONUs, acting as Distribution Point Units (DPUs), deliver ITU-T G.9700/9701 standards-based G.fast, enabling service providers to utilize the existing wiring (twisted pair or coax) within the customer premises to deliver premium broadband services. Entering the home with CAT5 or fiber has presented a problem for service providers and ADTRAN's solution changes the dynamics versus previous modes of deployment. Services can be deployed rapidly, and with minimal installation and construction costs.

VDSL2 AND G.FAST DOWNSTREAM RATES PER PAIR



Target Multiple Customer Segments

ADTRAN offers a choice of indoor and outdoor units. Indoor rack-mountable units are ideal for FTTB deployments serving multi-dwelling units (MDU). Sealed outdoor variants can be mounted to an exterior wall, pedestal, or pole, or installed inside a handhole. They can also be housed inside small outdoor cabinets. Depending on the placement the solution can be span-, local-, or reverse-powered from the subscriber.

products and solutions spanning the entire access network, from the central office to the cabinet and the customer premises. ADTRAN's G.fast solutions support open SDN-protocols such as NETCONF for SDN-programmability, BBF.247 and TR-301 defined YANG and RESTful APIs for interoperability across multi-vendor networks, and cloud-managed persistent management agent (PMAs) for providing a highly fault tolerant and simplified management interface supporting the scale to manage millions of nodes in the field.

SDN-Enabled for Faster Broadband Deployments

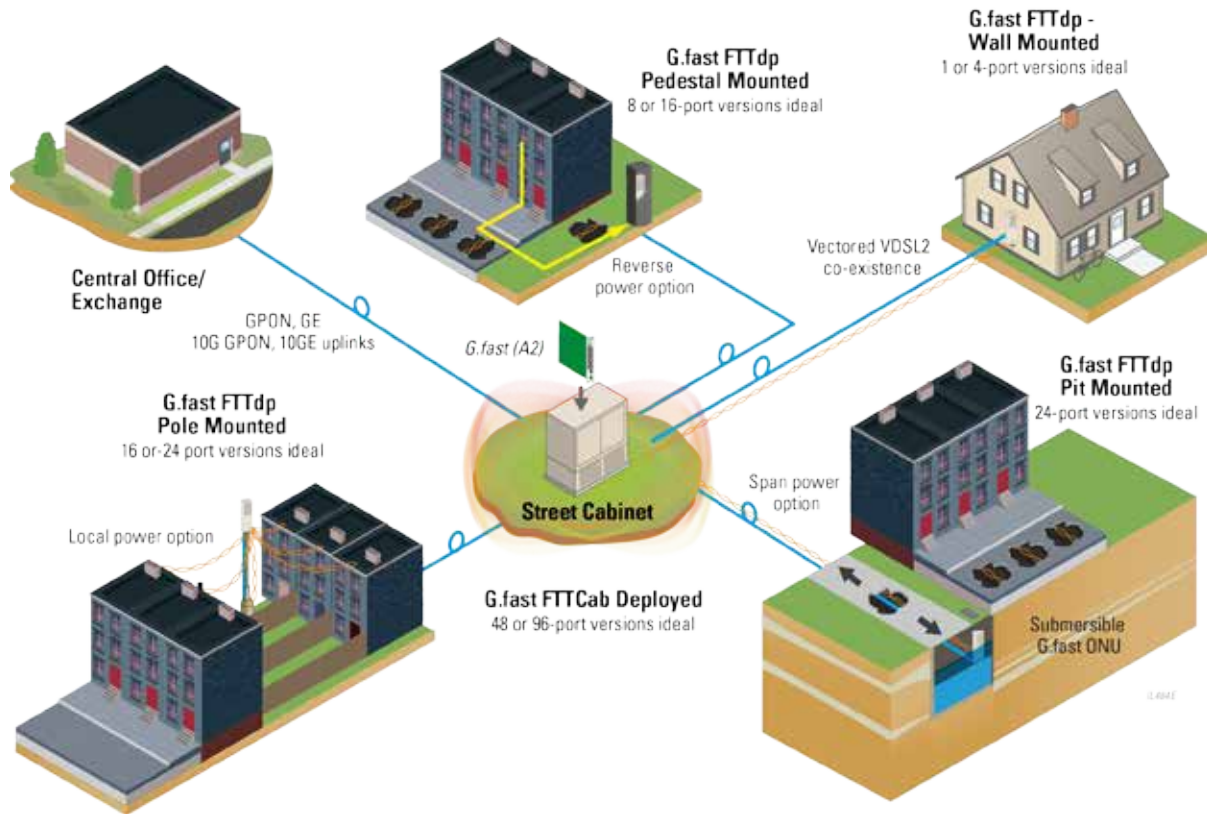
As it unlocks the single-vendor access network, ADTRAN is providing a standards-based carrier-grade set of

This flexible and open approach enables operators to select best-in-class solutions from multiple vendors to simplify deployment models and accelerate the introduction of new revenue generating services across their entire network.

SUMMARY

	501G	504G	508G	516G	524G	548G	624G	648G
Housing	Fully Sealed and Submersible Outdoor Design						Hardened Indoor/Outdoor Pizza Box Design	
Speeds	500 Mbps - 1 Gbps over copper (twisted pair, coax)							
Application	SFU/DPU, MDU				MDU			
Number of Subs	1-16				24-48			
Uplinks	1x2.5 Gbps		2x1/2.5 Gbps		4x10 Gbps			
Operational Model	FTTN, FTTdp, FTTB, FTTCab							
Deployment	Pedestal, Pole, Wall, Pit or Handhole Mounting						Desk, Rack or Wall Mountable	
Power	Reverse		Reverse, Span, Local		Span, Local		Local	
Operating Environment	-40C to + 65C (-40F to +149F); 100% Relative Humidity, Condensing							
Key Features	Cloud-based PMA; Open APIs; SDN-programmable, BBF.247 Certified							





Ordering Information

	Reverse Power	Span Power (RFT-V)	Local Power (AC)	Local Power (DC)
OUTDOOR FTTP ONUs				
504G 4-port G.fast ONU	11321706Fx*			
508G 8-port G.fast ONU	11321707Fx*	11321707Fx*	11321707Fx*	11321707Fx*
516G 16-port G.fast ONU	11321712Fx*	11321712Fx*	11321712Fx*	11321712Fx*
516G 16-port G.fast ONU (copper/coax)	11321761Fx*	11321761Fx*		11321761Fx*
524G 24-port G.fast ONU			11321724Fx*	11321724Fx*
548G 48-port G.fast ONU			11321748Fx*	11321748Fx*
INDOOR FTTP ONUs				
624G 24-port G.fast ONU			11371725Fx*	11371725Fx*
648G 48-port G.fast ONU			11321749Fx*	11321749Fx*

*Additional ONU configurations including options for chipset, line test, SFP and cabling are available for quote. Please email support@adtran.com or +1.256.963.8716



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ADTRAN
Certified
Supplier



ISO 9001
ISO 14001
TL 9000



TL10 1270

Product Specifications

500G/600G G.fast ONUs

	501G	504G	508G	516G	524G	548G	624G	648G
Interfaces								
Network								
Capacity	1 x 2.5 Gbps	1 x 2.5 Gbps	2 x 1/2.5 Gbps	2 x 1/2.5 Gbps	4 x 10 Gbps	4 x 10 Gbps	4 x 10 Gbps	4 x 10 Gbps
GPON	•	•	•	•	•	•	•	•
NGPON2					•	•	•	•
10 GigE (Point-to-Point)					•	•	•	•
Subscriber								
G.fast (106 MHz)	1	4	8	16	24	48	24	48
VDSL2 fallback			•					
Integrated Copper Tails	•	•	•	•	•	•		
Line Rate Performance								
106 MHz G.fast (ITU-T G.9700 and ITU-T 9701)			•	•	•	•	•	•
212 MHz G.fast option	•	•			•	•	•	•
Vectoring Group					4 Nodes	2 Nodes	4 Nodes	2 Nodes
G.vector ITU-T G.993.5	•	•	•	•	•	•	•	•
VDSL2 Five-band Profile 8a-d, 12a-b, 17a	•		•					
Configurable G.fast Start Frequency ≥ 2.2 MHz	•	•	•	•	•	•	•	•
Downstream to Upstream Ratio (1:1 to 10:1)	•	•	•	•	•	•	•	•
SRA, FRA, Physical Layer Retransmission	•	•	•	•	•	•	•	•
Ethernet Services								
802.1D Bridging	•	•	•	•	•	•	•	•
Virtual Switch Based on 802.1q VLAN	•	•	•	•	•	•	•	•
VLAN Tagging / Detagging per Ethernet Port	•	•	•	•	•	•	•	•
VLAN Stacking (Q-in-Q) and VLAN Translation	•	•	•	•	•	•	•	•
Class-of-Service (CoS) based on VLAN-ID, 802.1p Bit	•	•	•	•	•	•	•	•
Marking/ Remark of 802.1p	•	•	•	•	•	•	•	•
IPTV Support								
Internet Group Management Protocol (IGMP) v2 and v3	•	•	•	•	•	•	•	•
Dynamic Host Configuration Protocol (DHCP) Support with Option 82	•	•	•	•	•	•	•	•
Bypass Function								
Relay-function per Subscriber Port			•	•				
Power Options								
Power Consumption (AC)	10W	14W	35W	60W	92W	135W	60W	135W
Local DC Power			-42 VDC to -56VDC	-42 VDC to -56VDC	-42 VDC to -56VDC	-42 VDC to -56VDC	-42 VDC to -56VDC	-42 VDC to -56VDC
Local AC Power			100-240 VAC, 50/60 Hz	100-240 VAC, 50/60 Hz	100-240 VAC, 50/60 Hz	100-240 VAC, 50/60 Hz	100-240 VAC, 50/60 Hz	100-240 VAC, 50/60 Hz
Reverse Power Feeding	1-4 lines	1-4 lines	1-8 lines	1-16 lines				
Forward Line Power (per pair)			1-2 line powering pairs (+/- 190 VDC)	1-2 line powering pairs (+/- 190 VDC)	1-2 line powering pairs (+/- 190 VDC)	1-2 line powering pairs (+/- 190 VDC)		

	501G	504G	508G	516G	524G	548G	624G	648G
Physical								
Dimensions	25" x 6.1" x 12" (H x W x D)	25" x 6.1" x 12" (H x W x D)	17.3" x 10" x 3.3" (H x W x D)	17.3" x 10" x 3.3" (H x W x D)	18.5" x 8.6" x 5.7" (H x W x D)	18.5" x 8.6" x 5.7" (H x W x D)	2.6" x 17.2" x 10.7" (H x W x D)	2.6" x 17.2" x 10.7" (H x W x D)
Weight			16 lbs	16 lbs	33 lbs	33 lbs	8 lbs	8lbs
Mounting	Pedestal, Pole, Wall, Hand-hole, Dog House-style Cabinets	Pedestal, Pole, Wall, Hand-hole, Dog House-style Cabinets	Pedestal, Pole, Wall, Hand-hole, Dog House-style Cabinets	Pedestal, Pole, Wall, Hand-hole, Dog House-style Cabinets	Pedestal, Pole, Wall, Hand-hole, Dog House-style Cabinets	Pedestal, Pole, Wall, Hand-hole, Dog House-style Cabinets	Desk, Rack and Wall Mountable	Desk, Rack and Wall Mountable
Environmental								
Operating Temperature	-40F to +149F	-40F to +149F	-40F to +149F	-40F to +149F	-40F to +149F	-40F to +149F	-40F to +149F	-40F to +149F
Environmentally Sealed	•	•	•	•	•	•		
Storage Temperature	-40F to +185F	-40F to +185F	-40F to +185F	-40F to +185F	-40F to +185F	-40F to +185F	-40F to +185F	-40F to +185F
Relative Humidity	100% Condensing, Fully Submersible	100% Condensing, Fully Submersible	100% Condensing, Fully Submersible	100% Condensing, Fully Submersible	100% Condensing, Fully Submersible	100% Condensing, Fully Submersible	100% Condensing	100% Condensing
Regulatory								
FCC Part 15	•	•	•	•	•	•	•	•
UL 60950-1/21/22	•	•	•	•	•	•	•	•
GR-487-CORE, Issue 2	•	•	•	•	•	•	•	•
GR-1089-CORE, Issue 3	•	•	•	•	•	•	•	•
NEBS Level 3	•	•	•	•	•	•	•	•
RoHS 6 of 6 Compliant	•	•	•	•	•	•	•	•
ETSI EN 300 019	•	•	•	•	•	•	•	•
ETSI EN 300 389	•	•	•	•	•	•	•	•
ETSI EN 201 468	•	•	•	•	•	•	•	•
ETSI EN 60950-1; -21 and -22 without ETSI	•	•	•	•	•	•	•	•
ETSI EN 300 019	•	•	•	•	•	•	•	•
ETSI 300 753	•	•	•	•	•	•	•	•
DTAG TS 0364/96	•	•	•	•	•	•	•	•
DTAG1TR9	•	•	•	•	•	•	•	•
ITU-T K.27/31/35	•	•	•	•	•	•	•	•
ITU-T K.45	•	•	•	•	•	•	•	•

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