

ADSL2/2+ 4-port 11n(1x1) Wireless TN119-E4Wn

External Specification

Version: 1.0.0

By:

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1 Product Descriptions

This is a Highly integrated ADSL2/2+ Integrated Access Device , which is an advanced gateways incorporating Ethernet Switch and Wireless home networking Access Point ,complied with the IEEE802.11b/g /n(1x1) standards. It is usually preferred to provide high access performance applications for the individual users,the SOHO,the small enterprise and so on.

2 Product Specifications and Features

2.1 H/W Features

2.1.1 Specification

Key Components / Connectors / Performance	
Console	internal console (4 pin)
ITU-T K.21	Basic level standard
USB	USB2.0 Host
Interfaces (TR-068 compliant)	
LAN	4x 10/100M Base-TX MDI/MDIX RJ-45 ports Compliant with following standards: <ol style="list-style-type: none"> 1. IEEE 802.3/802.3u 2. Hardware based 10/100M, full/half, flow control auto negotiation 3. Non-blocking wire speed reception and transmission 4. Full duplex IEEE 802.3x flow control and half duplex back-pressure flow control 5. Broadcast storm protection 6. Automatic address learning, address aging and address migration 7. Integrated address Look-Up Engine, 1K absolute MAC addresses supported

WAN	<p>1x inner pair RJ-11 ADSL port</p> <p>Data Rate:</p> <p>Downstream: up to 24Mbps</p> <p>Upstream: up to 1Mbps</p> <p>Rate Adaptation:</p> <p>Data rate auto-negotiate in 32 kbps increments</p> <p>Performance:</p> <p>TR-067 Interop performance compliant</p>
WLAN	<p>Detachable SMA or fixed antenna can be optional.</p> <p>IEEE 802.11b/g/n compliance</p> <p>Data Rate:</p> <p>802.11n: 72.2, 58.5, 52, 45.5, 39, 32.5, 26, 19.5, 13 & 6.5Mbps</p> <p>802.11g: 54, 48, 36, 24, 18, 12, 9 & 6 Mbps</p> <p>802.11b: 11, 5.5, 2 & 1 Mbps</p> <p>Modulation:</p> <p>802.11n: BPSK, QPSK, 16-QAM, 64QAM</p> <p>802.11g: PSK/CCK, DBPSK, DQPSK, OFDM, BPSK, QPSK, 16QAM, 64QAM</p> <p>802.11b: CCK(11&5.5 Mbps), DQPSK (2Mbps), DBPSK (1Mbps), DSSS</p> <p>Antenna: 2dBi</p> <p>Operating Frequencies: 2.4 ~ 2.483 GHz</p> <p>Channel Bandwidth (802.11n): 20/40 MHz (bundling of two adjoining 20 MHz channels to one 40 MHz channel), 20 or 40 MHz channel bandwidth could be selected using software</p> <p>Channel Numbers:</p> <p>802.11n: 11 for North America; 13 for Europe;</p> <p>802.11g: 11 for North America; 13 for Europe;</p> <p>802.11b: 11 for North America; 13 for Europe;</p> <p>Security: WEP 64-bit, 128-bit</p> <p>WPA-PSK_TKIP/AES 256-bit</p> <p>Output Power:</p> <p>802.11n: 12.5±1.5dBm</p> <p>802.11g: 15±1.5dBm</p> <p>802.11b: 18±1.5dBm</p> <p>Total Transmission power (EIRP) 18dBm</p> <p>Support external WPS Button</p>

2.1.2 LED indicators

Location	LED Indicative	Color	Status	Description
Per Device	Power	Green	Solid Light	Power on
			Light Off	Power off
		Red	Solid Light	POST (Power On Self Test)failure(not bootable) or Device malfunction
	DSL	Green	Solid Light	DSL good sync.
			Blinking	DSL attempting sync.
			Light off	No carrier signal
	Internet	Green	Solid Light	IP connected and no traffic detected
			Light off	Modem power off, modem in bridge mode or ADSL connection not present.
		Red	Solid Light	Device attempted to become IP connected and failed
	LAN1~4	Green	Solid Light	Device connected to LAN port
			Blinking	LAN Activity present
			Light off	No Activity
	WLAN	Green	Solid Light	Connect to WLAN Port
			Blinking	WLAN activity
			Light off	No activity or power off
	WPS	Green	Solid Light	Finished WPS setup
			Blinking	During Setup

Product Specification		Light off	No use or Failure
USB	Green	Solid Green	Powered device connected to the USB port
		Blinking	USB activity present
		OFF	Power off, no cable or no USB device connected to the USB port

2.2 S/W Features

Feature Item	Feature	Detailed Description
ADSL Compliance	ANSI T1.413, G.992.1 (G.dmt), G.992.2 (G.lite)	
	Annex M (Annex A Annex B and C are optional)	
	G.992.3 (G.bis/ADSL2)	ADSL and ADSL2 dual mode PHY
	G.992.5 (ADSL2+)	ADSL2+
	Annex M	
Network Protocols and Features	RFC2684 VC-MUX, LLC/SNAP encapsulations for bridged or routed packet	VC-MUX for any connection type
	RFC2364 PPP over ATM	RFC2364 LLC/NLPID
	AAL5	encapsulation for PPPoA
	802.1q/1p VLAN over RFC2684 Bridge encapsulation	802.1q header insertion toward WAN and de-insertion toward LAN over RFC2684 bridge mode over AAL5. Supports multiple VLANs on multiple PVCs and mapping VLANs, PVCs and physical LAN ports to multiple bridges.

PPPoA	Support AUTO, PAP, CHAP, MS-CHAP authentication Added static IP address assignment.
PPPoE	Support AUTO, PAP, CHAP, MS-CHAP authentication Added static IP address assignment.
Multiple PPPoE sessions on single PVC	Allows multiple PPPoE sessions on one PVC.
PPPoE pass-through	Supports concurrent PPPoE clients inside the modem and PPPoE clients on the LAN devices
PPPoE - filtering of non-PPPoE packets between WAN and LAN	Previously only filtered non-PPPoE packet from LAN to WAN, now works in both directions.
Auto-clean-up remote staled PPP sessions at BRAS	Clean up staled PPP sessions (PPPoE and PPPoA) at ISP BRAS after ADSL link goes down then up or after modem reboots, if scratch pad is enabled on top boot flash.
IpoA	
MER (a.k.a IP over Ethernet over AAL5)	
Transparent bridging between all LAN and WAN interfaces	Enabled STP in bridge for LAN interfaces to avoid looping among multiple wireless gateways.
WAN to WAN traffic blocking in bridge mode	
Second IP address on LAN interface	Only public IP address and no DHCP on second IP address.
ARP	
DNS relay	

	DNS server fallback in DNS Relay	Launch dnsprobe process when both primary and secondary DNS's are assigned. Probe primary DNS status and fallback to secondary DNS. When primary DNS is up again, switch back to primary DNS.
	DHCP server	
	DHCP client	
	DHCP Relay	DHCP relay agent for IPoA and MER type of WAN connections.
	NAPT	
	IGMP Proxy	IGMP v1/v2
	IGMP Snooping	IGMPv1/v2 snooping in bridge mode. Added blocking mode.
	RIP v1/v2	Enable RIP over multiple WAN interfaces
	Dynamic DNS	Automatic update WAN IP address when it is changed to dyndns.org and/or TZO DDNS operator.
	LAN port to VC Mapping	Supports traffic mapping between a group of LAN ports to a PVC.
	Multiple Protocol VLAN Mux	Support multiple protocols on single PVC using VLAN ID
	Multiple Service PVC	Support PPPoE, Bridge, and MER services over a single PVC
	Stateful Inspection	SPI Fire Wall
Firewall	Denial of Service Attack	Passed DOS attacks: ARP Attack, Ping Attack, Ping of Death, Land, SYNC, Smurf, Unreachable, Tear Drop

	TCP/IP/Port/interface filtering rules	Support both incoming and outgoing filtering.
	MAC Layer Filtering	Added IGMP in protocol menu. Filter MAC frames based on protocol type, source/destination MAC address, direction
	Day-time Parental Control	
	IPsec VPN. IPsec/PPTP passthrough.	Support VPN connection to remote VPN gateway.
VPN	IP/Bridge/802.1p QoS	Supported both routed and bridged mode PVCs for packet level QoS: classification rules, priority queuing using ATM TX queues, IP TOS/Precedence, 802.1p marking. Added DiffServ DSCP marking and src/dest MAC addresses classification.
QoS	MAC filter	
Wireless	Wireless bridge	
	802.1x/Radius server/Dynamic WEP allocation	
	Secure Easy Setup (SES)	
	Multiple SSIDs, QoS/WMM	
	Web based GUI	
Configuration and Management	Embedded web server	
	Download image via HTTP or tftp client	
	Download image via FTP server	

Download image via TFTP server	
Command Line Interface via serial port, telnet, or ssh	added dumpcfg, sntp commands. Added option to tftp, adsl, wan, ppp commands.
Menu-driven CLI via serial port or telnet	Added dump configuration.
Universal Plug and Play (UPnP) Internet Gateway Device (IGDv1.0)	Added support for ADSL IGD. Enable/disable UPnP without reboot.
SNMP v1/v2c agent	
SNMP MIBs: rfc2662 ADSL line MIB, rfc2515 ATM MIB, MIB-II	Support GET only except GET/SET for system MIB and ifAdminStatus in ifTable.
Date/time update from SNTP Internet Time Server	Automatic synchronize date and time with Internet Time Servers and local time zone setup. Display Date/time in device info and syslog. Added SNTP command.
Daylight saving zone	
TR-069	Support 273 parameters, digest/certificate/SSL security. Support proprietary parameters implementation without tr69c framework sources

3 Physical & Environment

3.1.1 Power

- Power Adapter Input: 100-240V AC, 50/60Hz
- Power Adapter Output: 12V/1A DC
- Dying Gasp: Can be optional
- Power Switch: Push button supported
- Reset Button: [Reset to factory default by pushing button for 1 sec.;](#)
 - <15 sec. between reset and Internet connection is ready;
 - <60 sec. between power on and Internet connection is ready

3.1.2 Operation Temperature

- 32°F to 104°F (0°C to 40°C)

3.1.3 Storage Temperature

- -4°F to 149°F (-20°C to 70°C)

3.1.4 Humidity

- 5% ~ 95% non-condensing