eNet-A429P™ is an innovative product that provides “remoting” of ARINC operations on 10/100/1000 Ethernet IP/UDP local area networks (LAN). eNet-A429P is a small, low-power, device ideal for details ARINC signal testing with variable voltage control of the first 3 TX channels. Alta has combined the industry’s most advanced 32-bit ARINC FPGA protocol engine, AltaCore™, with a real-time IP/UDP thin server. The customer can implement their application with the same feature-rich application programming interface, AltaAPI™, as used with standard cards – often without even recompiling - the ultimate in code portability.

**NOTE: eNet-A429P (server) is a real-time Ethernet/ARINC device, but your computers’ (client) IP stack may not be!** The eNet-A429 device provides real-time UDP receive and transmit requests to ARINC buffers, but the client’s IP/UDP stack will induce path delays as compared to backplane cards. For many applications (<100-1000 packets per second), this product will provide unparalleled flexibility in ARINC configurations (much better than USB devices). Contact Alta for test results on various OS and computer configurations – your system results may vary.
eNet-A429P™ Specifications

General
- 1 RX/TX Shared Channel; 4 RX Only
- 3 TX Channels with Variable
  \(-3.5\pm12\) Vpp Voltage with \(-50\) mV Steps
- TX 1 uSec Signal Generator
- 8-bit, 1 uSec A/D Signal Capture on
  RX Channels 4 & 5!
  - Encode or Decode Almost any ARINC-429
    Physical Layer Signal (512-200K Baud)
- 2 Avionics & 2 RS-485 Discretes
- One Bi-LV TTL Clock and One LV TTL Trigger
- 13.5 x 3.7 x 4cm, 200g without cabling
- Rugged, Mountable
- Support ARINC-429/575/573/717
- Standard 10/100/1000 Ethernet UDP
- 5-32 VDC Input Accepted (USB 2 Amp)
  Power 1000E @ 40% Load: 700 mAmps
  Power 100E @ 40% Load: 600 mAmps
- Glenair Mighty Mouse Connectors.
  801-011-02M10-26PA/B Mates.
- One Megabyte RAM for Buffering
- Flash Disable Factory Setting for Secure Mem
- Parts Temp (C) : -55 to +120 Storage, 0 to +70
  Commercial, -40 to + 85 Extended Temp
- Power-Up, Loop-Back and User BIT
- IRIG-B RX PAM and RX/TX PPS Time Sync
- IPC Level 3 and ISO 9001:2008 Processes

TX Features
- Simple or Detailed Frequency (Hz)
  Control Per Label/Word List
- First 3 TX Channels Variable Voltage
  \(-3.5\pm12\) Vpp, \(-50\) mV Steps
  - ARINC-717 Frame Support
  - Interrupts, External Trigger
  - Full Error Injection
  - Unique 1 uSec Signal Generator
to Test Any Digital Patterns

RX Features – Three Buffering Modes
- Channel Level Label/Word Tables
- Channel Level Current Value Tables
- Multi-Channel Data Tables for All Channels
- ARINC 717 Frame Support
- 64-Bit, 20 nSec Time Tags, Interrupts, Trigger
- Full Error Detection

Playback (TX)
- Real Hardware Playback from Archive Files
- H/W Playback Timing to 20 uSec Accuracy

Software: AltaAPI & AltaView
- Multi-Layer AltaAPI Architecture to Support
  Windows and C Linux, VxWorks, LabVIEW, etc...
  - Contact Factory For RTOS Platforms
- Optional AltaView is Based on the Latest
  Windows MS Office Interface Ribbon-Bar
  - Full Analyzer Integration Tool
  - Multi Language Support
  - “A” Option at end of Part Number

Part Numbers
- ENET-A429P-8
  - 1 RX/TX Shared Channel; 4 RX Only
  - 3 TX Variable Voltage Channels

  Options: Add -E for Ext Temp Parts (-40 to +85C).
  Add –A for AltaView Analyzer, -N For NVRAM Write Disable.
  Example: ENET-A429P-8-AEN.

  NOTE: On shared channels: TX lines have an extra RX load;
  when powered-off, RX channels can have severe voltage
  drain – use only dedicated RX channels for critical systems.

Optional Cables:
- ENETCAB-J1-01
  - First 4 Channels (All TX and 1 Shared
    RX/TX Channel), Ethernet & USB Power
- ENETCAB-J2-01
  - 4 ARINC RX Only and
    Auxiliary Mini DB-26

5 Year Limited Warranty
EU and China RoHS Compliant
Contact Alta for Special Lead Build Configurations
Non-Public Telcom/CE Device

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