

aetina

# Aetina Jetson Roadmap

Eric Chu  
2021.Q1



# Nvidia Jetson Series

**JETSON NANO**  
0.5 TFLOPS (FP16)



5 - 10W  
45mm x 70mm

**JETSON TX2 series**  
1.3 TFLOPS (FP16)



7.5 - 15W\*  
50mm x 87mm

**JETSON Xavier NX**  
6 TFLOPS (FP16)  
21 TOPS (INT8)



10 - 15W  
45mm x 70mm

**JETSON AGX XAVIER series**  
11 TFLOPS (FP16)  
32 TOPS (INT8)



10 - 30W  
100mm x 87mm

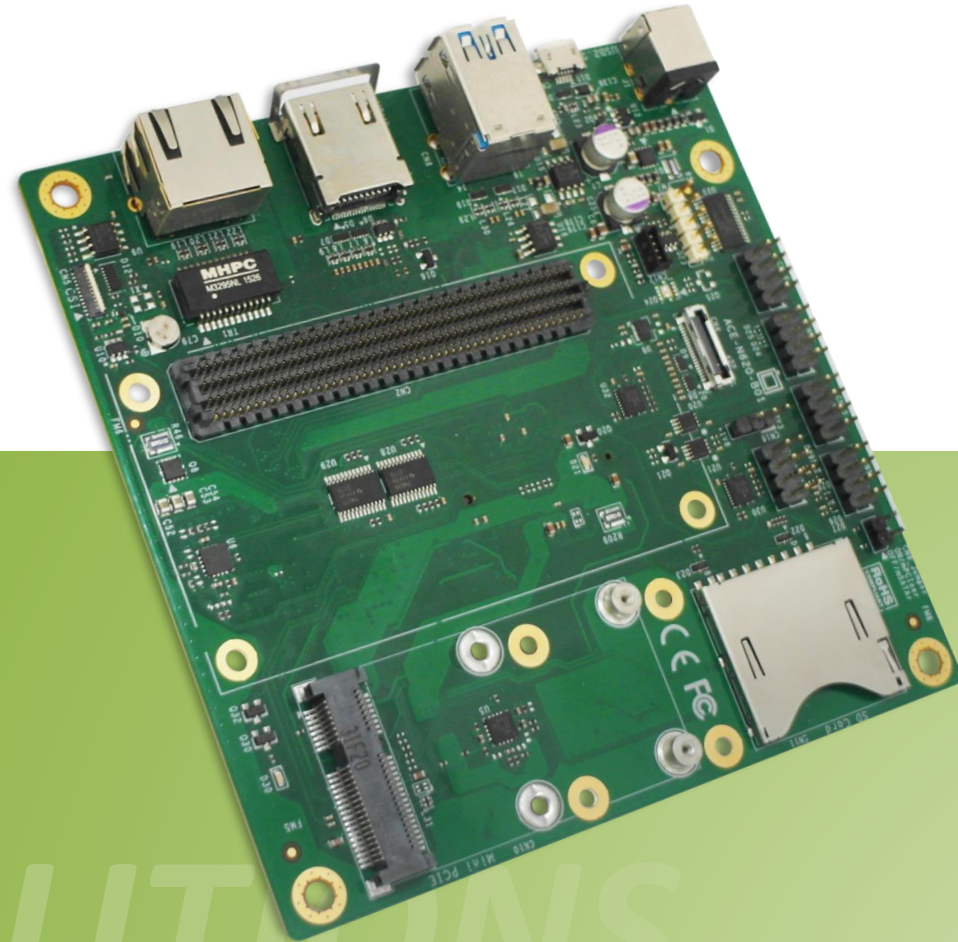
AI at the edge

Fully autonomous machines

Same software

# JETSON TX2 / TX1 CARRIER BOARD

Robust & Extreme  
Smart Factory



Jetson

*TX1/TX2 SOLUTIONS*

**ACE-N622**

# ACE-N622 Carrier

## Benefited by Multicore

- 256 CUDA Cores of Nvidia Jetson TX1 / TX2

## Reliability

- Support OS Recovery Mechanism

## Security

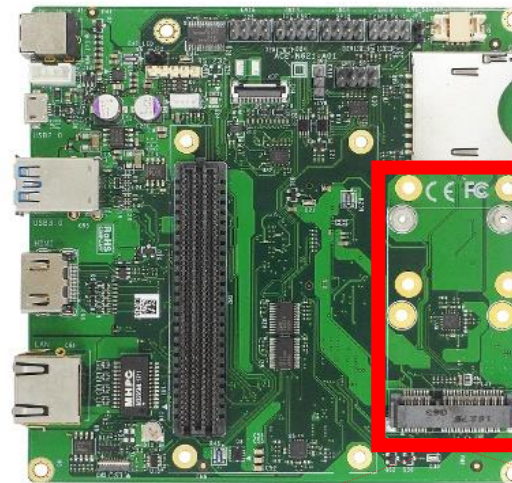
- Secure Boot to Against Unauthorized Device

## Expansionary

- Various I/O Extension Modules with Driver Ready

## Time-to-Market

- Leverage the Latest Algorithms for Quick Deploy



## Extension Modules



**CANBus Module**

USB to dual isolated CANBus 2.0B



**RS-232/422/485 Module**

mPCIe to four RS232/422/485



**Digital I/O Module**

USB to 32bit Digital I/O



**USB 3.0 Module**

mPCIe to four USB 3.0 Module



**PoE Module**

mPCIe to dual isolated PoE





# ACE-N510 Carrier

## Small and Low Profile

- 87x50mm, amiable for space-constrained device

## Quick Deployable Thermal

- Fan and fanless thermal option support

## Robust with Extended Temperature

- Wide temperature -20 ~ +70 °C

## On-stop System Integration

- Complete SW / HW Integration and OS optimize



## Applications



AOI



IVA



Robot  
Control



Drone



3D Modeling

# JETSON TX2 / TX1 CARRIER BOARD

Small and Low Profile  
Smart Surveillance / UAV / Robotic



# Jetson

# *TX1/TX2 SOLUTIONS*

**AN310**

# AN310 Carrier

## -40 ~ +85 °C Wide Temperature

- Aim for robust and space-constrained systems

## MIPI CSI Support Up to 6x 2-lane

- Support MIPI CSI by different extension modules

## Great Extension Connectivity

- 1x mPCIe / mSATA slot for extension modules

## One-stop Shopping

- Compliant with TX1/TX2 SoM and CSI Connector



- 4K camera x1
- ROS system
- CAN bus

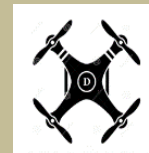


- 2M camera x6
- PoE module



### Target Markets

- 2M camera x6
- GPS/4G module

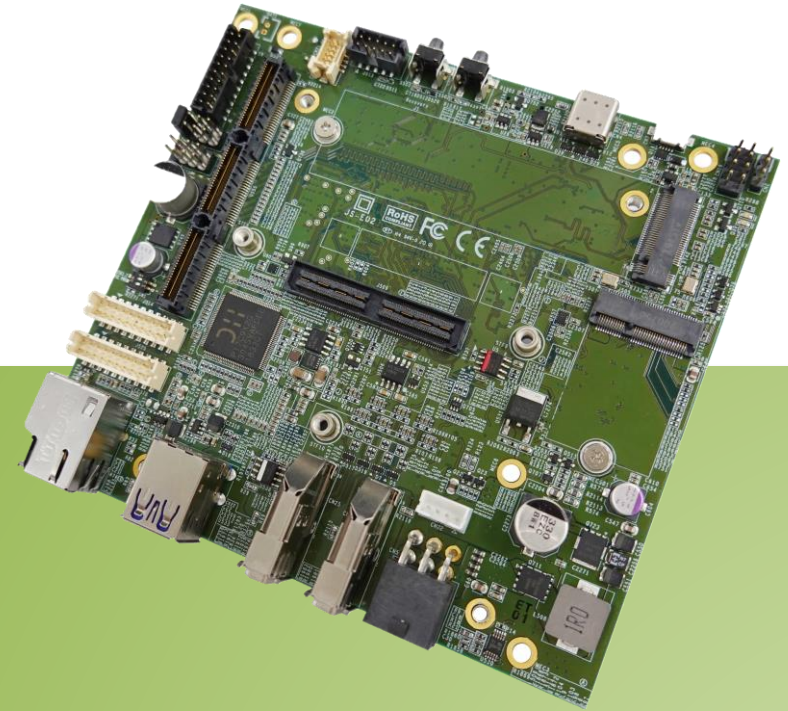


- 2M camera x6
- GPS/4G module
- CAN bus





# JETSON AGX CARRIER BOARD



Jetson

*AGX Xavier SOLUTION*

**AX720**

# AX720 Carrier

## -40 ~ +85 °C Wide Temperature

- Aim for robust and space-constrained systems

## MIPI CSI Support Up to 16-lane

- Support MIPI CSI by different extension modules

## SerDes Camera Support

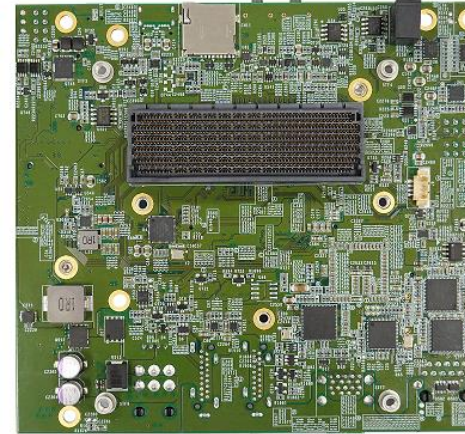
- Support FPD-LINKIII / THINE Camera up to 6

## Great Extension Connectivity

- 1x M.2 M Key & 1x M.2 E Key slot for extension modules

## Rich extension module support

- Support LTE / 5G / Capture card / Wifi / GPS.



- 4K camera x3
- ROS system
- CAN bus

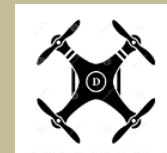


- IP camera support
- PoE Camera support



### Target Markets

- 4K camera x3
- GPS/LTE/5G module



- FPD-LINKIII/Thine
- GPS/LTE/5G module
- CAN bus



# JETSON Nano CARRIER BOARD



Jetson

*Nano SOLUTIONS*

AN110

# AN110 Carrier

## Small and Low profile

- 87x67mm, amiable for space-constrained device

## MIPI CSI Camera Support

- Support up to 1x 4K and 1x FHD camera with FPC cable

## Serdas Camera Support

- Support FPD-LINKIII Serdas Camera up to 2

## Great Extension Connectivity

- 1x M.2 E Key slot for extension modules



## Applications



AOI



IVA



Robot  
Control



Drone



3D Modeling



# Xavier NX CARRIER BOARD



Xavier  
NX SOLUTIONS

AN810

# AN810 Carrier

## -40 ~ +85 °C Wide Temperature

- Aim for robust and space-constrained systems

## Full MIPI CSI function support.

- 120 Pin connector support up to 12 Lanes.

## SerDes Camera Support

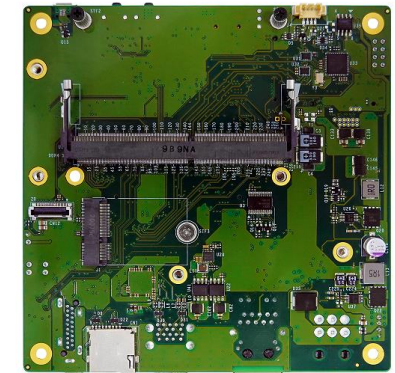
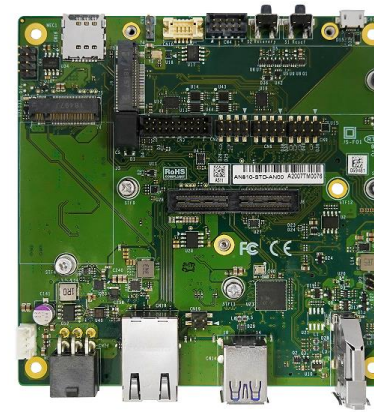
- Support FPD-LINKIII / THINE Camera up to 6

## Great Extension Connectivity

- 1x M.2 M Key / 1x M.2 B Key / 1x M.2 E Key slot for extension modules

## Rich extension module support

- Support LTE / 5G / Capture card / Wifi / GPS.



- 4K camera x3
- ROS system
- CAN bus

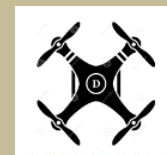


- IP camera support
- PoE Camera support



### Target Markets

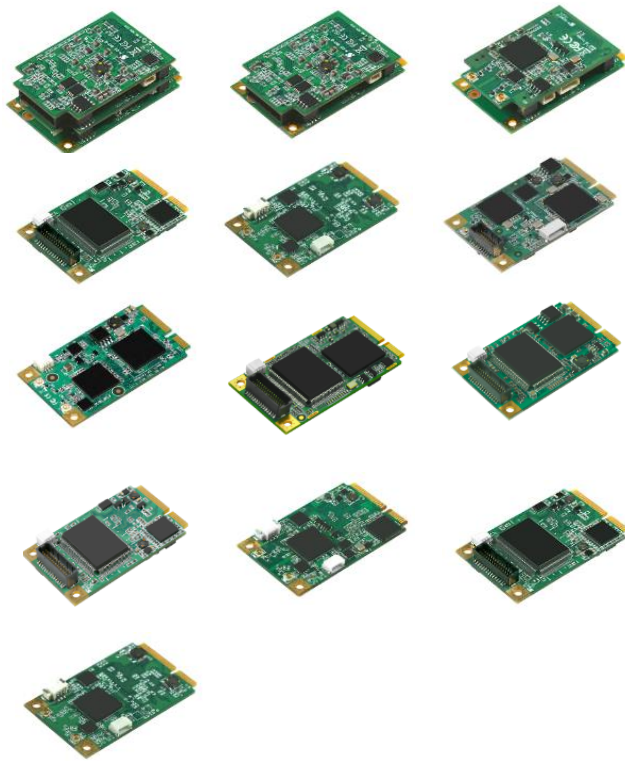
- 4K camera x3
- GPS/LTE/5G module



- FPD-LINKIII/Thine
- GPS/LTE/5G module
- CAN bus



# mPCIe Extension module(AN310/ACE-N622)



## Capture Card

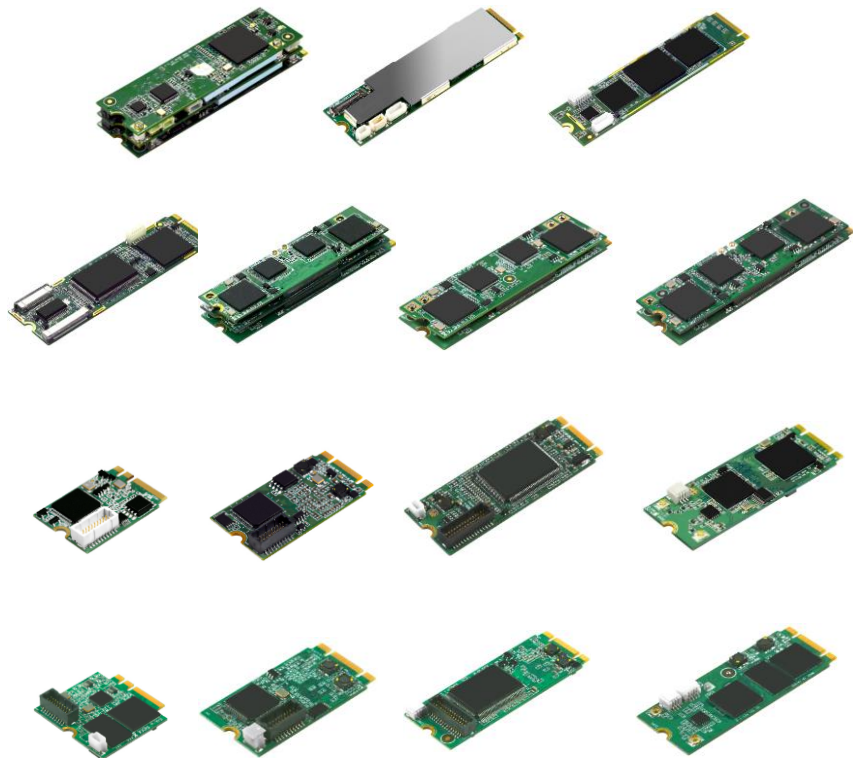
- FHD/720P
- HDMI/SDI/DVI-I

- mPCIe to USB3.0
- mPCIe to VGA/HDMI/DVI
- mPCIe to GbE/POE
- mPCIe to RS232/RS422/RS485/CAN

- mSATA Storage 8GB-1TB
- LTE/NB-IOT

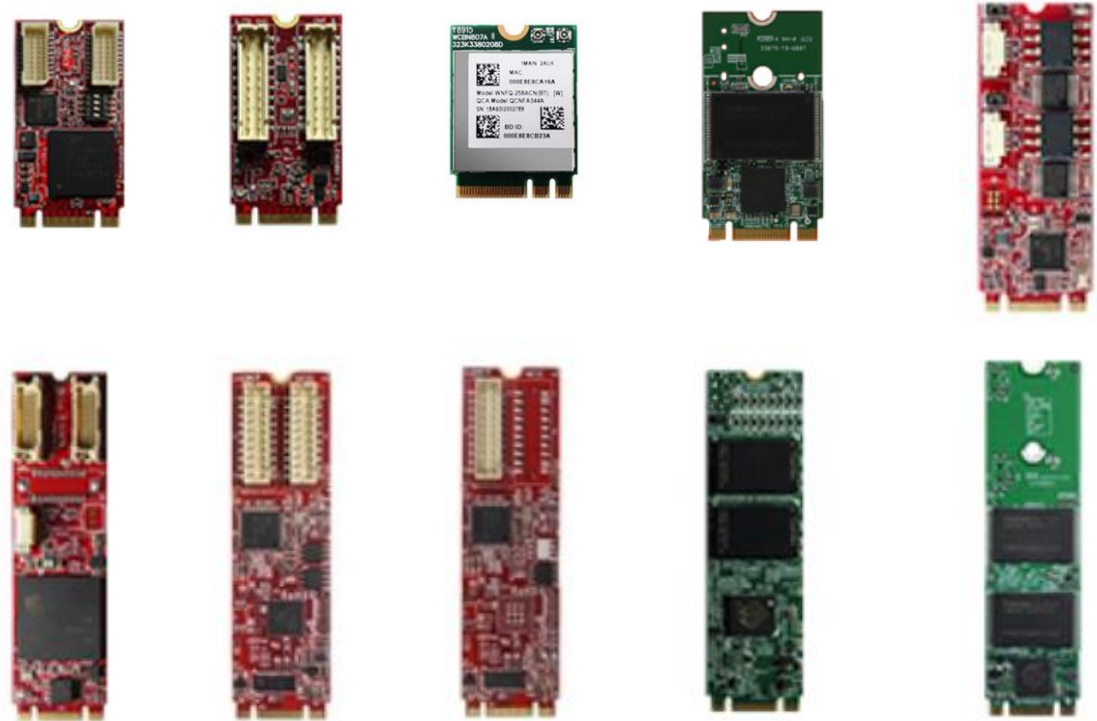


# M.2 Extension module(AX720)



## Capture Card

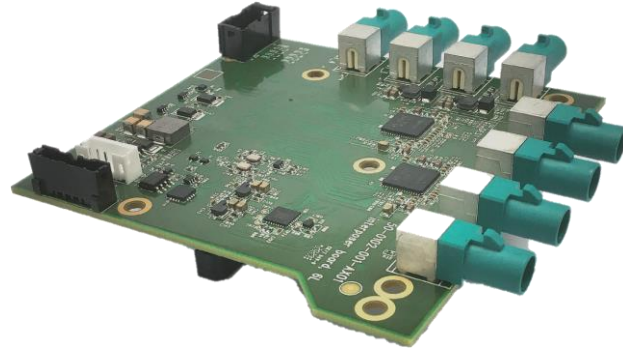
- 4K/FHD/720P
- HDMI/SDI/DVI-I



- M.2 to VGA/HDMI/DVI
- M.2 to GbE/POE
- M.2 to RS232/RS422/RS485/CAN
- M.2 to Wifi/BT
- M.2 PCIe/mSATA Storage(256GB-1TB)



# MIPI CSI II Adapter and Camera(AN310/AX720)

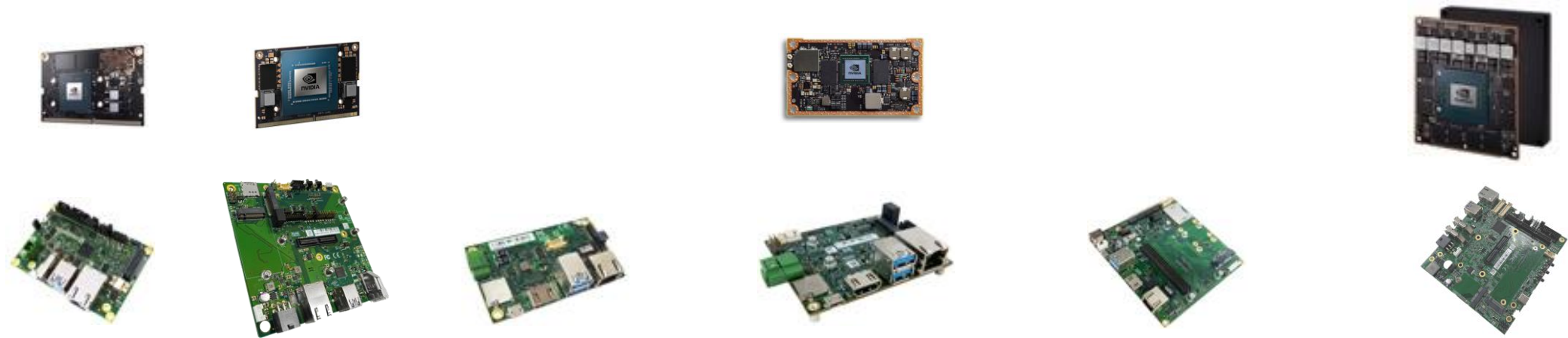


4K/FHD adapter

FPD-LINKIII/ Thine adapter

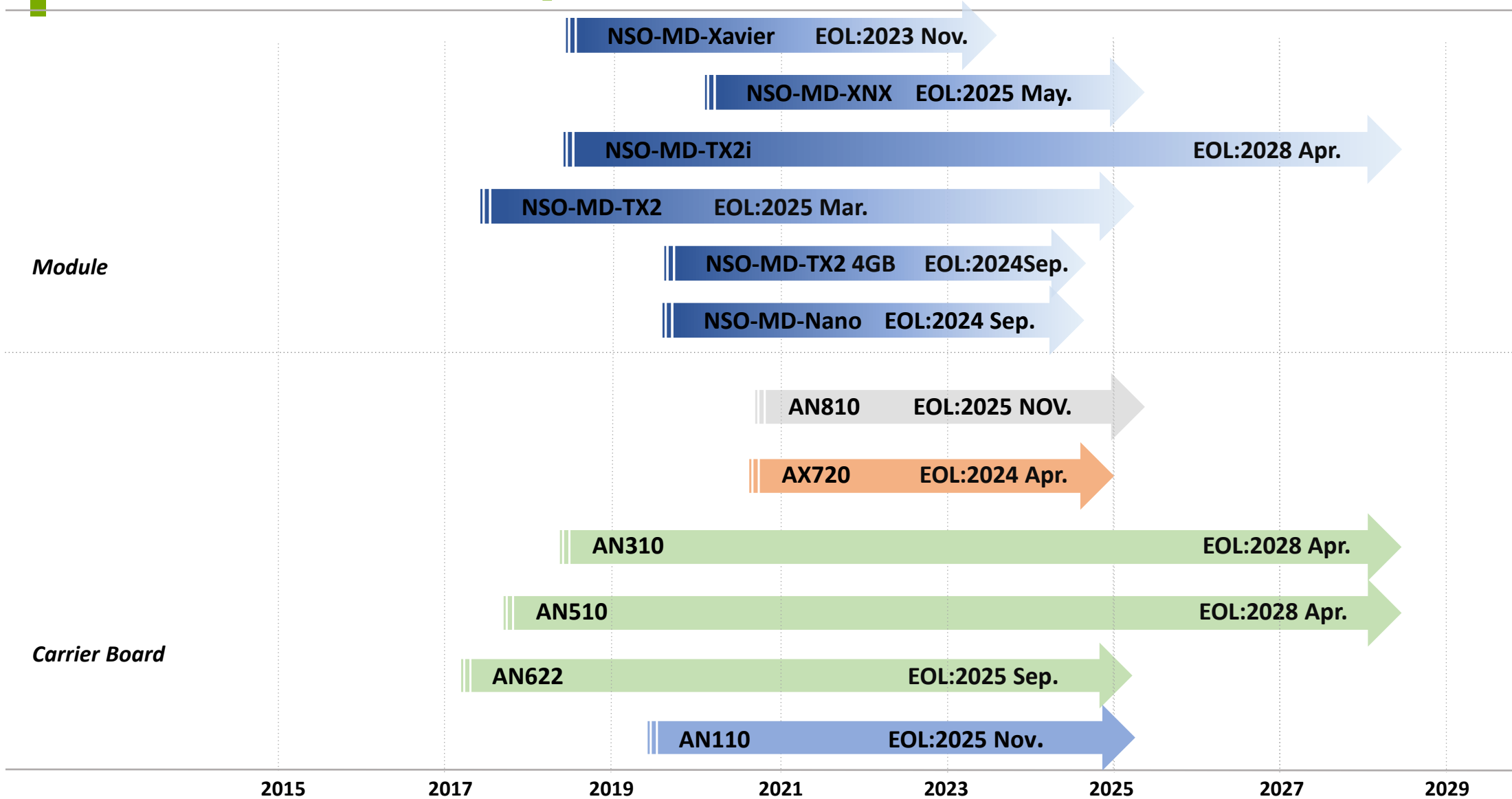
FPC/Fakra Camera

# Aetina NVIDIA Jetson Platforms



	AN110/AN810	AN510	AN310	N622	AX720
Position	High speed camera demand	GPU computing	High speed camera demand	Diverse output interface	Diverse output interface
Application	<ol style="list-style-type: none"> <li>1. NVR (Single Machine)</li> <li>2. Home robot</li> <li>3. Smart gateway</li> </ol>	<ol style="list-style-type: none"> <li>1. Webcam (Multiple Control)</li> <li>2. Portable medical device</li> <li>3. Robot</li> </ol>	<ol style="list-style-type: none"> <li>1. Drone</li> <li>2. Smart camera</li> <li>3. AGV / UGV</li> </ol>	<ol style="list-style-type: none"> <li>1. AOI</li> <li>2. Intelligent robotic arms</li> </ol>	<ol style="list-style-type: none"> <li>1. In-vehicle system</li> <li>2. Training server</li> <li>3. Drone</li> </ol>

# Jetson Series Lifecycle



# Jetson System Roadmap 2021

Planning
  Developing
  Available

<b>NX</b>	<b>AN110-NXN</b>		<b>AN810-XNX</b>	
	<ul style="list-style-type: none"> <li>8GB 128-bit LPDDR4</li> <li>16GB eMMC 5.1</li> <li>Fanless</li> <li>120(W)x72.7(D)x100(H)mm</li> </ul>		<ul style="list-style-type: none"> <li>8GB 128-bit LPDDR4</li> <li>16GB eMMC 5.1</li> <li>Include Fansink</li> </ul>	
<b>NANO</b>	<b>AN110-NAO</b>			
	<ul style="list-style-type: none"> <li>4GB 64-bit LPDDR4</li> <li>16GB eMMC 5.1</li> <li>Fanless</li> <li>120(W)x72.7(D)x100(H)mm</li> </ul>			
<b>TX2</b>	<b>AN310/AN510-TX2</b>	<b>AN310/AN510-TX2</b>	<b>AN622-TX2</b>	
	<ul style="list-style-type: none"> <li>132(W)x92(D)x69(H)mm</li> </ul>	<ul style="list-style-type: none"> <li>Fanless</li> <li>195(W)x95.1(D)x64.1(H)mm</li> </ul>	<ul style="list-style-type: none"> <li>Fanless</li> <li>156(W)x126.7(D)x89.5(H)mm</li> </ul>	
<b>Xavier 32G</b>	<b>AX720-X32</b>			
	<ul style="list-style-type: none"> <li>8GB 128-bit LPDDR4</li> <li>32GB eMMC 5.1</li> <li>Include Fansink</li> </ul>			

2021 Q1'

2021 Q1'





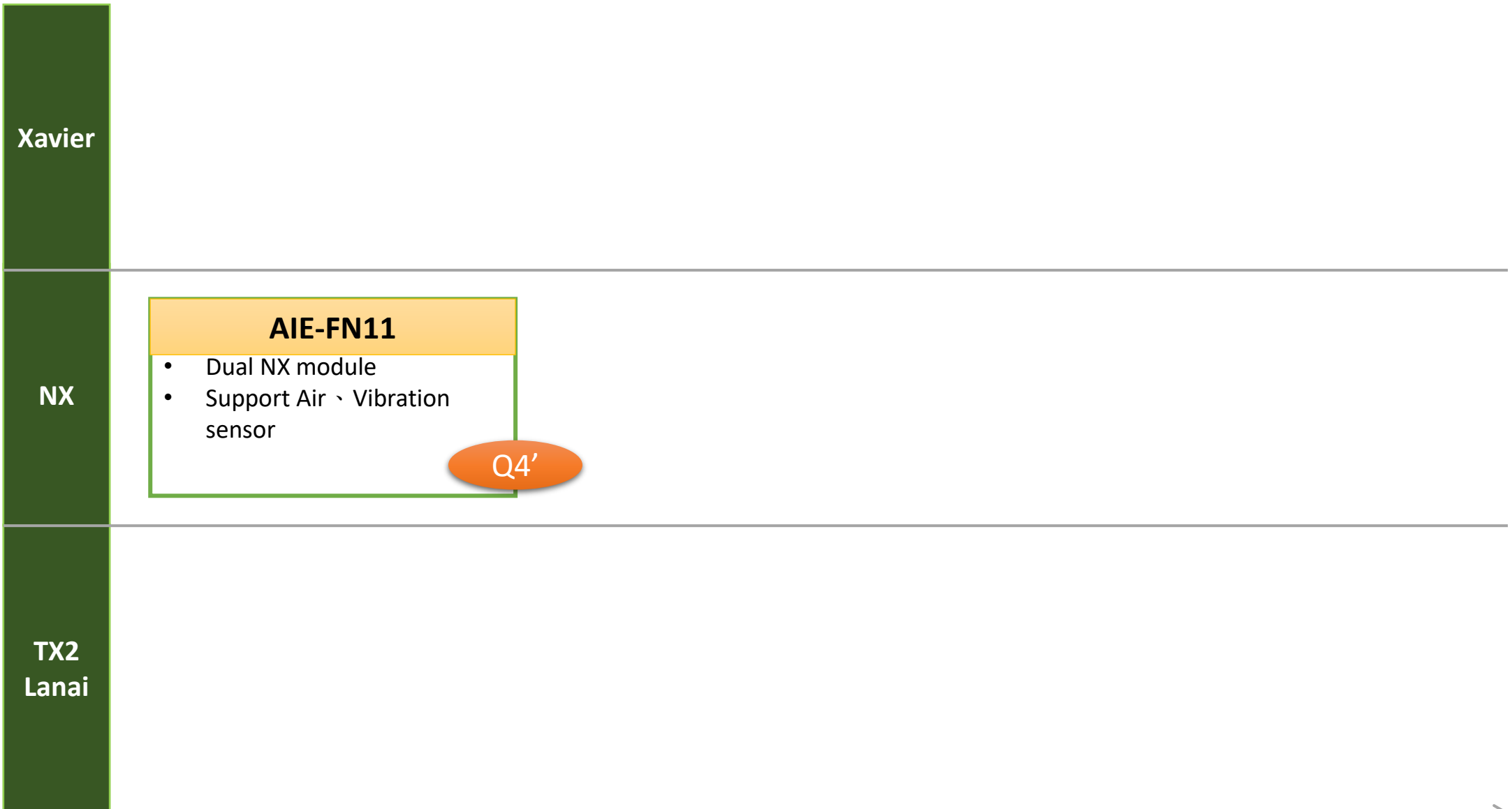
# Compact Product Roadmap 2021

Planning
  Developing
  Available

<b>NX</b>	<b>AIE-CN11</b>	<b>AIE-CN12</b>	<b>AIE-CN13</b>
	<ul style="list-style-type: none"> <li>LAN x2, USB x2, Type-C x1,</li> <li>HDMI x1, GPIO x1</li> <li>M.2 2242 SSD</li> <li>M.2 2230 wifi/BT</li> </ul>	<ul style="list-style-type: none"> <li>POE x2, HDMI x1, LAN x1,</li> <li>Type-C x1, GPIO x1</li> <li>M.2 2242 SSD</li> <li>M.2 2230 wifi/BT</li> </ul>	<ul style="list-style-type: none"> <li>USB x8, HDMI x1, LAN x1,</li> <li>Type-C x1, GPIO x1</li> <li>M.2 2242 SSD</li> <li>M.2 2230 wifi/BT</li> </ul>
	<b>Q1'</b>	<b>Q1'</b>	<b>Q1'</b>
<b>NANO</b>	<b>AIE-CO11</b>	<b>AIE-CO12</b>	<b>AIE-CO13</b>
	<ul style="list-style-type: none"> <li>LAN x2, USB x2, Type-C x1,</li> <li>HDMI x1, GPIO x1</li> <li>M.2 2242 SSD</li> <li>M.2 2230 wifi/BT</li> </ul>	<ul style="list-style-type: none"> <li>POE x2, HDMI x1, LAN x1,</li> <li>Type-C x1, GPIO x1</li> <li>M.2 2242 SSD</li> <li>M.2 2230 wifi/BT</li> </ul>	<ul style="list-style-type: none"> <li>USB x8, HDMI x1, LAN x1,</li> <li>Type-C x1, GPIO x1</li> <li>M.2 2242 SSD</li> <li>M.2 2230 wifi/BT</li> </ul>
	<b>Q1'</b>	<b>Q1'</b>	<b>Q1'</b>
<b>TX2/ Lanai</b>	<b>AIE-CT41</b>	<b>AIE-CT42</b>	<b>AIE-CT43</b>
Lanai solution	<ul style="list-style-type: none"> <li>LAN x2, USB x2, Type-C x1,</li> <li>HDMI x1, GPIO x1</li> <li>M.2 2242 SSD</li> <li>M.2 2230 wifi/BT</li> </ul>	<ul style="list-style-type: none"> <li>POE x2, HDMI x1, LAN x1,</li> <li>Type-C x1, GPIO x1</li> <li>M.2 2242 SSD</li> <li>M.2 2230 wifi/BT</li> </ul>	<ul style="list-style-type: none"> <li>USB x8, HDMI x1, LAN x1,</li> <li>Type-C x1, GPIO x1</li> <li>M.2 2242 SSD</li> <li>M.2 2230 wifi/BT</li> </ul>
	<b>Q1'</b>	<b>Q1'</b>	<b>Q1'</b>
<b>Coral</b>	<b>AIE-CC11</b>		
	<ul style="list-style-type: none"> <li>LANx1, USB Type-A x2</li> <li>USB Type-AB x1, HDMI x1</li> <li>Type-C x1, Micro SD x1</li> <li>Build in Google Camera</li> </ul>		
	<b>Q1'</b>		

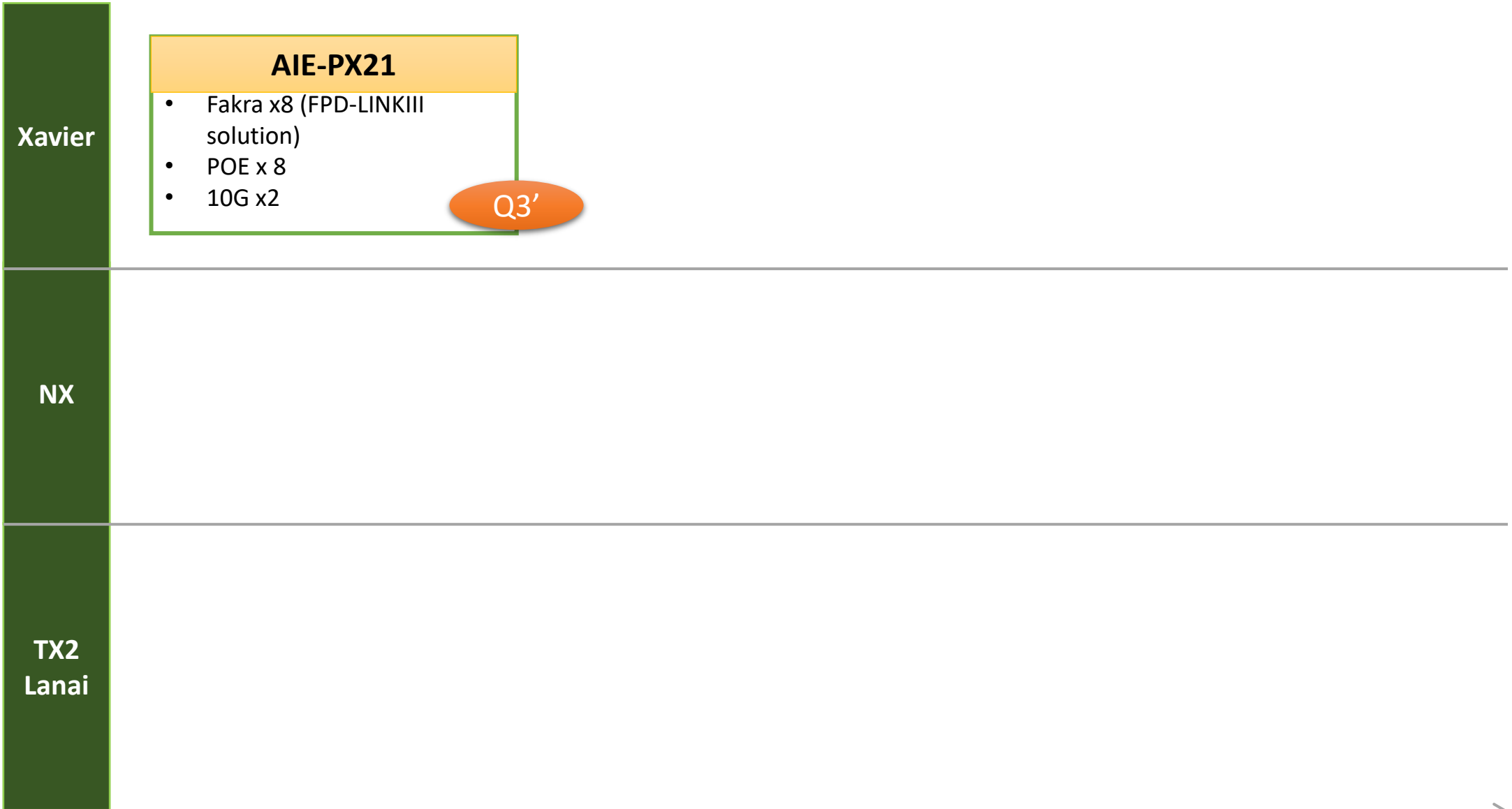
# Flexible Product Roadmap 2021

Planning Developing Available



# Performance Product Roadmap 2021

Planning Developing Available



# THANK YOU FOR LISTENING



[www.aetina.com](http://www.aetina.com)

